Attaining the Right to Environment Through Environmental Impact Assessment

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ATTAINING THE RIGHT TO ENVIRONMENT THROUGH ENVIRONMENTAL IMPACT ASSESSMENT

A dissertation submitted to the faculty in fulfilment of the requirements for the degree of Doctorate in Judicial Sciences (SJD) in Environmental Law at the Elisabeth Haub School of Law at Pace University

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Every word, every page, and every finding within these covers is a testimony to the significant contribution of everyone mentioned here. Each one of you has left an indelible mark on this scholarly journey, turning an individual effort into a collective achievement.
List of Abbreviations

1983 Ordinance: Pakistan Environmental Protection Ordinance (1983)
African Commission: African Commission on Human and Peoples' Rights
ASEAN: Association of Southeast Asian Nations
ASEAN Biodiversity Agreement (2005): Agreement on the establishment of the ASEAN Centre for Biodiversity, 2005.
Balochistan Act: Balochistan Environmental Protection Act, 2012.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brundtland Commission (1983)</strong></td>
<td>UNGA established a special commission through UNGA Res. 38/161, Dec. 19, 1983. It was also named World Commission on Environment and Development.</td>
</tr>
<tr>
<td><strong>CE</strong></td>
<td>Categorical Exclusions in the United States</td>
</tr>
<tr>
<td><strong>CEQ</strong></td>
<td>Council on Environmental Quality in the United States</td>
</tr>
<tr>
<td><strong>ECSR</strong></td>
<td>European Committee of Social Rights</td>
</tr>
<tr>
<td><strong>ECtHR</strong></td>
<td>European Court of Human Rights</td>
</tr>
<tr>
<td><strong>EA</strong></td>
<td>Environmental Assessment document in the United States</td>
</tr>
<tr>
<td><strong>EIA</strong></td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td><strong>Eighteenth Amendment</strong></td>
<td>Constitution of Pakistan (Eighteenth Amendment) Act 2010</td>
</tr>
<tr>
<td><strong>EIS</strong></td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td><strong>environmental components</strong></td>
<td>Five (5) components of the environment, namely nature and biodiversity, atmosphere, water, land, and sustainable development</td>
</tr>
<tr>
<td><strong>environmental concepts</strong></td>
<td>Environmental components, obligations, rights, and principles found in environmental laws</td>
</tr>
</tbody>
</table>
### Environmental Laws

Existing environmental instruments, including hard and soft laws, at the international, regional, and national levels

### Environmental Obligations

Policy provisions in the environmental laws delineate these obligations of the states, organizations, and individuals to protect human health and the environmental components

### Environmental Principles

Ten (10) recurring and common environmental principles existing in the environmental laws, including the precautionary approach, the integration of environmental considerations, the involvement of stakeholders, environmental equity, environmental justice, transboundary cooperation, the polluter pays principle, common but differentiated responsibilities, the use of science and technology, and education and awareness in environmental matters

### Environmental Rights

Collectively, the substantive and procedural environmental rights found across environmental laws

<table>
<thead>
<tr>
<th>Agreement/Substantive</th>
<th>Date/Details</th>
</tr>
</thead>
<tbody>
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<td><strong>Fauna and Flora Convention (1933)</strong></td>
<td>London Convention relative to the Preservation of Fauna and Flora in their Natural State, Nov. 8, 1933.</td>
</tr>
<tr>
<td><strong>Federal Act</strong></td>
<td>Pakistan Environmental Protection Act, 1997.</td>
</tr>
<tr>
<td><strong>Federal EPA</strong></td>
<td>Pakistan Environmental Protection Agency</td>
</tr>
<tr>
<td><strong>Federal EPC</strong></td>
<td>Pakistan Environmental Protection Council</td>
</tr>
<tr>
<td><strong>FONSI</strong></td>
<td>Finding Of No Significant Impact in the United States</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>IACHR</strong></td>
<td>Inter-American Commission on Human Rights</td>
</tr>
<tr>
<td><strong>IACtHR</strong></td>
<td>Inter-American Court of Human Rights</td>
</tr>
<tr>
<td><strong>IAIA</strong></td>
<td>International Association for Impact Assessment</td>
</tr>
<tr>
<td><strong>ICJ</strong></td>
<td>International Court of Justice</td>
</tr>
<tr>
<td><strong>IEE</strong></td>
<td>Initial Environmental Examination in Pakistan</td>
</tr>
<tr>
<td><strong>IPCC</strong></td>
<td>Intergovernmental Panel on Climate Change</td>
</tr>
<tr>
<td><strong>KPK</strong></td>
<td>Khyber Pakhtunkhwa Province in Pakistan</td>
</tr>
<tr>
<td><strong>KPK Act</strong></td>
<td>Khyber Pakhtunkhwa Environmental Protection Act, 2014.</td>
</tr>
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<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>NPO Fisheries Convention (1952)</td>
<td>Tokyo International Convention for the High Seas Fisheries of the North Pacific Ocean, May 9, 1952.</td>
</tr>
<tr>
<td>Pakistani approvals</td>
<td>IEE and EIA approvals in Pakistan</td>
</tr>
<tr>
<td>Pakistani laws</td>
<td>Collectively, the Federal Act, the Punjab Act, the Sindh Act, the KPK Act, and the Balochistan Act</td>
</tr>
<tr>
<td>Pakistani provinces</td>
<td>Punjab, Sindh, KPK, and Balochistan provinces</td>
</tr>
<tr>
<td>Pakistani regulations</td>
<td>Federal Regulations, the Sindh Regulations, and the Balochistan Regulations</td>
</tr>
<tr>
<td>procedural rights</td>
<td>Three (3) procedural environmental rights include the rights to information, public participation, and judicial remedy in environmental matters</td>
</tr>
<tr>
<td>regions</td>
<td>Five (5) global geographical regions, namely Americas, Europe, Africa, Asia, and Arab.</td>
</tr>
<tr>
<td>right to environment</td>
<td>Right to a clean, healthy and sustainable environment</td>
</tr>
<tr>
<td>SAARC</td>
<td>South Asian Association for Regional Cooperation</td>
</tr>
<tr>
<td>SEA</td>
<td>Strategic Environmental Assessment</td>
</tr>
<tr>
<td>Sindh Act</td>
<td>Sindh Environmental Protection Act, 2014.</td>
</tr>
<tr>
<td>substantive rights</td>
<td>Eight (8) substantive environmental rights focusing on environmental quality, including the rights of nature, the right to natural resources, the right to clean air, the rights to water and sanitation, the right to sustainable development, the right to adequate conditions of life or standards of living, the right to enjoyment of the highest attainable standards of health, and the right to food and adequate nutrition</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
</tr>
<tr>
<td>UNGA</td>
<td>United Nations General Assembly</td>
</tr>
<tr>
<td>UN Resolution (2022)</td>
<td>UNGA Res. A/RES/76/300, July 28, 2022, recognizing the right to a clean, healthy, and sustainable environment.</td>
</tr>
<tr>
<td>Agreement/Convention</td>
<td>Description</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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ATTAINING THE RIGHT TO ENVIRONMENT
THROUGH ENVIRONMENTAL IMPACT ASSESSMENT

Chapter I: Introduction

This thesis explores an essential legal question: how can a single mechanism ensure and protect all the environmental components, obligations, rights, and principles, and provide remedy for the enforcement and attainment of the comprehensive right to environment? In response, the thesis identifies the Environmental Impact Assessment (EIA) as a holistic and unifying tool that fulfills these purposes.

Firstly, this thesis explores the evolution of the environmental laws from the year 1900 and provides a unifying synthesis of the diverse environmental concepts enshrined within them. Secondly, the thesis identifies the right to environment as a unifying and holistic concept that incorporates all the environmental concepts and encapsulates comprehensive environmental protection. Thirdly, it finds EIA as the most significant – and perhaps the only – mechanism and remedy for protecting, upholding, respecting, enforcing, and attaining the comprehensive right to environment. Furthermore, it presents EIA as a unique environmental tool that incorporates all the environmental concepts. In essence, the thesis discusses the interconnection between the right to environment and EIA, elaborating their combined potential to effectively address most – if not all – the complex and interconnected environmental challenges.

A. Environmental Challenges

The world is persistently facing severe natural and human-induced environmental challenges. These challenges pose significant impacts on nature, biodiversity, human health, economic systems, and society at large. To illustrate the severity of merely the health impacts, it is helpful to compare it with the most prominent global health crisis of this century, the COVID-19. While the pandemic has caused a total of over 6.96 million reported deaths globally as of October 12, 2023,¹ the impact of a single environmental issue like air pollution is even graver. The World Health Organization (WHO) indicates that air pollution attributes an estimated 6.7 million annual deaths worldwide.² This staggering figure does not even account for other health diseases, biodiversity, economic, and social impacts associated with air pollution or any other environmental issues.

Many environmental organizations, including the United Nations Environment Programme (UNEP) and the Intergovernmental Panel on Climate Change (IPCC), have reiterated the complex and interconnected environmental challenges in their reports.³ They present a striking consensus that these environmental challenges are growing in number and severity, causing millions of premature deaths, undermining the human health and well-being, significantly

affecting economic growth and the society at large, and deteriorating the environment and natural resources. Furthermore, there is compelling evidence that the rapidly expanding human activities are primarily driving these environmental changes and the society is not meeting most of its commitments to limit – let alone reverse – the environmental damage. This certainly underscores that there is an immediate need for adoption of proactive measures and sustainable solutions to effectively address these ever-growing environmental challenges. Moreover, this must be done within a rapidly closing window of opportunity to sustain life on earth.

At the outset, although these organizations propose several measures for transforming society’s engagement with nature in their reports, they lack to identify a unified mechanism or tool that could holistically and systematically address a spectrum of environmental challenges, ranging from protecting human health, conserving nature and biodiversity, reducing pollution, mitigating climate change, promoting sustainable development, and strengthening social and environmental justice.

B. Legal Responses to Environmental Challenges

To address these environmental challenges, states have introduced a variety of instruments, including hard and soft laws, at the international, regional, and national levels (the “environmental laws”). This thesis explores the evolution of the environmental laws and provides a unifying synthesis of the diverse environmental concepts enshrined within environmental laws across each level of governance. It demonstrates that environmental protection and governance, from the global stage to the grassroots local level, within the environmental laws are built upon four (4) foundational pillars: environmental components, obligations, rights, and principles (the “environmental concepts”).

The thesis indicates that the environmental laws encompass a handful of different concepts that provide direction for formulating and implementing environmental laws, policies, and jurisprudence to address environmental challenges at every level:

(1) Environmental laws primarily comprise of policy provisions that delineate the environmental obligations of the states, organizations, and individuals (the “environmental obligations”) to protect human health and five (5) core environmental components, including nature and biodiversity, atmosphere, water, land, and sustainable development (collectively, the “environmental components”). These policy provisions can further be divided into substantive and procedural obligations.

(2) In parallel, environmental laws also secure a total of eleven (11) substantive and procedural environmental rights (collectively, the “environmental rights”). Eight (8) substantive rights focus on environmental quality, including the rights of nature, the right to natural resources, the right to clean air, the rights to water and sanitation, the right to sustainable development, the right to adequate conditions of life or standards of living, the right to enjoyment of the highest attainable standards of health, and the right to food and adequate nutrition (collectively, the “substantive rights”). Furthermore, three (3) procedural rights complement their substantive counterparts and include the rights to information, public participation, and judicial remedy in environmental matters (collectively, the “procedural rights”).

(3) In addition, the environmental laws encompass ten (10) recurring and common environmental principles, including the precautionary approach, the integration of
environmental considerations, the involvement of stakeholders, environmental equity, environmental justice, transboundary cooperation, the polluter pays principle, common but differentiated responsibilities, the use of science and technology, and education and awareness in environmental matters (collectively, the “environmental principles”). These principles are crucial for safeguarding the environmental components and upholding the environmental rights.

However, despite these extensive environmental obligations, rights, and principles in place, the world continues to grapple with persistent environmental challenges. Recently, in response to these challenges, the United Nations General Assembly (UNGA) adopted Resolution No. 76/300 on July 28, 2022 (the “UN Resolution (2022)”) to recognize the “right to a clean, healthy and sustainable environment” (the “right to environment”). This formal recognition by UNGA solidifies the significance of this right as a universal, fundamental, and indispensable human right of everyone that all states are obliged to uphold and protect.

C. Right to Environment

This thesis delves into the evolution, meaning, and significance of the right to environment. It articulates that this right serves as a unifying, holistic, integrated, and comprehensive concept that incorporates all the existing environmental rights, obligations, and principles:

(1) The right to environment builds upon, brings together, and consolidates the existing substantive and procedural environmental rights into a unified framework. It allows states to address these rights collectively under the umbrella of the right to environment, streamlining the protection of environmental rights and eliminating the need to address each of them separately.

(2) The right to environment also encompasses both substantive and procedural environmental obligations that states must fulfill for protection of the environmental components. These obligations provide a pathway for states to effectively enforce and attain the right to environment.

(3) The right to environment is characterized by five (5) essential components, namely substantive, procedural, universal, intertemporal, and assessment components. These components reflect the comprehensive nature of this concept and its relationship with the environmental principles.

Accordingly, the universal recognition of the right to environment is a significant move towards an integrated and comprehensive approach to environmental conservation. It equips states with a comprehensive strategy to counter the complex and interconnected environmental challenges. In this context, the environmental obligations, rights, and principles delineated in the environmental laws become integral to enforcing the right to environment and become components of a broader and cohesive structure aimed at realizing this fundamental right. Therefore, states must safeguard the environmental obligations, rights, and principles existing in the environmental laws for an effective protection of this right.

Although there is significant literature on enforcement of the right to environment by the courts in cases of its violation, this thesis presents an alternate and proactive approach for attaining

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and enforcing this right by the executive. This thesis establishes that the right to environment can also be respected, upheld, enforced, and attained by using an administrative and systematic process of EIA that has potential to resolve most – if not all – of the environmental challenges. This thesis seeks to contribute to a better understanding of how to effectively operationalize the right to environment and safeguard holistic environmental protection. It serves as one of the first few scholarly works to extensively examine how EIA can facilitate enforcement and attainment of the right to environment, especially in light of recent recognition of this right as a human right by the United Nations and New York State.

D. Environmental Impact Assessment

While the right to environment stands as a significant concept that encapsulates comprehensive environmental protection, it is not self-executing without an effective legal remedy for its enforcement. The maxim “where there is a right, there is a remedy” underscores the necessity for practical measures to attain, uphold, and enforce this right. In this context, the thesis identifies EIA as a unique environmental tool that incorporates all the environmental obligations, rights, and principles and provides a crucial remedy for enforcement of the right to environment:

1) EIA serves as a mechanism and tool to ensure a holistic and comprehensive environmental protection. Much like the inherent distribution within the environmental laws, the environmental rights, and the right to environment, EIA also embodies an intricate nexus of procedural and substantive components. These components together synergistically facilitate a comprehensive environmental analysis within EIA. While procedural components undoubtedly are foundational to an EIA, there is a complimentary and undeniable significance of the substantive core that adds depth to these procedures and breathes life and meaning into its architectural skeleton.

The procedural components of an EIA delineate a structured sequence of steps and collaborative initiatives to harmonize developmental interests with environmental conservation. These procedural components encompass the selection of projects for EIA, the designated responsibility to prepare the EIA report, specifying the contents within the EIA report, issuing public notices, fostering public participation, engaging in consultation with concerned authorities, conducting transboundary consultation, determining the final decision on EIA, ascertaining the time involved in EIA, emphasizing on monitoring and compliance after EIA, and evaluating the extent of judicial review in EIA.

On the substantive side, EIA has four (4) substantive components, including the identification and evaluation of environmental factors, the assessment of potential impacts, the mitigation of significant effects, and the contemplation of reasonable project alternatives. These substantive components constitute the core content of the assessment as well as the corresponding EIA report. Collectively, these components provide a comprehensive depth to EIA process, ensuring that environmental considerations are thoroughly integrated into every project with significant environmental effects. They amplify the efficacy of their procedural counterparts, ensuring that EIA transcends a mere procedural checklist to become a dynamic tool for a holistic environmental protection.
(2) EIA emerges as a systematic, unifying, holistic, and comprehensive tool and mechanism that ensures quality of the environmental components; protects and enforces the substantive and procedural environmental rights; and integrates the environmental principles within a single concept.

(3) EIA is one of the significant – and perhaps the only – tool for protecting, upholding, respecting, enforcing, and attaining the comprehensive right to environment.

(4) The universal recognition of the right to environment provides essential foundation for making EIA stronger and more effective. In essence, both the right to environment and EIA have potential to effectively address most – if not all – the complex and interconnected environmental challenges, ranging from protecting human health, conserving nature and biodiversity, reducing pollution, mitigating climate change, promoting sustainable development, and strengthening social and environmental justice.

This thesis presents a detailed comparative analysis of procedural and substantive components of EIA across three (3) jurisdictions that represent different geographical and developmental contexts, including the European Union, the United States, and Pakistan. In the absence of a uniform international EIA framework, the European Union presents a remarkable example of a regional system, where twenty-seven (27) states have harmonized EIA requirements. It has an advanced, well-defined, and structured EIA system that transcends national boundaries and serves as a potential guide for other regions and international community aspiring to refine EIA systems.

Diverging from the regional focus, the United States is one of the most advanced national systems for EIA within the Global North. Further, since the United States is a pioneer for EIA process in 1969, it offers an opportunity to delve into the evolution of a detailed, complex, and multi-layered EIA system. In addition, the United States has rich academic literature in this area, offering nuanced insights into the intricacies of EIA and their development over time.

Shifting towards the Global South, Pakistan presents a compelling case study with a provincial based EIA system. It grapples with a diverse set of legislative and enforcement challenges within its EIA system and presents an opportunity to compare its relatively weaker system with two of the most respected global models. Accordingly, the Pakistani system provides a glimpse into the potential deficiencies within a nascent or evolving EIA legal structure, offering opportunities to identify areas for improvement and to propose legal reforms for enhancing the effectiveness of the EIA process.

Accordingly, this thesis identifies the prevalent similarities and differences across the EIA systems in the European Union, the United States, and Pakistan and draws upon their exemplary practices and shortcomings in terms of each EIA component. It explains that the international community has yet to fully recognize the importance of EIA that offers comprehensive environmental protection and provides a remedy for enforcing and attaining the right to environment.

**E. Thesis Structure**

This thesis is structured into three (3) Parts distributed into thirteen (13) chapters, including the Introduction as Chapter I:
(a) The First Part is divided into four (4) chapters. Chapters II and III explore the developments in the environmental laws at the international and regional levels, respectively. Chapter IV provides a comparison of the constitutional environmental provisions of all countries. Thereafter, Chapter V highlights the environmental components, rights, and principles that form the foundation of environmental protection and governance across the globe and provide direction for formulating and implementing environmental laws, policies, and jurisprudence at international, regional, and national levels.

While the First Part takes a descriptive approach, it plays a crucial role in establishing the context for subsequent two Parts, which comprehensively analyze two of the most significant holistic concepts, namely the right to environment and EIA. Both these concepts relate to and encompass all the environmental components, rights, and principles discussed in Chapter V and have potential, when combined, to effectively address most of the environmental challenges prevalent in the present era.

(b) The Second Part focuses on the right to environment. Drawing from extensive research, this Part is structured into two (2) chapters. Chapter VI explores the universal nature of this right emphasized by its wide recognition at international, regional, national, and sub-national levels. Subsequently, Chapter VII defines the right to environment and discusses its five (5) core components, including substantive, procedural, universal, intertemporal, and assessment components.

(c) Moving forward, the Third Part delves into a comprehensive understanding of the EIA concept under the international, regional, and national environmental laws. For a comprehensive understanding of EIA, it presents a cross-jurisdictional analysis of EIA components across the European Union, the United States, and Pakistan.

The Third Part is structured into five (5) chapters. Chapter VIII discusses evolution of the obligation to conduct EIA under international, regional, and national environmental laws. It further provides a brief comparison of the regulatory frameworks of EIA within the European Union, the United States, and Pakistan.

Chapter IX analyzes different levels of environmental assessments that pertain to various scales, capacities, and categories of projects based on their significant environmental effects. It explores the methods and criteria used in the European Union, the United States, and Pakistan to determine whether a project or action requires to undergo through rigorous EIA. The process of this determination for selection of projects for EIA is commonly referred to as "screening".

Chapter X elaborates various stages of the EIA process in the European Union, the United States, and Pakistan.

The next two Chapters XI and XII distinguish between the procedural and substantive components of EIA and provide a comparative analysis of these components across the European Union, the United States, and Pakistan. Both chapters highlight the strengths and weaknesses of each jurisdiction in terms of EIA components and provide insights into which jurisdiction offers a more efficient and comprehensive EIA framework.

Finally, Chapter XIII highlights that EIA is a unique tool that ensures holistic and comprehensive environmental protection by: (a) integrating each of the environmental...
components, rights, and principles discussed in the First Part of the thesis; and (b) protecting, upholding, respecting, enforcing, and attaining the comprehensive right to environment discussed in the Second Part of the thesis. In essence, both the right to environment and EIA have potential to effectively address most – if not all – the complex and interconnected environmental challenges.

F. Thesis Limitations

The advent of this century saw the European Union pioneer a new concept of the Strategic Environmental Assessment (SEA) that holds significant relevance to EIA. EIA primarily focuses on evaluating, assessing, and mitigating the potential adverse environmental effects of individual projects or actions, such as developmental or industrial projects, during their planning stage. In contrast, SEA functions at a broader and strategic level and facilitates the integration of environmental considerations into strategic policies, plans, and programmes, such as regional development plans or transportation strategies. Accordingly, both EIAs and SEAs play complementary roles to ensure that environment is prioritized from the high-level policy formulations to the project planning stage. This thesis, however, restricts its focus to EIA due to the length and time constraints. However, most of the arguments articulated for EIA within this thesis hold relevance to SEA, which will be incorporated during subsequent updates of this thesis.
There have been considerable advances in the environmental laws at international, regional, and national level over the last two (2) centuries. This First Part, consisting of Chapters II to V, explores the evolution of the environmental laws and provides a unifying synthesis of the diverse environmental concepts enshrined within them across each level of governance.

Chapters II surveys the developments in the international environmental laws and categorizes them in three (3) phases based on the understanding and awareness about the environment. It refers the first phase as the Early Modern Period (1900-1972) because the understanding and awareness for the environment was limited and scattered in this period, and the environment was not addressed as a holistic and integrated concern. During this period, fifteen (15) multilateral environmental instruments were signed among a limited number of countries. These instruments primarily had a narrow focus on the protection of nature, flora, fauna, birds, marine life, and addressing marine pollution in mostly different geographical regions.

Subsequently, Chapter II refers the second phase as the Modern Period (1972-2022) because of its notable and always increasing awareness of environmental protection. This period started after the Stockholm Declaration of the United Nations Conference on the Human Environment (1972) (the “Stockholm Declaration (1972)”) that recognized the environment as a holistic and integrated concern. It witnessed the emergence of thirty-five (35) international environmental instruments that received widespread ratification from states. These instruments encompassed broad range of environmental components such as nature and biodiversity conservation, atmospheric protection, marine and freshwater protection, handling hazardous material, climate change, and sustainable development.

These both periods fall short in explicitly recognizing the right to environment at the international level. Therefore, Chapter II identifies the third phase as the Enlightened Period that has recently commenced after the UN Resolution (2022) has recognized the right to environment as a fundamental and universal human right. This phase symbolizes an era where global awareness of environmental protection is heightened, and people have a comprehensive right to environment. This significant development in the international environmental law reflects a well-established recognition of the fundamental importance of environment as a legally protected right and imposes an obligation on every international, regional, and national authority to respect, uphold, and enforce this right.

Chapter II stands out for its unique and novel contribution to the academic literature. It presents the UN Resolution (2022) as a significant milestone akin in significance to the Stockholm Declaration (1972). Both these instruments have profoundly influenced the international environmental landscape and have transformed the course of history in terms of the perception and approach towards environmental issues. While the Stockholm Declaration (1972) is the first international environmental instrument that recognized the environment as a holistic and

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2 Id.
integrated concern, the UN Resolution (2022) has prompted several policy changes in environmental protection and governance across the globe, advocating for absolute environmental protection.

On the other hand, Chapter III examines regional environmental laws, commencing from 1945 when the first region of Arab League was established. It distinguishes three (3) categories of “regional instruments” that acknowledge the significance of environment in every geographical region, including Americas, Europe, Africa, Asia, and Arab (the “regions”). Firstly, “regional constitutive instruments” establish regional bodies in these regions. Some of these instruments have provisions for environmental protection. Secondly, “regional human rights instruments” in most of these regions protect and recognize the right to environment and the environmental rights. Thirdly, “regional environmental instruments” in all these regions are specific to different environmental issues. This chapter determines that although these regional laws have not reached the same level of advancement as international environmental laws, they nonetheless contain similar environmental concepts and align themselves with the same trajectory.

At the national level, nearly all countries have signed and ratified most of the international environmental instruments as well as the regional instruments tailored to their specific regions. As a result, to adhere to their international and regional commitments and safeguard the environment, majority of countries have incorporated environmental provisions in their constitutions and nearly all countries have introduced comprehensive legislations, policies, and jurisprudence that cover a wide spectrum of environmental issues.

However, it is essential to acknowledge that providing an exhaustive list of all the environmental legislations, policies, and jurisprudence for every country across the globe is both excessively lengthy and beyond the scope of this thesis. Although there is scholarly work on environmental laws of each country, this chapter focuses on the fact that majority of countries worldwide have explicitly incorporated environmental protection provisions in their national constitutions. The scholars have consistently reported the inclusion of environmental provisions in the constitutions, coining the term “environmental constitutionalism” to describe the phenomenon and to establish constitutional basis for the right to environment. This concept has garnered significant attention in the scholarly community, resulting in a wealth of literature on the subject.

Therefore, Chapter IV surveys all the environmental provisions contained in the national constitutions of a total of 194 countries and classified them into two (2) main categories. The first type of provisions is the “policy provisions” that provide obligations of states and citizens concerning protection of the environment. This chapter categorizes these policy provisions into ten (10) separate environmental aspects to reflect their recognition within the national constitutions. These aspects included different environmental concerns, spanning from the broader aspects of the environment, quality of life, and health, to more specific areas such as nature and biodiversity, natural resources, sustainable development, interests of future generations, marine, pollution, hazardous material, air, and climate change.

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Furthermore, the second type of provisions is the “right-based provisions” that acknowledge the right to environment and the environmental rights. Chapter IV classifies these provisions into seven (7) categories to show recognition of substantive and procedural environmental rights in constitutions of countries worldwide.

Finally, Chapter V provides a unifying synthesis of the overarching concepts enshrined within environmental laws across each level of governance. It consolidates the core environmental components, rights, and principles underpinning these environmental laws and elucidates their universal recognition and application across the global landscape. It discusses that environmental protection and governance, from the global stage to the grassroots local level, can be conceptualized through four (4) foundational pillars: environmental components, obligations, rights, and principles. This chapter explicates, differentiates, and underscores the significance of these pillars.

Chapter V indicates that the environmental laws encompass a handful of different concepts that provide direction for formulating and implementing environmental laws, policies, and jurisprudence to address environmental challenges at every level:

1. Environmental laws primarily comprise of policy provisions that delineate the environmental obligations of the states, organizations, and individuals (the “environmental obligations”) to protect human health and five (5) core environmental components, including nature and biodiversity, atmosphere, water, land, and sustainable development (collectively, the “environmental components”). These policy provisions can further be divided into substantive and procedural obligations.

2. In parallel, environmental laws also secure a total of eleven (11) substantive and procedural environmental rights (collectively, the “environmental rights”). Eight (8) substantive rights focus on environmental quality, including the rights of nature, the right to natural resources, the right to clean air, the rights to water and sanitation, the right to sustainable development, the right to adequate conditions of life or standards of living, the right to enjoyment of the highest attainable standards of health, and the right to food and adequate nutrition (collectively, the “substantive rights”). Furthermore, three (3) procedural rights complement their substantive counterparts and include the rights to information, public participation, and judicial remedy in environmental matters (collectively, the “procedural rights”).

3. In addition, the environmental laws encompass ten (10) recurring and common environmental principles, including the precautionary approach, the integration of environmental considerations, the involvement of stakeholders, environmental equity, environmental justice, transboundary cooperation, the polluter pays principle, common but differentiated responsibilities, the use of science and technology, and education and awareness in environmental matters (collectively, the “environmental principles”). These principles are crucial for safeguarding the environmental components and upholding the environmental rights.

Accordingly, Chapter V underscores the intricate interplay of environmental components, obligations, rights, and principles found in environmental laws spanning from international to grassroots levels. It streamlines the broad concept of environmental protection and governance and illuminates the collective journey towards a harmonious coexistence with nature.
While this Part of the thesis takes a descriptive approach, it plays a crucial role in establishing the context for subsequent two (2) Parts, which comprehensively analyze two of the most significant concepts, including the right to environment and EIA. These both concepts relate to and encompass all the environmental components, obligations, rights, and principles discussed in Chapter V and have potential, when combined, to effectively address most – if not all – of the environmental challenges prevalent in the present era.
Chapter II: International Environmental Laws

As outlined in the introductory section of the First Part, the evolution of international environmental law can be categorized into three (3) distinct phases, namely the Early Modern Period, the Modern Period, and the Enlightened Period. This chapter reviews the developments of international environmental law and lists down the fifteen (15) multi-lateral and thirty-five (35) international environmental instruments adopted during the Early Modern and Modern Periods. Additionally, it explores the inception of the Enlightened Period, where global awareness of environmental protection is heightened, and people have a comprehensive, fundamental, and universal right to environment. Accordingly, this chapter underscores the need for establishing remedies and mechanisms to attain, respect, and enforce the right to environment.

A. Early Modern Period

This formative period encompasses the early twentieth century up until the United Nations Conference on the Human Environment held in Stockholm, Sweden, in 1972. Over this course of more than seven (7) decades, there was a gradual and scattered understanding and awareness for the preservation of nature and species. This awareness was driven by a series of both natural and man-made incidents that threatened nature and endangered existence of various species. In this period, there were only limited number of "multilateral instruments" ratified by a small group of countries, as the establishment of international law was still in its initial stages by the end of this period. These instruments primarily focused on the protection of nature, flora, fauna, birds, marine life, and addressing marine pollution in mostly different geographical regions. Moreover, environment was not explicitly addressed as a holistic and integrated concern in any of these instruments. Nevertheless, this phase played a crucial role in the progression of environmental laws across the globe.

During this period, the international law started to emerge in 1945 with establishment of the United Nations and has largely been shaped by the objective of promoting and protecting human rights. This is evident from the fact that first few major “international instruments”, including the Universal Declaration of Human Rights (1948), the International Covenant on Civil and Political Rights (1966),4 and the International Covenant on Economic, Social and Cultural Rights (1966),5 reaffirmed faith in universal and fundamental human rights, including civil and political freedoms and economic, social, and cultural rights. Notably, these international instruments did not address any environmental topic, did not incorporate environmental considerations, and did not recognize the right to environment as a human right. They, however, protected few rights, which were later expounded to be related to environment by the courts around the globe.

In the Early Modern Period, fifteen (15) multilateral instruments were signed and ratified on the following environmental topics:

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1. Protection of Nature, Flora, and Fauna

During the Early Modern Period, there were at least five (5) conventions signed and ratified by several countries with a clear emphasis on preservation and protection of nature, fauna, flora, wildlife, and wetlands in different regions. These conventions included the following:

(1) The London Convention for the Protection of Wild Animals, Birds and Fish in Africa (1900)\(^6\) was signed by the then seven (7) African colonial powers, including Belgium, France, Germany, Italy, Portugal, Spain and the United Kingdom, to conserve nature and natural resources of the African region. It aimed at preventing uncontrolled massacre and ensuring conservation of different species of the wild animals, birds, and fish. This Convention was never ratified by most of its signatories. It was, however, one of history's earliest agreements on nature conservation, which paved the way for the subsequent convention focused on preservation of fauna and flora in 1933.\(^7\)

(2) Based on the preceding convention, the London Convention relative to the Preservation of Fauna and Flora in their Natural State (1933)\(^8\) was signed by nine (9) countries, including the Union of South Africa, Belgium, the United Kingdom of Great Britain and Northern Ireland, Egypt, Spain, France, Italy, Portugal, and the Anglo-Egyptian Sudan. The purpose of this convention was to preserve fauna and flora of particularly African region and to save them from danger of extinction or permanent injury. It considered that "such preservation can best be achieved (i) by the constitution of national parks, strict natural reserves, and other reserves within which the hunting, killing or capturing of fauna, and the collection or destruction of flora shall be limited or prohibited, (ii) by the institution of regulations concerning the hunting, killing and capturing of fauna outside such areas, (iii) by the regulation of the traffic in trophies, and (iv) by the prohibition of certain methods of and weapons for the hunting, killing and capturing of fauna".\(^9\)

(3) The Washington Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (1940)\(^10\) was concluded for protection and preservation of: (a) nature, flora and fauna; (b) natural habitat of all species and genera of their native flora and fauna, including migratory birds and wildlife; and (c) scenery of extraordinary beauty, unusual and striking geologic formations, regions and natural objects of aesthetic, historic or scientific value, and areas characterized by primitive conditions. It is ratified by nineteen (19) countries, including Argentina, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, the United States of America, Uruguay, and Venezuela.\(^11\)

\(^6\) London Convention for the Protection of Wild Animals, Birds and Fish in Africa, May 19, 1900.
\(^8\) London Convention relative to the Preservation of Fauna and Flora in their Natural State, Nov. 8, 1933.
\(^9\) Id. Preamble.
\(^11\) List available at: https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280150233&clang=en
(4) The Antarctic Treaty (1959) targeted to govern activities and promote cooperation in scientific investigation in the Antarctic region.\(^{12}\) It was signed by twelve (12) countries, including Argentina, Australia, Belgium, Chile, the French Republic, Japan, New Zealand, Norway, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. This treaty provided a legal framework for governance of Antarctica, emphasizing the peaceful and cooperative nature of activities, facilitating cooperation in scientific research, and prohibiting military activities and nuclear testing in the region. This treaty contributed to preservation of the Antarctica’s unique environment and the conservation of its living resources.

(5) The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)\(^{13}\) recognized the ecological, cultural, and economic importance of wetlands and aimed to promote their conservation and sustainable use with coordinated international action.\(^{14}\) It also recognized the interdependence of man and his environment and established the fundamental ecological functions of wetlands as regulators of water regimes and as habitats supporting a characteristic flora and fauna, especially waterfowl. It was ratified by only a handful of countries at that time, but now it is widely ratified by 170 countries.\(^{15}\)

2. Protection of Birds

In the Early Modern Period, there were the following two (2) conventions signed and ratified by a limited number of countries for protection of birds:

(1) The Convention for the Protection of Migratory Birds in the United States and Canada (1916)\(^{16}\) aimed at the conservation of migratory birds through sustainable hunting. It was signed by the United States and the Great Britain (on behalf of Canada).

(2) The International Convention for the Protection of Birds (1950)\(^{17}\) declared protection of all birds as a matter of principle. It was signed by twelve (12) countries, including Austria, Belgium, Bulgaria, Spain, France, Greece, the Principality of Monaco, the Netherlands, Portugal, Sweden, Switzerland, and Turkey. This Convention was an amendment to the earlier International Convention for the Protection of Birds Useful to Agriculture (1902)\(^{18}\) and was signed after realizing danger of extermination and numerical decrease in certain species of birds, particularly migratory species.


\(^{13}\) Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb. 2, 1971.

\(^{14}\) Id. This convention has been adopted by over 170 countries, highlighting the global recognition of the importance of wetland conservation.

\(^{15}\) List available at: https://treaties.un.org/pages/showDetails.aspx?objid=0800000280104c20


\(^{17}\) International Convention for the Protection of Birds, Oct. 18, 1950 [successor to the International Convention for the Protection of Birds Useful to Agriculture, Mar. 19, 1902].

\(^{18}\) International Convention for the Protection of Birds Useful to Agriculture, Mar. 19, 1902.
3. Protection of Marine Life

In the Early Modern Period, there were the following four (4) conventions signed and ratified by a limited number of countries for preservation of marine life, including fur seals, whales, and fisheries of different seas:

(1) The Washington Treaty for the Preservation and Protection of Fur Seals (1911)\(^{19}\) was signed by four (4) countries, namely the United States, Great Britain (also representing Canada), Russia and Japan, to prohibit pelagic sealing in waters of the North Pacific Ocean and managing onshore hunts. This treaty provided an exemption for aboriginal tribes, which hunted seals for non-commercial purposes using traditional methods.

(2) The International Convention for the Regulation of Whaling (1946)\(^{20}\) established the International Whaling Commission for “proper conservation of whale stocks and … the orderly development of the whaling industry”.\(^{21}\) This Convention was signed by fifteen (15) countries, including Argentina, Australia, Brazil, Canada, Chile, Denmark, France, the Netherlands, New Zealand, Norway, Peru, South Africa, the Soviet Union, the United Kingdom and the United States. This convention was a successor to the earlier Geneva Convention for Regulation of Whaling (1931) and the International Agreement for the Regulation of Whaling (1937), both established in response to the overexploitation of whales after the First World War. This convention acknowledged the significance of safeguarding the whale stocks as natural resources for future generations.

(3) The Washington International Convention for the North-West Atlantic Fisheries (1949) was signed by ten (10) countries, including Canada, Denmark, France, Iceland, Italy, Norway, Portugal, Spain, the United Kingdom of Great Britain and Northern Ireland, and the United States, for the investigation, protection, and conservation of the fishery resources of the Northwest Atlantic Ocean.\(^{22}\)

(4) The Tokyo International Convention for the High Seas Fisheries of the North Pacific Ocean (1952) was signed by three (3) countries, including the United States of America, Canada, and Japan, to ensure the maximum sustained productivity of the fishery resources of the North Pacific Ocean, and to assume an obligation to encourage the conservation of such resources.\(^{23}\) This Convention established an International Commission to carry out its purposes.


\(^{21}\) Id. Preamble.

\(^{22}\) International Convention for the North-West Atlantic Fisheries, Feb. 8, 1949.

\(^{23}\) Tokyo International Convention for the High Seas Fisheries of the North Pacific Ocean, May 9, 1952.
4. Addressing Marine Pollution

After the 1950s, there was a notable rise in oil spill incidents from maritime ships into the seas. These incidents drew global attention to the hazards and environmental consequences of marine oil spills and triggered a proactive response from community. As a result, four (4) conventions were signed and ratified by a limited number of countries to address pollution damage and cleanup costs. These conventions of the Early Modern Period include the following:


2. The Bonn Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil (1969) was signed by eight (8) states bordering the North Sea, namely Belgium, Denmark, Germany, France, the Netherlands, Norway, Sweden, and the United Kingdom. Its primary objectives were to foster cooperation in preventing and responding to environmental pollution in the North Sea resulting from maritime disasters, chronic pollution from ships, and offshore installations. This was subsequently replaced with a new Bonn Agreement in 1983 to include participation of the European Union and to enhance its scope from oil pollution to include "other harmful substances".

3. The Brussels International Convention on Civil Liability for Oil Pollution Damage (1969) was adopted to ensure the availability of adequate compensation for those who suffered oil pollution damage caused by maritime accidents involving oil-carrying ships. This Convention established uniform international rules and procedures to determine liability. It was driven by an awareness of the global risks posed by one of the major the Torrey Canyon oil spill incident in 1967, causing substantial damage to Western Europe. In addition, a voluntary agreement, namely the Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution (1969), was also signed by the tanker-owners in this regard to take effective action, facilitating swift and efficient cleanup efforts, and ensuring adequate and timely compensation.

4. The Brussels International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971) addressed some of the unresolved legal and financial questions raised during the earlier 1969 Brussels Convention. This Convention proposed the creation of an international fund to relieve shipowners of certain burdens and additionally provide extra compensation to pollution.

26 Bonn Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil, June 9, 1969.
27 Bonn Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances, Sept. 13, 1983.
29 Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution, Oct. 6, 1969.
damage victims in cases where compensation under the earlier 1969 Brussels Convention was deemed insufficient or unattainable. Accordingly, it served as a complementary measure to the earlier 1969 Brussels Convention. In addition, a voluntary agreement called the Contract Regarding a Supplement to Tanker Liability for Oil Pollution (1971) was also signed to supplement the earlier 1969 Voluntary Agreement by the tanker and oil industries.  

B. Modern Period

This second period, encompassing five (5) decades from 1972 to 2022, stands out for its notable advancement in recognizing the environment as a holistic and integrated concern at the international level after the Stockholm Declaration (1972). During this period, since the international law was significantly developed and there was increasing understanding and awareness of environmental issues, a total of thirty-five (35) international environmental instruments were signed and widely ratified. These international environmental instruments sought to safeguard diverse aspects of the environment and broad topics, such as nature and biodiversity conservation, atmosphere protection, marine and freshwater protection, hazardous material, climate change, and sustainable development. It is worth noting, however, that despite recognition of the importance of the environment, this Modern Period also falls short in explicitly acknowledging the right to environment.  

By the end of the Early Modern Period, environmental awareness was rising. In 1960s, an environmental movement was started in response to an increasing recognition of environmental and health risks associated with visible pollution caused by intensive industrialization and other manmade activities. While this movement gained significant momentum in the United States, similar concerns and movements also emerged in other nations, leading to global proliferation of environmental activism. This movement marked a crucial turning point in the development of international environmental laws and fostered the need for conservation and sustainable practices worldwide.

In response to the environmental movement of 1960s, the first significant effort in the international environmental law was the United Nations Conference on the Human Environment, held in Stockholm, Sweden, in 1972. This conference resulted into adoption of the Stockholm Declaration (1972) and the Action Plan for the Human Environment (1972) (the “Action Plan (1972)”). While the Action Plan (1972) made several recommendations on environmental assessment, environmental management, and supporting measures, the Stockholm Declaration (1972) was a landmark document that acknowledged the interdependence between human beings and their environment and connected the environment to the "well-being" and "enjoyment" of the basic human right to life. It is essential to highlight that a year before the Stockholm Declaration (1972), the Wetlands Convention (1971) had already recognized the “interdependence of man and his environment”.

Although it was not legally binding, the Stockholm Declaration (1972) declared the “protection and improvement of the human environment as a major issue which affects the well-being of peoples and economic development throughout the world”. Furthermore, it acknowledged

33 Stockholm Declaration, Preamble 1 & 2.
that everyone has “solemn responsibility to protect and improve the environment for present and future generations” and “fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being”.\textsuperscript{34} In addition, it recognized that “economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life”.\textsuperscript{35}

The Stockholm Declaration (1972) brought environmental issues at the forefront of international concerns and expressly recognized the close relationship between quality of the environment, the enjoyment of human rights, and economic growth.\textsuperscript{36} Although it did not proclaim a fundamental human right to environment, it embodied various components of the right to environment as well as several obligations of states to safeguard, manage, and improve the human environment carefully and wisely. It also called for greater cooperation among nations to achieve these goals and paved way for development of environmental law across the globe. In essence, it recognized the environment as a holistic and integrated concern and proved to be a significant development that transformed the course of history in terms of the perception and approach towards environmental issues.

With its wide recognition, the Stockholm Convention (1972) played a pivotal role in shifting the focus from limited and fragmented issues in multilateral instruments to a holistic consideration of the environment. This shift in perspective was groundbreaking as it emphasized the importance of taking a holistic and integrated approach to environmental challenges and promoting a comprehensive approach to environmental protection. This Convention paved way for a more integrated and coordinated global response to environmental challenges and brought together various stakeholders, including governments, scientists, and civil society, to collectively address the pressing environmental issues. By addressing a wide range of environmental concerns, including pollution, conservation of natural resources, and the impact of human activities on the environment, this Convention highlighted the complexity and interdependence of these issues. Furthermore, it served as a catalyst for the development of international environmental law and laid the groundwork for subsequent international agreements, conventions, and protocols of the Modern Period in international environmental law.

Post-Stockholm, the next significant effort was made twenty (20) years later with the unprecedented United Nations Conference on Environment and Development, known as the Earth Summit, held in Rio de Janeiro, Brazil, in 1992.\textsuperscript{37} The Earth Summit produced five (5) international environmental instruments, including the Rio Declaration on Environment and Development (1992) (the “Rio Declaration (1992)”), the Agenda 21 (1992), the Forest Principles (1992), the United Nations Framework Convention on Climate Change (1992), and the Convention on Biological Diversity (1992). These documents prioritized and interlinked

\textsuperscript{34} Id. Principle 1
\textsuperscript{35} Id. Principle 8.
\textsuperscript{37} Rio Declaration of the U.N. Conference on Environment and Development, June 14, 1992 [hereinafter the “Rio Declaration”].
several concepts for environmental protection, including the sustainable development, climate change, biodiversity, forest management, and public awareness and participation.

While the other instruments are discussed under their appropriate headings, it is essential to discuss the Rio Declaration (1992) separately and highlight few of its following important principles:

(1) The human beings are at the center of concerns for sustainable development and are entitled to a healthy and productive life in harmony with nature.  

(2) The states have responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other nations or of areas beyond the limits of their national jurisdiction.

(3) The “right to development” must be fulfilled to equitably meet development and environmental needs of present and future generation.

(4) Environmental protection must constitute integral part of the development process to achieve sustainable development and cannot be considered in isolation.

(5) All states and people must co-operate in eradicating poverty as an indispensable requirement for sustainable development.

(6) The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, must be given special priority.

(7) The states must co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, the states have common but differentiated responsibilities.

(8) To achieve sustainable development and a higher quality of life for all people, the states should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

(9) The states should strengthen capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

(10) The environmental issues are best handled with the participation of all concerned citizens. At the national level, everyone shall have appropriate access to information.

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38 Id. Principle 1.
39 Id. Principle 2.
40 Id. Principle 3.
41 Id. Principle 4.
42 Id. Principle 5.
43 Id. Principle 6.
44 Id. Principle 7.
45 Id. Principle 8.
46 Id. Principle 9.
concerning the environment held by public authorities, the opportunity to participate in decision-making processes, and effective access to judicial and administrative remedy.\(^\text{47}\)

(11) The precautionary approach must be widely applied by the states according to their capabilities to protect the environment.\(^\text{48}\)

(12) The states must undertake environmental impact assessment for “proposed activities that are likely to have a significant adverse impact on the environment”.\(^\text{49}\)

(13) Peace, development, and environmental protection are interdependent and indivisible.\(^\text{50}\)

(14) States must resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.\(^\text{51}\)

During this Modern Period, international environmental law has continued to evolve and shape by a total of thirty-five (35) international conventions, declarations, and agreements. In contrast to the limited participation observed in earlier multilateral instruments and scattered environmental awareness in the Early Modern Period, the instruments of the Modern Period received widespread acceptance from countries, which reflect the collective efforts of the global community to address the complex, diverse, interconnected, and pressing environmental challenges. These international environmental instruments can generally be categorized into six (6) broad categories, including nature and biodiversity conservation, atmospheric protection, climate change, marine and freshwater protection, handling hazardous material, and sustainable development:

1. Nature and Biodiversity Conservation

This category in the Modern Period pertains to treaties and agreements aimed at nature and biodiversity conservation. There are the following ten (10) treaties in this category:

(1) Convention Concerning the Protection of the World Cultural and Natural Heritage (1972), also known as the “World Heritage Convention”, aims to identify, protect, and conserve cultural and natural heritage sites of outstanding universal value, such as historical landmarks, national parks, and ecosystems;\(^\text{52}\)

(2) Convention on International Trade in Endangered Species of Wild Flora and Fauna (1973) regulates the exploitation and trade of over 35,000 endangered plant and animal species and aims to ensure that their trade does not threaten their survival.\(^\text{53}\)

\(\text{47}\) Id. Principle 10.  
\(\text{48}\) Id. Principle 15.  
\(\text{49}\) Id. Principle 17.  
\(\text{50}\) Id. Principle 25.  
\(\text{51}\) Id. Principle 26.  
\(\text{52}\) Convention Concerning the Protection of the World Cultural and Natural Heritage, Nov. 23, 1972. This convention is ratified by over 190 countries, making it one of the most widely adopted environmental conventions in the world.  
(3) Convention on the Conservation of Migratory Species of Wild Animals (1979) aims to conserve migratory species of wild animals and their habitats that cross international borders;\(^{54}\)

(4) World Charter for Nature (1982) is a non-binding document, outlining general principles of conservation of nature and ecosystems and sustainable use of natural resources.\(^{55}\)

(5) Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (1992) aims to conserve and protect small cetaceans (dolphins, porpoises, and small whales) in these regions;\(^{56}\)

(6) Rio Convention on Biological Diversity (1992) (the “Biodiversity Convention (1992)”) promotes the sustainable use and conservation of biodiversity;\(^{57}\)

(7) Rio Forest Principles (1992) are non-legally binding statement of principles for a global consensus on management, conservation, and sustainable development of all types of forests.\(^{58}\)

(8) Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994) aims to combat illegal trade in wildlife and plants by promoting international cooperation and enforcement efforts;\(^{59}\)

(9) Rio United Nations Convention to Combat Desertification (1994) is introduced to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through international cooperation and partnership arrangements;\(^{60}\) and

(10) International Treaty on Plant Genetic Resources for Food and Agriculture (2001) aims to ensure the sustainable use and conservation of plant genetic resources for food and agriculture.\(^{61}\)

These instruments, generally, obliges every state-party to conserve nature and biodiversity by preventing loss of species and habitats and promoting sustainable use of natural resources. They particularly focus on protection and conservation of nature, ecosystems, biodiversity, forests, natural parks, wildlife, flora, fauna, migratory and endangered species, their habitats, cultural and natural heritage, and all species and genetic diversity found within them.

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\(^{56}\) Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas, Mar. 17, 1992. The Agreement currently has 11 parties, including countries bordering the North Atlantic and Baltic Seas, as well as the European Union.
\(^{57}\) Convention on Biological Diversity, June 5, 1992.
\(^{60}\) U.N. Convention to Combat Desertification, June 17, 1994.
2. Atmosphere Protection

This category of international environmental law in the Modern Period involves treaties for protecting the atmosphere. There are the following four (4) treaties in this category:

(1) Geneva Convention on long-range Transboundary Air Pollution (1979) aims to address air pollution and its long-range transboundary effects on human health and the environment;\(^62\)

(2) Vienna Convention for the Protection of the Ozone Layer (1985) with an aim of protecting the ozone layer from depletion caused by human activities, and its Montreal Protocol on Substances that Deplete the Ozone Layer (1987) to phase out the production and consumption of ozone-depleting substances;\(^63\)

(3) Espoo Convention on Environmental Impact Assessment in a Transboundary Context (1991) (the “Espoo Convention (1991)”\(^64\)) aims to prevent and mitigate the adverse environmental effects of major industrial and other activities across borders. This Convention has been amended vide the Sofia Amendment (2001), the Kiev Protocol on Strategic Environmental Assessment (2003), and the Cavtat Amendment (2004).\(^65\)

(4) Convention on the Transboundary Effects of Industrial Accidents (1992) aims to prevent, prepare for, and respond to industrial accidents with transboundary effects, including those caused by hazardous substances.\(^66\)

These instruments seek to safeguard the Earth's atmosphere for the well-being of ecosystems and human health. They require every state party to these instruments to reduce indoor and outdoor air pollution, its transboundary effects, greenhouse gases, and ozone-depleting substances from atmosphere.

3. Climate Change

This category in the Modern Period comprises treaties to address the problem of climate change. Although this category can be included in above category of the atmosphere protection, it deserves a separate recognition because of the significance of climate change concept. There are the following three (3) treaties in this category:

(1) United Nations Framework Convention on Climate Change (1992) (“UNFCCC”) provides a framework for binding greenhouse gas emission reduction targets and timetables to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human interference with the climate system;\(^67\)

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\(^65\) Sofia Amendment to Espoo Convention, Feb. 27, 2001; Kiev Protocol on Strategic Environmental Assessment to Espoo Convention, May 21, 2003; Cavtat Amendment to Espoo Convention, June 4, 2004.


(2) Kyoto Protocol (1997) to UNFCCC legally binds developed countries to reduce their greenhouse gas emissions to levels that are at least 5% below their 1990 levels, with specific reduction targets for each participating country;\(^{68}\) and

(3) Paris Agreement (2015), a legally binding treaty under UNFCCC, aims to limit global temperature rise to well below 2°C above pre-industrial levels, with a goal of pursuing efforts to limit the temperature increase to 1.5°C.\(^{69}\) It includes commitments by participating countries to reduce their greenhouse gas emissions, to regularly report on their emissions and progress towards their targets, and to provide financial assistance to developing countries to mitigate and adapt to climate change impacts.

These instruments primarily address the global challenge of climate change caused by human activities, particularly the emission of greenhouse gases. They require every state party to these instruments to foster international cooperation to limit global warming and adapt to effects of climate change by limiting global temperature rise.

4. **Marine and Freshwater Protection**

This category in the Modern Period contains treaties to address the issues of marine and freshwater resources. There are the following seven (7) treaties in this category:

(1) London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) aims to protect the marine environment from pollution caused by dumping waste and other materials into the sea;\(^{70}\)

(2) International Convention for the Prevention of Pollution from Ships (1973) aims to prevent marine pollution caused by ships, including oil pollution, pollution from noxious liquid substances, harmful substances in packaged form, sewage, garbage, and air pollution;\(^{71}\)


(4) International Convention on Oil Pollution Preparedness, Response and Co-operation (1990) establishes a framework for international co-operation in dealing with major oil spills at sea;\(^{73}\)

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\(^{69}\) Paris Agreement, Dec. 12, 2015.


(5) Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992) aims to protect transboundary water resources, including rivers, lakes, and groundwater, from pollution and degradation;\textsuperscript{74}

(6) Convention on the Law of the Non-Navigational Uses of International Watercourses (1997) provides a framework for the management and use of transboundary water resources in a way that is equitable and sustainable;\textsuperscript{75} and

(7) Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (2023) is adopted to ensure the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction through effective implementation of the relevant provisions of the Law of Seas Convention (1982).\textsuperscript{76}

These instruments impose an obligation on state-parties to manage, conserve, and use all their marine resources, including underground water, rivers, lakes, seas, oceans, marine biodiversity, its ecosystems, and its habitat, in an equitable and sustainable way. Further, they also require states to ensure protection from pollution and degradation caused by dumping waste and other material, including oil, noxious liquid substances, harmful substances, sewage, and garbage into the ground water.

4. Hazardous Material

This category of international environmental law in the Modern Period encompasses treaties for handling hazardous material. There are the following three (3) treaties in this category:

(1) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) regulates the transboundary movement of hazardous wastes and ensures their environmentally sound management;\textsuperscript{77}

(2) Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998) regulates international trade in hazardous chemicals and pesticides, ensuring that importing countries are informed of the potential risks and can make informed decisions about their import;\textsuperscript{78} and

(3) Stockholm Convention on Persistent Organic Pollutants (2001) aims to protect human health and the environment from exposure of chemicals known as persistent organic pollutants that can persist in the environment for a long time and can have harmful effects on human health and the environment.\textsuperscript{79}

\textsuperscript{74} Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17, 1992.
These instruments require the state-parties to safely handle, transport, and dispose of hazardous substances and toxic wastes into their jurisdictions and to prevent their adverse effects on the environment and human health. They include provisions for handling transboundary movement, management, and trade of hazardous wastes, chemicals, pesticides, and persistent organic pollutants.

6. Sustainable Development

This last category of international environmental law in the Modern Period includes international declarations and persuasive and widely accepted soft law instruments for sustainable development. There are the following six (6) instruments in this category:

(1) The United Nations General Assembly passed a resolution in 1983, and established a special commission named the “World Commission on Environment and Development”.80 This Special Commission, later known as the Brundtland Commission, was established to present “a report on environment and the global problamatique to the year 2000 and beyond, including proposed strategies for sustainable development, within a period of two years from its establishment”.81

In 1987, UNEP adopted the “Report of the World Commission on Environment and Development”, also known as “Our Common Future” or the Brundtland Report, to address growing concerns about the impacts of human activities on the environment and sustainable development.82 It highlighted the need for common environmental concerns, challenges, and actions. It also emphasized on the concept of sustainable development and highlighted the interconnectedness of environmental, economic, and social issues to achieve environmental sustainability. In addition, it called for a global shift towards sustainable development and proposed strategies to achieve this goal. This groundbreaking report was the earliest notable contribution because it influenced the global environmental agenda and set the stage for the Earth Summit in 1992.

(2) The Rio Declaration (1992), passed at the Earth Summit, aims to promote sustainable development by balancing economic development with environmental protection and social equity. This has already been discussed in detail at the start of this section.

(3) Rio Agenda 21 (1992), passed at the Earth Summit, is a comprehensive plan of action, which aims to balance economic, social, and environmental concerns in order to meet the needs of the present and future generations.83 It includes recommendations for achieving sustainable development in areas such as poverty reduction, health, education, gender equality, energy, transport, agriculture, biodiversity, and urbanization.

(4) Johannesburg Declaration on Sustainable Development (2002), passed at the World Summit in 2002, recognizes the urgency of sustainable development and emphasizes on the need for cooperation among all countries to achieve it.84 It calls for an integrated

81 Id. art 10.
83 Agenda 21, June 14, 1992.
84 Johannesburg Declaration on Sustainable Development, Sept. 4, 2002.
approach to economic, social, and environmental issues, and for the promotion of equitable growth and poverty eradication. It also highlights the importance of good governance, democracy, and rule of law in achieving sustainable development. Further, it recognizes the role of partnerships among governments, civil society, and the private sector in implementing sustainable development goals.

(5) "The Future We Want", produced at the United Nations Conference on Sustainable Development (2012), also known as Rio+20, reaffirms the commitments made at previous sustainable development conferences and outlines a framework for sustainable development in the future. It recognizes the need for economic, social, and environmental sustainability, and stresses the importance of addressing poverty, inequality, and environmental degradation. It calls for the integration of sustainable development goals into national policies and for the establishment of a set of sustainable development indicators to measure progress.\(^\text{85}\)

(6) Sustainable Development Goals (SDGs) are adopted at the United Nations Sustainable Development Summit in 2015 as a universal call to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity. SDGs consist of 17 goals and 169 targets to be achieved by 2030, covering areas such as poverty reduction, climate action, gender equality, and clean water and sanitation.\(^\text{86}\) The SDGs provide a roadmap for sustainable development and guide the international community towards a more sustainable and equitable future.

These instruments aim to integrate environmental, social, and economic considerations to achieve a balanced and sustainable development that meets the needs of the present and future generations. SDGs are total of seventeen (17) interlinked objectives of sustainable development. These objectives include no poverty; zero hunger; good health and well-being; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry, innovation, and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice, and strong institutions; and partnerships for the goals.

**C. Enlightened Period**

The six (6) categories of thirty-five (35) international environmental instruments of the Modern Period play a crucial role in collectively addressing the global environmental challenges. However, despite adoption of these numerous instruments aimed at different aspects of the environmental protection, the world still confronts persistent environmental threats and grapples with implementation challenges across all these domains.

In response to the ongoing environmental challenges, UNGA has taken a significant step by recognizing the right to environment as a fundamental and universal human right in the UN Resolution (2022). Accordingly, with this recognition, the Enlightened Period in international environmental law has commenced. This period symbolizes an era where global awareness of environmental protection is heightened, and people have a comprehensive right to environment. It reflects a well-established recognition of the fundamental importance of

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\(^{85}\) The Future We Want: Rio 20+, June 19, 2012.

environment as a legally protected right and imposes an obligation on every international, regional, and national authority to respect, uphold, and enforce this right.

At the outset, the UN Resolution (2022) is a significant milestone akin in significance to the Stockholm Declaration (1972). Both these instruments have profoundly influenced the international environmental landscape and have transformed the course of history in terms of the perception and approach towards environmental issues. While the Stockholm Declaration (1972) is the first international environmental instrument that recognized the environment as a holistic and integrated concern, the UN Resolution (2022) has prompted several policy changes in environmental protection and governance across the globe, advocating for absolute environmental protection.

The universal recognition of the right to environment represents a parallel development that does not undermine the previous concepts of the international environmental instruments but rather establishes a vital connection among them. It places the onus on international, regional, and national authorities to be accountable to their citizens and obliges them to ensure a healthy and sustainable environment that safeguards all the environmental components. The recognition and definition of this right are discussed in the Second Part.

**D. Conclusion**

This chapter traces the evolution of international environmental law through its three (3) distinct phases, namely the Early Modern Period, the Modern Period, and the Enlightened Period. These periods are separated by two (2) of the most significant instruments, namely the Stockholm Declaration (1972) and the UN Declaration (2022). The Stockholm Declaration (1972) is the first international environmental instrument that brings environmental issues at the forefront of international concerns and expressly recognizes the close relationship between quality of the environment, the enjoyment of human rights, and economic growth. By recognizing the environment as a holistic and integrated concern, it proved to be a significant global development that transformed the course of history in terms of the perception and approach towards environmental issues.

On the other hand, the UN Resolution (2022) is another significant milestone akin in significance to the Stockholm Declaration (1972). This resolution recognizes the fundamental importance of the environment as a legally protected universal human right and imposes an obligation on every international, regional, and national authority to respect, uphold, and enforce this right. It prompts several policy changes in environmental protection and governance across the globe and advocates for absolute environmental protection. However, the profound repercussions of this resolution on the global environmental landscape are yet to unfold.

The chapter also reveals an overview of fifteen (15) multilateral environmental instruments adopted by limited number of countries during 1900 to 1972 and the subsequent thirty-five (35) international environmental instruments widely adopted during 1972 to 2022. These are progressive developments, indicating that international environmental law has evolved to encompass diverse facets, including nature and biodiversity conservation, atmospheric preservation, climate change mitigation, marine and freshwater ecosystems protection, hazardous materials management, and the promotion of sustainable development.
Among these instruments, the significance of EIA is only recognized in five (5) international environmental instruments, including the Espoo Convention (1991), the Rio Declaration (1992), the Biodiversity Convention (1992), UNFCCC (1992), and the Watercourses Convention (1997).
Chapter III: Regional Environmental Laws

Alongside the development of international law, several states formed regional groups to jointly address specific issues, including environment, within their geographical regions. This chapter discusses regional groups in the American, European, African, Asian, and Arab regions and highlights their regional laws. It explores how these regional alliances of neighboring countries foster cooperation and contribute to environmental protection.

At the outset, the term “regional laws” refers to such legal instruments, conventions, and agreements that are negotiated, established, and enforced by regional organizations or group of countries within a particular region or geographic area. These laws often address and regulate specific or multiple issues, challenges, or interests, such as economic integration, trade, human rights, environmental protection, security, and governance. They can foster regional cooperation, integration, and harmonization of laws and policies within these specific regions and allow member countries to effectively address common challenges, shared values and interests, and collective goals at the regional level.

There are three (3) types of regional laws or instruments that recognize the importance of environment. Firstly, the “regional constitutive instruments” establish regional bodies in the American, European, African, Asian, and Arab regions. Some of these instruments have provisions for environmental protection. Secondly, the “regional human rights instruments” in all these regions protects and recognizes the right to environment and the environmental rights. Thirdly, the “regional environmental law instruments” in some of these regions are specific to environmental protection.

This chapter discusses regional laws and environmental provisions of the following five (5) geographical regions of the world:¹

1. American region consisting of thirty-five (35) countries from North, Central, and South America, as well as the Caribbean belonging to the Organization of American States;

2. European region consisting of forty-six (46) countries of the Council of Europe, including twenty-seven (27) countries of the European Union;

3. African region consisting of fifty-five (55) countries of the African Union;

4. Asian region, including ten (10) countries of the Association of Southeast Asian Nations (ASEAN) and eight (8) countries of the South Asian Association for Regional Cooperation (SAARC); and

5. Arab region consisting of twenty-two (22) member states of the League of Arab States.

¹ The complete lists of the countries in these regions are provided in Appendix II. Amongst these regions, only the European Union has imposed a duty to conduct EIA on its member states.
A. American Region

In the American region, the constitutive regional instrument, namely the Charter of the Organization of American States (1948), establishes the Organization of American States and acknowledges, in its Preamble, that “the historic mission of America is to offer to man a land of liberty and a favorable environment for the development of his personality and the realization of his just aspirations”. Further, it requires the Inter-American Council for Integral Development to promote, coordinate, and assign responsibility for the execution of development programs and projects to the subsidiary bodies and relevant organizations in areas such as the environment.

There are at least the following four (4) regional human rights instruments in the American region with environmental provisions:

1. American Convention on Human Rights (1969), also known as the "Pact of San José, Costa Rica", does not contain any provision for protection of environment. It, however, provides the right to have life respected (Article 4), the right to participate in conduct of public affairs (Article 23), and the right to judicial protection (Article 25).

2. San Salvador Protocol to the American Convention on Human Rights (1988) has formally recognized the “right live in a healthy environment”. Its Article 11 states that “everyone shall have the right to live in a healthy environment and to have access to basic public services” and the “States Parties shall promote the protection, preservation, and improvement of the environment.” In addition, its Article 12 provides that “everyone has the right to adequate nutrition which guarantees the possibility of enjoying the highest level of physical, emotional and intellectual development”.

3. Inter-American Democratic Charter (2001), in its Preamble, provides that “a safe environment is essential to the integral development of the human being, which contributes to democracy and political stability”. It recognizes the “right and responsibility of all citizens to participate in decisions relating to their own development” and conditions participation with the full and effective exercise of democracy and strengthening democracy. Moreover, it also acknowledges that “exercise of democracy promotes the preservation and good stewardship of the environment [and it] is essential that the states … implement policies and strategies to protect the environment, including application of various treaties and conventions, to achieve sustainable development for the benefit of future generations.”

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3 Id. art 95.
6 Id. art 11.
7 Id. art 12
9 Id. art 6.
(4) Social Charter of the Americas (2012) recognizes that “a safe environment is essential to integral development.” It acknowledges the fundamental right of all persons to “the enjoyment of the highest attainable standard of health” and affirms commitment of member states “to promote healthy lifestyles and to strengthen their capacity to prevent, detect, and respond to … diseases, and environmental health concerns.” It requires the member states to recognize that “water is fundamental for life and central to socioeconomic development and environmental sustainability … [and] undertake to continue working to ensure access to safe drinking water and sanitation services for present and future generations.” It states that “natural and man-made disasters affect populations, economies, and the environment” and “reducing the vulnerabilities of countries to these disasters … is essential to ensuring nations’ progress and the pursuit of a better quality of life.” Lastly, through this Charter, the member states “pledge themselves to a united effort to ensure international social justice in their relations and integral development [encompasses environmental fields] for their peoples”.

There is only one regional environmental instrument in this region, called the Escazú Agreement (2018), which acknowledges the rights to environment and to sustainable development, as well as the procedural environmental rights.

A free trade agreement, namely the U.S.-Mexico-Canada Agreement (2018) (USMCA), has also been signed between Canada, Mexico and the United States, which has substituted the earlier North American Agreement on Environmental Cooperation (1994). This new trade-free-agreement contains a separate chapter with detailed provisions on enforcement of environmental laws, public information and participation, procedural matters, EIA, multilateral environmental agreements, protection of Ozone layer, protection of marine environment from ship pollution, air quality, marine litter, corporate social responsibility, voluntary mechanism to enhance environmental performance, trade and biodiversity, marine species, forest management, and environmental cooperation and consultation.

The American regional law recognizes and protects several rights related to environment, including the right to life, right to have access to public services, right to adequate nutrition which guarantees the possibility of enjoying the highest level of physical, emotional, and intellectual development, right of citizens to participate in decisions relating to their own development, right to the enjoyment of the highest attainable standard of health. In addition, the procedural environmental rights, including the right to access to environmental information, public participation in environmental decision-making, and access to justice in environmental matters, are also provided and secured in this region. Further, the right to live in a healthy environment and to sustainable development is also specifically recognized and protected in this region.

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11 Id. art 17.
12 Id. art 20.
13 Id. art 22.
14 Id. art 33.
15 Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, Escazú, Mar. 4, 2018 [the “Escazú Agreement”].
B. European Region

There are two regional organizations in Europe, including the Council of Europe and the European Union, with their own regional laws.

1. Council of Europe

Following the devastating effects of the Second World War, the Council of Europe was established by the Treaty of London (1949). It has signed the European Convention on Human Rights (1950) to protect and promote fundamental human rights and freedoms in Europe. This convention does not specifically address environmental rights or environmental protection. However, along with other fundamental rights, it provides the right to life (Article 2.1) and right to an effective remedy (Article 13).

The Council of Europe has adopted the following regional environmental instruments:

(1) Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (1998)\(^\text{17}\) sets out procedural rights of access to information, public participation, and judicial remedy. It requires its state parties to guarantee the protection of these rights, which contribute to “the right of every person of present and future generations to live in an environment adequate to his or her health and well-being.”\(^\text{18}\) The Aarhus Convention has been amended by the Kiev Protocol on Pollutant Release and Transfer Registers (21 May 2003) and the Almaty Amendment (27 May 2005).

(2) Florence Council of Europe Landscape Convention (2000) aims to promote landscape protection, management, and planning, and to organize co-operation between its state parties on these aspects. It covers both outstanding and ordinary landscapes that determine the quality of living environment for the people.\(^\text{19}\)

2. European Union

The European Union functions under the Treaty on European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU). These treaties provide legal basis of its five institutions, including the European Commission, the European Parliament, the Council of the European Union, the European Council, and the Court of Justice of the European Union. The European Union has developed one of the most comprehensive and advanced environmental legal frameworks in the world.

As a regional human right instrument, the European Union has adopted the Charter of Fundamental Rights of the European Union (2000), which requires that “a high level of environmental protection and the improvement of the quality of the environment must be

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\(^\text{19}\) Florence Council of Europe Landscape Convention, Oct. 20, 2000.
integrated into the policies of the [European] Union and ensured in accordance with the principle of sustainable development.”20 Although the Charter does not recognize the right to environment, it grants everyone the right to life (Article 2.1), the right of access to preventive health care and the right to benefit from medical treatment (Article 35), the right to access to documents of institutions, bodies, offices and agencies of the European Union (Article 42), the right to petition the European Parliament (Article 44), and the right to effective remedy before an independent and impartial tribunal (Article 47).


C. African Region

The Charter of the Organization of African Unity (1963) established the Organization of African Unity to promote unity and solidarity among the African states, to coordinate efforts to achieve better life for African people, to eradicate all forms of colonialism, and to promote international cooperation.22 However, it was replaced with the Constitutive Act of the African Union (2000), which also does not have any provision on environmental protection.23

As a regional human rights instrument, the African Charter on Human and Peoples' Rights (1981) recognizes the “right to a general satisfactory environment favorable to their development” (Article 24). It also embodies several other human rights that are related to environment, such as the right to respect for life and integrity (Article 4), the right to dignity (Article 5), the right to have cause heard by national courts and other organs (Article 7), the right to receive information and express opinion (Article 9), the right to participate in government (Article 13), the right to enjoy the best attainable state of physical and mental health (Article 16), the right to freely dispose natural resources (Article 21), and the right to economic, social and cultural development (Article 22).24

Similarly, the African Union’s Malabo Protocol on the African Court of Justice and Human Rights (2014) recognizes the procedural environmental rights, including the right to access to information on the environment, public participation in environmental decision-making, and access to justice in environmental matters.25

As regional environmental instruments, the African Union has developed several instruments to promote sustainable development and environmental protection, including the following:

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(1) African Convention on Conservation of Nature and Natural Resources (1968) to ensure conservation, utilization and development of soil, water, flora, and faunal resources in accordance with scientific principles and best interests of the people.\(^\text{26}\) This was revised to incorporate developments of international environmental law and enlarge its scope in 2003 in Maputo, Mozambique. The updated convention now aims to promote biodiversity conservation, sustainable development, and the equitable sharing of benefits derived from natural resources in Africa.

(2) Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (1991) to minimize and control the generation, transboundary movement, and disposal of hazardous wastes in Africa.\(^\text{27}\)

In addition, the Treaty Establishing the African Economic Community (1991) provides several obligations of states on environmental protection.\(^\text{28}\)

**D. Asian Region**

There are two regional organizations in Asia, including the Association of Southeast Asian Nations (ASEAN) and the South Asian Association for Regional Cooperation (SAARC), with their own regional laws.

1. **Association of Southeast Asian Nations (ASEAN)**

The ASEAN Declaration (1967), also known as the “Bangkok Declaration”, has established an association for regional cooperation among the countries of the South-East Asia, including Singapore, Brunei Darussalam, Lao People's Democratic Republic, Malaysia, Vietnam, Cambodia, Myanmar, Philippines, Indonesia, and Thailand.\(^\text{29}\) The aim of ASEAN is to accelerate the economic growth, social progress, cultural development, and technical advancement in the region through equality and partnership in order to strengthen peace and stability for this region. ASEAN countries have also agreed to the Charter of ASEAN Nations (2007).\(^\text{30}\) Both the Bangkok Declaration and the ASEAN Charter do not have any provision for environmental protection. However, ASEAN has adopted the ASEAN Human Rights Declaration (2012), which recognizes the right to safe, clean, and sustainable environment.\(^\text{31}\)

ASEAN has also established few regional environmental instruments to promote sustainable development and address environmental challenges in this region, including the ASEAN Agreement on Transboundary Haze Pollution (2002) and the Agreement on the establishment of the ASEAN Centre for Biodiversity (2005).\(^\text{32}\)


\(^{29}\) ASEAN Declaration, Bangkok, Aug. 8, 1967.


\(^{31}\) ASEAN Human Rights Declaration, art 28(f), Nov. 18, 2012.

\(^{32}\) ASEAN Agreement on Transboundary Haze Pollution, June 10, 2002; and Agreement on the establishment of the ASEAN Centre for Biodiversity, 2005.
Many scholars identify that although most ASEAN member states surpass the global average in terms of environmental performance, they are still confronted with increasing environmental difficulties caused by factors like population growth, urbanization, and industrialization. Nevertheless, ASEAN countries persist in utilizing their regional law to foster regional unity for environmental preservation and to promote sustainable development as instant solution to environmental challenges.33

2. South Asian Association for Regional Cooperation (SAARC)

The Charter of the South Asian Association for Regional Cooperation (1985) has formed an association consisting of eight countries, including Afghanistan, Bangladesh, Bhutan, Indian, Maldives, Nepal, Pakistan, and Sri Lanka, to promote the welfare of people of South Asia and to improve their quality of life, to accelerate economic growth, social progress and cultural development in the region, to provide all individuals the opportunity to live in dignity and to realize their full potentials, to promote and strengthen collective self-reliance among the countries, and to enhance mutual trust, understanding and cooperation amongst them.34 Although this Charter does not have any provision for environmental protection, the SAARC Social Charter (2004) provides the responsibility of member states “towards present and future generations by ensuring equity among generations, and protecting the integrity and sustainable use of the environment”.35

In addition, SAARC countries have formed an inter-governmental organization called the South Asia Co-operative Environment Programme (SACEP) in 1982 to promote and support protection, management, and enhancement of the environment in the region. Further, SAARC countries have also adopted SAARC Convention on Cooperation on Environment (2010), which has provisions to exchange best practices and knowledge, capacity building and transfer of eco-friendly technology in environmental matters.

E. Arab Region

The Pact of the League of Arab States (1945) has established the League of Arab States for cooperation among its member states on economic, financial, communications, cultural, social welfare, transboundary movement, and health matters.36 Although this Pact does not have any provision for environmental matters, the Arab Charter on Human Rights (2004) grants every person the right to a healthy environment.37 Article 38 of the Arab Charter states that “every person has the right to an adequate standard of living for himself and his family, which ensures their well-being and a decent life, including food, clothing, housing, services and the right to a healthy environment. The States parties shall take the necessary measures commensurate with their resources to guarantee these rights.” In addition, in Article 39 of this Charter, the state parties “recognize the right of every member of society to the enjoyment of the highest attainable standard of physical and mental health”.38 This Article also requires the member

34 Charter of the South Asian Association for Regional Cooperation, Dec. 8, 1985.
38 Id. art 39(1).
states to, amongst others, provide basic nutrition and safe drinking water for all, combat pollution, and provide sanitation systems.\textsuperscript{39}

As a regional environmental instrument, this region has adopted the Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution (1978) to prevent, abate and combat pollution of the marine environment of the region.\textsuperscript{40} In this regional convention, the state parties agree to take all appropriate measures to prevent, abate and combat pollution of the marine environment, to cooperate in taking necessary measures to deal with pollution emergencies and in scientific and technical research relating to marine pollution, and to establish appropriate rules for determination of civil liability and compensation for such environmental damage.

\textbf{F. Conclusion}

The chapter reveals an overview of the environmental laws and provisions of the regional groups in the American, European, African, Asian, and Arab regions. It indicates that although these regional laws have not reached the same level of advancement as international environmental laws, they nonetheless contain similar environmental aspects and align themselves with the same trajectory. For example, the regional environmental laws: (a) focus on preventing and combating pollution of the regional marine environment in the Arab region; (b) address nature conservation and management of hazardous waste in the African region; (c) protect against transboundary haze pollution and safeguard biodiversity in ASEAN region; (d) promote cooperation in protection, management, and enhancement of the environment and its various aspects in SAARC region; (e) ensure landscape protection, management, and planning within the Council of Europe; and (f) include various directives aimed at preventing pollution and preserving water, birds, habitat, and air quality within the European Union. In essence, the regional laws contain similar environmental concepts, including nature and biodiversity conservation, atmospheric preservation, climate change mitigation, marine and freshwater ecosystems protection, hazardous materials management, and the promotion of sustainable development.

The chapter also shows that although environmental laws and provisions exist in all the regions of the world, the development of the regional environmental laws is not as developed as the international environmental law. For example, in the American region, there is only one regional environmental instrument, called the Escazú Agreement (2018), which acknowledges the right to environment and to sustainable development as well as procedural environmental rights, including the right to access to environmental information, public participation in environmental decision-making, and access to justice in environmental matters. Similarly, the Arab region also has only one regional environmental instrument, called the Kuwait Convention (1978), to prevent, abate and combat pollution of the marine environment of the region.

The African region has only two regional environmental instruments, including the Nature Convention (1968; rev. 2003) to ensure conservation, utilization and development of soil, water, flora and faunal resources, and the Bamako Convention (1991) to minimize and control the generation, transboundary movement, and disposal of hazardous wastes in Africa. At the

\textsuperscript{39} Id. art 39(2)(e) & (f).

\textsuperscript{40} Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Apr. 24, 1978.
Amongst these regions, the European region has the most developed regional environmental laws. The Council of Europe has introduced the Aarhus Convention (1998) to secure all these procedural rights and the Florence Convention (2000) to promote landscape protection, management, and planning. Similarly, the European Union has enacted a series of directives and regulations aimed at protecting specific aspects of the environment to promote sustainable development, including the EIA Directive (2011), the SEA Directive (2001), the Habitats Directive (1992), the Water Framework Directive (2000), and the Birds Directive (2009).

Regrettably, the European Union remains the only regional framework to have demonstrated a significant progress in incorporating EIA into its regional environmental laws. Beyond the European Union, only the Council of Europe and the American region incorporate certain requirements concerning EIA in, respectively, the Aarhus Convention (1998) and the Escazu Agreement (2018). However, both these instruments lack a detailed framework on EIA and do not mandate an obligation to conduct EIA. This scenario indicates a considerable gap in requiring EIA across regional environmental laws.
Chapter IV: National Environmental Constitutionalism

The two preceding chapters have extensively examined the evolution of international and regional environmental laws. A notable outcome of these legal frameworks is the widespread adoption and ratification of international environmental instruments by nearly all countries worldwide, alongside the regional instruments within their specific regions. As a result, to adhere to their international and regional commitments and safeguard the environment, majority of countries have incorporated environmental provisions in their constitutions and nearly all countries have introduced comprehensive legislations, policies, and jurisprudence that cover a wide spectrum of environmental issues.

As an illustrative example, the United States demonstrated a remarkable response to the environmental movement of the 1960s by enacting at least ten (10) significant environmental laws in a relatively short timeframe. These laws include the National Environmental Policy Act (1969), the Clean Air Act (1970), the Clean Water Act (1972), the Marine Mammal Protection Act (1972), the Federal Advisory Committee Act (1972), the Endangered Species Act (1973), the Magnuson–Stevens Fishery Conservation and Management Act (1976), the National Forest Management Act (1976), the Resource Conservation and Recovery Act (1976), and the Comprehensive Environmental Response, Compensation, and Liability Act (1980). These laws establish a number of processes and obligations pertaining to their specific aspect of environmental protection within the United States.

However, it is essential to acknowledge that providing an exhaustive list of all the environmental legislations, policies, and jurisprudence for every country across the globe is both excessively lengthy and beyond the scope of this thesis. Although there is scholarly work on environmental laws of each country, this chapter focuses on the fact that majority of countries worldwide have explicitly incorporated environmental protection provisions in their national constitutions. The scholars have consistently reported the inclusion of environmental provisions in the constitutions, coining the term “environmental constitutionalism” to describe the phenomenon and to establish constitutional basis for the right to environment. This concept has garnered significant attention in the scholarly community, resulting in a wealth of literature on the subject.

The scholars have stressed on the profound significance of the constitution as a fundamental and supreme legal document that serves as the foundational framework for governance system of a country. The constitutional law holds a unique and immense power to shape society as a whole and to influence the highest level of government institutions, including the legislature, executive, and judiciary. In every country, except for the United Kingdom and Israel that do not possess written constitutions, the constitutions provide the essential foundation upon which all other laws on every subject are built. The constitution sets policy of a country with respect to all subjects, including the environment, and plays a pivotal role in resolving conflicts.

3 Id.
involving fundamental rights of citizens and effective management of a country by government institutions. This inherent authority of the constitution makes its provisions less likely to be disregarded or evaded by any institution within the country and by its citizens.

Accordingly, an environmental provision in a constitution holds more significance than an environmental legislation, policy, or jurisprudence in a country. It serves as the basis or the very root from which all of these are derived. Such a provision reinforces the central and highest importance of environment within legal and governance framework of a country and firmly establish its commitment to environmental protection and the environmental principles or concepts embodied therein. By incorporating environmental provisions in its constitution, a country demonstrates a strong commitment to environmental protection, integrating its principles into the very fabric of its legal and governance system. Additionally, this recognition of the environment at the constitutional level elevates the importance of environmental concerns and signifies a profound dedication to safeguarding the environment for current and future generations.

This chapter explores environmental provisions in national constitutions worldwide and broadly classifies them into two (2) main categories. The first category comprises ‘policy-based provisions’ that are the directive principles of state policy on the environment. Lael K. Weis has referred to this type of provisions as the contra-judicative approach. The provisions in this category allocate institutional responsibility for upholding fundamental environmental principles and norms to the legislative and executive branches of the government. The second category consists of ‘rights-based provisions’ that guarantee citizens the right to environment and other environmental rights. These provisions are generally enforced by the national courts in case of violations of these rights.

This chapter sheds light on both categories by providing a comprehensive list of countries and their respective provisions in each category. To achieve this, a comprehensive table of specific constitutional environmental provisions of all countries worldwide is included as Appendix A. The compilation of this table involved an extensive review of the constitutions and their translations for a total of 194 countries, including 193 members of the United Nations and Palestine, which is recognized as a “non-member observer state” by the United Nations. By clarifying and consolidating these provisions in a single reference, this chapter contributes to the knowledge and discourse on environmental governance at the national constitutional level.

Appendix A is structured with six (6) columns for easy reference. Column 1 contains serial numbers, Column 2 shows the name of the country, and Column 3 displays the year of its constitution's enactment and revision. The subsequent columns provide a breakdown of the rights-based and policy-based environmental provisions in the constitutions of each country. Column 4 displays rights-based provisions that are enshrined in the constitutions of countries worldwide, guaranteeing their citizens the right to environment or related environmental rights. Columns 5 and 6 outline policy-based provisions in the constitutions of countries worldwide.
specifying the duties of their citizens and the obligations of the states concerning environmental protection.

Appendix A provides valuable insights into how environmental provisions are delineated within various constitutional frameworks. It verifies the following:

(1) Among the 194 countries worldwide, only one-hundred and fifty (150) countries contain environmental protection provisions in their national constitutions. Among the rest of forty-four (44) countries, Israel and the United Kingdom of Great Britain & Northern Ireland do not have formal written constitutions; and the remaining forty-two (42) countries do not have any express environmental protection provision in their constitutions. These countries are Antigua & Barbuda, Australia, Bahamas, Barbados, Botswana, Brunei Darussalam, Canada, Cyprus, Denmark, Djibouti, Dominica, Equatorial Guinea, Federated States of Micronesia, Germany, Grenada, Iceland, Ireland, Japan, Jordan, Kuwait, Lebanon, Liberia, Libya, Liechtenstein, Malaysia, Malta, Marshall Islands, Mauritius, Monaco, Namibia, Nauru, New Zealand, Pakistan, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, Samoa, Singapore, Solomon Islands, Tonga, Trinidad & Tobago, and the United States of America.

(2) Among the one-hundred and fifty (150) countries with constitutional environmental provisions, one-hundred and forty-three (143) countries have policy-based provisions, and one-hundred and three (103) countries have rights-based provisions protecting the environment.

(3) While the majority of countries choose to incorporate both types of provisions in their constitutions, some include only one type. Among these one-hundred and fifty (150) countries with constitutional environmental provisions, only seven (7) countries do not have any type of policy-based provisions, including Jamaica, Kiribati, Mauritania, Morocco, South Africa, Tuvalu, and Ukraine. These countries, however, have rights-based provisions.

(4) In one-hundred and forty-three (143) countries with policy-based provisions, ninety-one (91) countries explicitly mention the obligations of citizens about environmental protection, while one-hundred and thirty-eight (138) countries outline the obligations of the states concerning the environment and its different aspects.

For complete understanding, additional details of these provisions are discussed below:

A. Policy-Based Environmental Constitutionalism

As discussed earlier, the policy-based environmental provisions in constitutions allocate institutional responsibility for upholding fundamental environmental principles and norms to the legislative and executive branches of the government, instead of the national courts. Lael K. Weis has referred to this type of provisions as the contra-judicative approach.\(^7\) In simple terms, these provisions take the form of policy statements in the constitution of a country and describe obligations of the government and individuals about environment or any of its aspects. They impose constitutional obligations on the governments to make legislations and

implementation policies, and on citizens to respect the environment, in line with the fundamental environmental principles and norms recognized in these provisions. These provisions seek to ensure that the political branches of government play a central role in shaping environmental policies and norms.

The inclusion of policy-based provisions in national constitutions has witnessed significant progress over time. After the Second World War, the countries started to include environmental provisions in their constitutions. Before the Stockholm Conference (1972), merely seven (7) countries included environmental provisions in their national constitutions. Italy was pioneer to include environmental provision in its constitution in 1948, followed by Madagascar in 1959, Kuwait in 1962, Malta in 1964, Guatemala in 1965, and Switzerland and the United Arab Emirates in 1971.  

However, as elaborated in Chapter II, the Stockholm Declaration (1972) marked a turning point in environmental laws globally and brought environmental issues at the forefront of international and national concerns. This landmark event prompted countries to incorporate environmental protection provisions within their constitutions and laid basis for environmental constitutionalism. Post-Stockholm, the environmental constitutionalism gained substantial momentum. While only seven (7) countries had environmental provisions in their constitutions before 1972, the number rose to sixteen (16) countries integrating environmental provisions in their constitutions from 1972 to 1979, followed by twenty-two (22) countries from 1980 to 1989, sixty-eight (68) countries from 1990 to 1999, twenty-seven (27) countries from 2000 to 2009, and nine (9) countries from 2010 to 2013. By this list, one-hundred and forty-nine (149) countries had adopted some kind of environmental provisions in their constitutions by 2013.

Conversely, the literature on recognition of the constitutional environmental provisions has shown various inconsistencies. For example, in 2006, James R. May reported that about one-hundred and thirty (130) countries have constitutional provisions that expressly address environmental norms; and majority of these provisions were enacted during the last three (3) decades, with a significant portion in the last fifteen (15) years. In 2015, Klaus Bosselmann published that over one-hundred and twenty-five (125) constitutions around the globe incorporate environmental norms, including one-hundred and seven (107) in developing countries and only eighteen (18) in developed countries. The author also noted that about ninety-seven (97) constitutions contain obligations for the national government to prevent harm from the environment; and fifty-six (56) constitutions recognize a responsibility of citizens or residents to protect the environment.

Similarly, in 2018, Erin Daly reported that: “177 national constitutions (out of 193 member states of the United Nations) address the environment in some fashion. … A quarter of constitutions incorporate concerns for sustainability, future generations, climate change, or provide that the government holds natural resources as a public trust for the people. … And

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dozens of constitutions address specific resources such as marine life, minerals, water, or flora and fauna.\textsuperscript{12}

Furthermore, in 2019, James R. May and Erin Daly clarified that “approximately 150 of the world’s 193 UN members have constitutions from about 90 nations that expressly or implicitly recognize some kind of fundamental right to a quality environment, while a similar number imposes corresponding duties on individuals or the state to protect the environment, and about three dozen establish procedural rights in environmental matters. Constitutions also identify environmental protection as a matter of national policy, and some recognize specific rights concerning water, sustainability, nature, public trust and climate change. And that about two-thirds (126) of the constitutions in force address natural resources in some fashion, including water (63), land (62), fauna (59), minerals and mining (45), flora (42), biodiversity or ecosystem services (35), soil/sub-soil (34), air (28), nature (27), energy (22), and other (17). Some countries have constitutions that do many if not most of these things, while others do none of them. Most fall somewhere in between.”\textsuperscript{13}

To reconcile the inconsistencies and contradictions found in the literature, this section includes a comprehensive table as Appendix B. It builds on the earlier Appendix A, which shows that among the one-hundred and ninety-four (194) countries worldwide, one-hundred and forty-three (143) countries have policy-based provisions. Among these, ninety-one (91) countries explicitly mention the obligations of citizens about environmental protection, while one-hundred and thirty-eight (138) countries outline the obligations of the states concerning the environment and its different aspects.

Appendix B, however, provides a thorough and systematic analysis of the constitutional policy-based provisions related to environmental protection in all countries. It presents an extensive compilation of precise terms used in the constitutional policy-based provisions of countries worldwide. Further, it meticulously classifies these terms into ten (10) different categories, each specifying a specific aspect of environmental protection.

Appendix B is structured into twelve (12) columns. Column 1 has serial numbers and Column 2 contains the respective country names. Subsequent columns provide individual categories used for specific aspect of environmental protection and contain exact terms used in policy-based provisions. Column 3 inaugurates with terms specific to safeguarding the environment and quality of life and health, in general. Column 4 encompasses terms safeguarding nature and biodiversity. Column 5 advances with terms relevant to protection of natural resources. Column 6 enlists terms related to sustainable development. Column 7 catalogues terms found in these provisions specifically addressing the interests of future generations. Column 8 encompasses terms concerning marine protection. Column 9 progresses with terms associated with protection against pollution. Column 10 identifies specific terms within provisions concerning the management of hazardous substances and toxic waste. Column 11 is dedicated to specific terms aimed at preserving the atmosphere and air quality. Finally, Column 12 contains terms pertinent to addressing climate change.


The findings from Appendix B reiterate that there are one-hundred and forty-three (143) countries worldwide (out of 194 total countries) that explicitly include policy-based environmental provisions in their constitutions. Among these countries:

1. A total of one-hundred and thirty-seven (137) countries have constitutional provisions for safeguarding the environment and quality of life and health, in general.

2. A total of seventy-seven (77) countries worldwide includes provisions for protection of nature and biodiversity, embodying the conservation of elements such as nature, land, forests, parks, landscapes, biodiversity, ecosystems, species, flora, fauna, wetlands, wildlife, endangered species, genetic heritage, as well as historical, cultural, and artistic national treasures.

3. Sixty-seven (67) countries incorporate provisions for protection of natural resources in their constitutions.

4. Forty-eight (48) countries have provisions to ensure sustainable development or sustainability in their constitutions, including Algeria, Angola, Armenia, Belgium, Bhutan, Cabo Verde, Central African Republic, Cuba, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Eswatini, Ethiopia, France, Gambia, Greece, Guatemala, Guyana, Indonesia, Kenya, Laos, Lithuania, Malawi, Maldives, Mongolia, Montenegro, Mozambique, Nepal, Panama, Paraguay, Peru, Poland, Portugal, Qatar, Senegal, Serbia, Sweden, Switzerland, Thailand, Timor-Leste, Tunisia, Uganda, Uruguay, Venezuela, Viet Nam, and Zambia.

5. Forty-two (42) countries have explicit constitutional provisions to protect the interests of future generations, including Albania, Algeria, Andorra, Angola, Argentina, Armenia, Bangladesh, Belgium, Bhutan, Bolivia, Brazil, Burundi, Cuba, Egypt, Eritrea, Eswatini, Fiji, Gambia, Georgia, Kenya, Latvia, Lesotho, Luxembourg, Madagascar, Malawi, Maldives, Mozambique, Nepal, Niger, Palestine, Papua New Guinea, Poland, Qatar, Senegal, South Sudan, Sudan, Sweden, Switzerland, Thailand, Timor-Leste, Tunisia, Uganda, Uruguay, and Vanuatu.

6. Twenty-four (24) countries address marine environment and its elements in their constitutional provisions, encompassing areas such as water bodies, seas, waterways, aquatic life, seashores, islands, lakes, rivers, groundwater, potable water, water resources, water contamination, sanitary measures, seabed, and water diversity. These countries include Algeria, Austria, Cambodia, Ivory Coast, Croatia, Egypt, Eritrea, Eswatini, Guatemala, Guyana, Honduras, Hungary, India, Lithuania, Mongolia, Nepal, Nicaragua, Nigeria, Panama, Papua New Guinea, Switzerland, Uganda, Uruguay, and Venezuela.

7. Twenty (20) countries incorporate constitutional provisions concerning pollution in general, including Algeria, Bhutan, China, North Korea, Ecuador, Guatemala, Guyana, Islamic Republic of Iran, Lithuania, Maldives, Mozambique, Oman, Palestine, Panama, Saudi Arabia, Tunisia, Turkey, Uganda, Venezuela, and Viet Nam.

8. Fifteen (15) countries have constitutional provisions for management of hazardous and toxic materials, including Argentina, Burundi, Chad, Republic of the Congo, Ivory

(9) Merely twelve (12) countries across the globe that address air protection in their constitutions, including Algeria, Austria, Cambodia, Croatia, Eritrea, Guyana, Lithuania, Nigeria, Panama, Papua New Guinea, Uganda, and Venezuela.

(10) Only six (6) countries, including Algeria, Cuba, Gambia, Venezuela, Viet Nam, and Zambia, have explicit policy directives concerning climate change in their constitutional provisions.

This in-depth analysis demonstrates that policy-based environmental provisions in constitutions across the globe are widespread. More than 73.7% countries worldwide have incorporated such provisions in their constitutions, demonstrating their commitment to environmental protection, both broadly and in terms of its diverse aspects.

**B. Rights-Based Environmental Constitutionalism**

The second category of the environmental constitutional provisions comprises rights-based provisions that guarantee citizens the right to environment and other environmental rights. These provisions are primarily enforced by the national courts when a citizen asserts violation of their guaranteed rights. They offer the highest level of legal protection to everyone in a country, ensuring their entitlement to a healthy environment or its different aspects as the fundamental constitutional rights. These provisions establish a strong legal foundation for citizens to hold government and other entities accountable for actions harming both their guaranteed rights and the environment.

Notably, the literature on environmental constitutionalism has predominantly focused on the recognition, definition, significance, and judicial enforcement of the right to environment. Scholars have extensively examined how this right empowers individuals to seek judicial redress in cases of its violation or environmental harm and consequently improves the environment. This is elaborated in the Second Part of this thesis on the right to environment. However, the provisions regarding the right to environment are only one component of rights-based constitutional provisions worldwide.

Furthermore, it is also essential to acknowledge that there is limited literature on recognition and significance of procedural environmental rights in constitutions worldwide. In 2018 and 2019, James May and Erin Daly have reported that about three (3) dozen constitutions explicitly provide for procedural environmental rights, encompassing the right to information about environmental matters, the right to participate in decisions about environmental matters, or the right to judicial remedy when environmental rights are infringed upon.14

This section, however, takes the discussion a step further. It demonstrates that the rights-based environmental provisions in constitutions worldwide can be structured into seven (7) separate categories, wherein the last three (3) categories pertain to the procedural environmental rights:

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(1) The first category encompasses provisions that explicitly recognize the right to environment.

(2) The second category involves provisions in which the right to environment is implied within the right to life or health.

(3) The third category comprises provisions with substantive environmental rights, referring to specific aspect of the environment, such as water, air, sustainable development, and natural resources.

(4) The fourth category encompasses provisions that restrict or limit other fundamental human rights and freedoms in favor of environmental protection, such as the right to property, freedom of movement, freedom of enterprise, freedom of market and entrepreneurship, and generally all other rights and freedoms.

(5) The fifth category consists of provisions which explicitly recognize the right to information in environmental matters or imply such right through corresponding obligation of the states.

(6) The sixth category includes provisions that either explicitly recognize the right to participation or consultation in environmental matters or imply such right through corresponding state obligations.

(7) The final category encompasses provisions that explicitly recognize the right to judicial remedy or compensation in environmental matters or imply such right through corresponding state obligation.

Accordingly, this section includes an extensive table as Appendix C to categorize the rights mentioned in constitutions of each country within seven (7) categories. This Appendix builds on Column 4 of earlier Appendix A, which shows that among the 194 countries worldwide, 103 countries have rights-based provisions. Appendix C offers a comprehensive analysis of the rights-based provisions of these countries. It presents an extensive compilation of all the constitutional rights related to environment globally.

Appendix C is structured into nine (9) columns. Column 1 contains serial numbers, while Column 2 contains lists the respective country names. The subsequent columns outline rights listed in each category of rights-based provisions. Column 3 includes provisions that explicitly recognize the right to environment and Column 4 encompasses provisions where this right is implied within the right to life or health. Column 5 focuses on provisions with substantive environmental rights and Column 6 consists of provisions that restrict or limit other fundamental human rights and freedoms in favor of the environmental protection. The last three (3) Columns 7 to 9 cover provisions explicitly recognizing procedural environmental rights, namely the rights to information, participation, and judicial remedy in environmental matters respectively, or implying such rights within state obligations.

Appendix C reveals several key findings:

(1) A total of eighty-seven (87) countries explicitly recognizes the right to environment in their constitutions. These countries include Algeria, Angola, Argentina, Azerbaijan, Belgium, Benin, Bolivia, Brazil, Bulgaria, Burkina Faso, Cabo Verde, Cameroon,
Central African Republic, Chad, Chile, Colombia, Comoros, Costa Rica, Cuba, Czech Republic, Democratic Republic of the Congo, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, Finland, France, Gambia, Georgia, Greece, Guinea, Guyana, Hungary, Indonesia, Iraq, Ivory Coast, Jamaica, Kenya, Kyrgyzstan, Latvia, Maldives, Mali, Mauritania, Mexico, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Nepal, Nicaragua, Niger, North Macedonia, Norway, Palestine, Paraguay, Peru, Philippines, Portugal, South Korea, Republic of the Congo, Romania, Russia, Rwanda, Sao Tome and Principe, Senegal, Serbia, Seychelles, Slovak Republic, Slovenia, Somalia, South Africa, South Sudan, Spain, Thailand, Timor-Leste, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, Viet Nam, and Zimbabwe.

(2) There are five (5) countries that embody environmental protection within other constitutional provisions. For instance, in Belarus, the right to health care must be secured by measures to improve the environment.\(^\text{15}\) In Burundi, the rights and duties guaranteed by the international texts regularly ratified constitute an integral part of its constitution.\(^\text{16}\) Accordingly, the right to environment is also implied in its constitution after recognition of this right by UNGA. Further, in Croatia, the same constitutional provision guarantees the right to a healthy life and requires state to ensure conditions for a healthy environment.\(^\text{17}\) In Gabon, the constitution recognizes and guarantees the inalienable and imprescriptible human rights and the protection of a preserved natural environment, rest, and leisure.\(^\text{18}\) Similarly, in Iran, preservation of the environment is embodied in the right of present and future generations to flourishing social existence.\(^\text{19}\)

(3) Only six (6) countries, namely Bangladesh, Guatemala, India, Pakistan, Panama, and Sri Lanka, consistently recognize an implied right to environment through national jurisprudence.\(^\text{20}\)

(4) There are fifteen (15) countries that explicitly recognize substantive environmental rights, including the rights of nature, the right to natural resources, the rights to water and sanitation, the right to sustainable development, the right to improved standards of living, the right to enjoyment of the highest attainable standards of health, and the right to consume healthy food products. It is surprising that the right to clean air is not recognized in any of the country. Among these countries:

(a) Ecuador recognizes that nature has the “right to be restored” and the “right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes”.\(^\text{21}\)

(b) The right to natural resources is recognized in atleast four (4) national constitutions, manifesting as the individuals’ entitlement to utilize and enjoy the natural resources. For example, Dominican Republic recognizes the “right …

\(^{15}\) Constitution of Belarus, art. 45.

\(^{16}\) Constitution of Burundi, art. 19.

\(^{17}\) Constitution of Croatia, art. 69.

\(^{18}\) Constitution of Gabon, art. l(8).

\(^{19}\) Constitution of Iran, art. 50.


\(^{21}\) Constitution of Ecuador, art. 71 & 72.
to use and sustainable enjoyment of natural resources”; 22 Ecuador recognizes the “right to benefit from the environment and the natural wealth”; 23 Somalia recognizes the “right to have a share of the natural resources of the country, whilst being protected from excessive and damaging exploitation of these natural resources”, 24 and Thailand recognizes the “right … to manage, maintain and utilise natural resources, environment and biodiversity in a balanced and sustainable manner”. 25

(c) The right to water is recognized in constitutions of six (6) countries in various forms. For instance, Costa Rica recognizes the “right of access to potable water”; 26 Ecuador recognizes the right to water; 27 Egypt recognized the “right to enjoy the Nile River”; 28 Honduras recognizes the right to access to water and sanitation; 29 Morocco recognizes the “right … to the access to water”; 30 and Uruguay recognizes the right to “the access to potable water and the access to sanitation”. 31

(d) Three (3) countries embrace the right to sustainable development in their constitutions, including Ethiopia, 32 Mauritania, 33 and Morocco. 34

(e) Ethiopia recognizes the “right to improved living standards” in its constitution. 35

(f) Portugal recognizes the “right to health protection … fulfilled … by creating economic, social, cultural and environmental conditions … and by developing … healthy living practices”. 36

(g) Moldova recognizes the “right … to consume healthy food products” in its constitution. 37

(5) A total of twenty-five (25) countries expressly restricts or limits other fundamental human rights and freedoms in favor of the environmental protection, such as right to property, freedom of movement, freedom of enterprise, freedom of market and entrepreneurship, or generally all other rights and freedoms. These countries include Belarus, Belize, Croatia, Estonia, Eswatini, Jamaica, Kiribati, Madagascar, Moldova, Mongolia, Montenegro, Nepal, North Macedonia, Papua New Guinea, Poland,
Romania, Russia, Serbia, Slovak Republic, Slovenia, Sweden, Tuvalu, Uzbekistan, Venezuela, and Zimbabwe.

(6) A total of thirty-nine (39) countries recognizes procedural environmental rights and guarantees or any one of them in their constitutions. Among these, only twenty-four (24) countries have included at least one (1) express procedural environmental right in their constitutions. The distribution of these rights is as follows:

(a) Fifteen (15) countries explicitly protect the informational right in environmental matters, including Albania, Azerbaijan, Belarus, Czech Republic, France, Georgia, Indonesia, Moldova, Montenegro, Poland, Russia, Serbia, Slovakia, Turkmenistan, and Ukraine.

(b) Only two (2) countries have procedural constitutional guarantees corresponding to the informational right. For instance, Latvia Constitution requires the state to protect the right to environment by providing information about environmental conditions.\(^{38}\) Similarly, to safeguard the right to environment, Norway Constitution entitles its citizens to be informed of the state of natural environment and of the effects of any encroachment on nature.\(^{39}\)

(c) Only five (5) countries explicitly protect the participatory right in environmental matters, including Ethiopia, France, Georgia, Montenegro, and Tunisia.

(d) Seven (7) countries have procedural constitutional guarantees corresponding to the participatory right, including Colombia, Finland, Gambia, Mauritania, Nepal, Uruguay, and Venezuela.

(e) Thirteen (13) countries explicitly acknowledge the right to judicial remedy or compensation in environmental matters. Among these, the right to take legal action against infringement of the environment or environmental rights is recognized in five (5) countries, including Angola, Burkina Faso, Montenegro, Mozambique, and Paraguay; and the right to get compensation for damages caused to property or health because of environmental rights or violations is recognized in eight (8) countries, including Azerbaijan, Ethiopia, Kyrgyzstan, Nepal, Portugal, Russia, Turkmenistan, and Ukraine.

(f) Nine (9) countries have procedural guarantees in their constitutions, corresponding to the right to judicial remedy or compensation in environmental matters. Among these, seven (7) countries have procedural guarantees to take legal action against infringement of the environment or environmental rights, including Bolivia, Costa Rica, Kenya, Moldova, Serbia, Spain, and Viet Nam. Further, two (2) countries have incorporated constitutional guarantees regarding compensation for environmental damages or violations, including Belarus and Chad.

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38 Constitution of Latvia, art. 115.
39 Constitution of Norway, art. 112.
These findings demonstrate that rights-based environmental provisions in constitutions across the globe are widespread. More than 53% of countries worldwide have incorporated such provisions in their constitutions, empowering its citizens with a variety of environmental rights.

C. Conclusion

Both types of policy-based and rights-based constitutional environmental provisions guide and shape environmental legislations, policies, and jurisprudence at the national level and establish a strong legal foundation for environmental protection across countries. These constitutional provisions are generally aligned with the international and regional environmental laws. This alignment signifies a global consensus on, firstly, the importance of protecting the environment, and secondly, guaranteeing such protection through common environmental components, rights, and principles existing at each level of governance. These environmental components, rights, and principles are elaborated in detail in the next chapter.

By adopting the same environmental components, rights, and principles as those recognized at the international and regional levels, countries demonstrate their willingness to cooperate and collaborate on global environmental challenges. This alignment helps to create a framework for joint efforts in addressing the complex and interconnected environmental challenges, such as climate change, biodiversity loss, sustainable development, and pollution, on a global scale. Overall, the analysis suggests that constitutional environmental provisions are crucial tools for promoting environmental protection worldwide and for shaping laws, policies, practices, and jurisprudence for a sustainable future.
Chapter V: Pillars of Environmental Protection and Governance

The previous three chapters have extensively analyzed the developments in international, regional, and national environmental laws. These laws have been cautiously categorized into various environmental components at each level.

This chapter provides a unifying synthesis of the overarching concepts enshrined within environmental laws across each level of governance. It consolidates the core components, rights, and principles underpinning these environmental laws and elucidates their universal recognition and application across the global landscape. It discusses that environmental protection and governance, from the global stage to the grassroots local level, can be conceptualized through four (4) foundational pillars: environmental components, obligations, rights, and principles. This chapter explicates, differentiates, and underscores the significance of these pillars.

Firstly, this chapter distills the diverse concepts discussed in international, regional, and national laws (Chapters II to IV) into five (5) core environmental components. They encompass nature and biodiversity, atmosphere, water, land, and sustainable development. These environmental components collectively serve as the foundational pillars of the broader concept of the environment and are consistently woven into environmental laws across all levels in both the policy- and rights-based provisions. The policy-based provisions delineate the environmental obligations of the states, organizations, and individuals to protect human health and these environmental components.

Secondly, this chapter elucidates that these environmental elements have a total of eight (8) corresponding substantive environmental rights that exist in parallel with these policy-based provisions at the international, regional, and national levels. These rights include the rights of nature, the right to natural resources, the right to clean air, the rights to water and sanitation, the right to sustainable development, the right to adequate conditions of life or standards of living, the right to enjoyment of the highest attainable standards of health, and the right to food and adequate nutrition. In addition to these substantive rights, three (3) procedural environmental rights are also recognized at every level to complement their substantive counterparts. These procedural environmental rights include the rights to information, public participation, and judicial remedy in environmental matters. These eleven (11) substantive and procedural environmental rights are collectively referred to as the environmental rights in this thesis.

Thirdly, after analysis of environmental components and rights embodied within the environmental laws, this chapter identifies ten (10) recurring and common environmental principles integrated in several international, regional, and national environmental laws. These principles include the precautionary approach, the integration of environmental considerations, the involvement of stakeholders, environmental equity, environmental justice, transboundary cooperation, the polluter pays principle, common but differentiated responsibilities, the use of science and technology, and education and awareness in environmental matters. This chapter also discusses the application of these principles in protecting the environmental components as well as guaranteeing the environmental rights.

Accordingly, this chapter underscores the intricate interplay of environmental elements, obligations, rights, and principles found in environmental laws spanning from international to
grassroots levels. It streamlines the broad concept of environmental protection and governance and illuminates the collective journey towards a harmonious coexistence with nature.

A. Environmental Components

At the first instance, it is essential to discuss and categorize the environmental elements found in international, regional, and national environmental laws. This endeavor not only serves to define the broader term ‘environment’ but also holds paramount importance in accentuating the obligations of governing authorities and the duties of every person, both natural and legal, to ensure complete environmental protection. In this thesis, these elements are classified into five (5) broad categories, namely nature and biodiversity, atmosphere, water, land, and sustainable development.

1. Nature and Biodiversity

Generally, nature includes the entire spectrum of ecosystems, landscapes, and natural processes that contribute to the balance and health of the planet. On the other hand, biodiversity encompasses the immense diversity of species of plants, animals, microorganisms, and the genetic variations within these species. Therefore, nature and biodiversity refer to the rich variety of life forms, ecosystems, and interactions that exist in the natural world.

This is an essential component or aspect of environmental protection and embodies protection, conservation, and restoration of elements, including nature, beauty, natural resources, ecological balance, and biodiversity; ecosystems and natural habitats, such as land, forests, parks, landscapes, wetlands, coral reefs, deserts; species and living organisms, such as flora, fauna, birds, fish, waterfowl, animals, insects, wildlife, threatened species, endangered species, migratory species, and invasive species; genetic resources, heritage and diversity; as well as historical, cultural, and artistic treasures.

At the international level, a total of seventeen (17) instruments seeks to protect, conserve, and restore nature and biodiversity and their components. Among these, six (6) multi-lateral environmental instruments were signed from 1900-1960s, including the African Wild Animals, Birds, and Fish Convention (1900) (not ratified), the US-Canada Migratory Birds Convention (1916), the Fauna and Flora Convention (1933), the Nature and Wildlife Convention (1940), the Birds Convention (1950), and the Antarctic Treaty (1959). In addition, eleven (11) international environmental instruments were signed and ratified from 1971-2001, including the Wetlands Convention (1971), the World Heritage Convention (1972), the Wild Flora and Fauna Convention (1973) [or CITES], the Migratory Wild Animals Convention (1979), the World Charter for Nature (1982), the Small Cetaceans Agreement (1992), the Biodiversity Convention (1992) [or CBD], the Forest Principles (1992), the Wild Fauna and Flora Agreement (1994) [or Lusaka Agreement], the Desertification Convention (1994), and the Plant Genetic Treaty (2001). The objectives of these international environmental instruments revolve around safeguarding the specific elements of nature and biodiversity. These objectives are apparent in their names and have already been discussed in detail in Chapter II.

Similarly, five (5) regional environmental instruments are signed and ratified in Africa, ASEAN, the Council of Europe, and the European Union for protection, conservation, and restoration of nature and biodiversity and their components. These include the African Nature Convention (1968), the ASEAN Biodiversity Agreement (2005), the CoE Landscape Convention (2000) [or Florence Convention], the EU Habitats Directive (1992), and the EU
Birds Directive (2009). Their objectives and application within respective regions are apparent in their names and have been discussed in detail in Chapter III.

In addition, there are seventy-seven (77) countries worldwide that include provisions for protection of nature and biodiversity and their specific elements within policy-based environmental provisions of their constitutions. Further, there are sixty-seven (67) countries that incorporate such provisions for protection of natural resources in their constitutions. This has already been discussed in Chapter IV and in Columns 4 and 5 of Appendix B.

This discussion outlines the significance of protection, conservation, and restoration of nature and biodiversity and their elements as a key component of the environment.

2. Atmosphere

The atmosphere is a layer of gases that surrounds the Earth. It is commonly known to be composed of 78% nitrogen, 21% oxygen, and 1% of other gases. It consists of several distinct layers, each with its own characteristics and functions. These layers play a vital role in supporting life on the planet by providing breathable air, regulating temperature, controlling weather, adapting climate, and shielding from harmful radiation of the sun.

Accordingly, safeguarding the atmosphere is an essential component of the broader environmental protection. It encompasses two (2) concepts that have consistently been relied in environmental laws at every level, namely air pollution and climate change. These both are caused by variety of human activities, including burning of fossil fuels (coal, oil, and natural gas) for energy production, transportation, industrial processes, deforestation, land use changes, and agriculture and waste management. However, while air pollution is considered to have major effects on human health, climate change has wide-ranging effects on existence of life, nature and biodiversity, and ecological balance. The significance of both these concepts is highlighted hereunder:

(1) Climate Change

Climate change is a complex and urgent global challenge that refers to long-term alterations in Earth's average weather patterns and temperatures.¹ There is no denying the fact that average global temperatures are consistently rising, leading to heatwaves, shifting weather patterns, and changes in the frequency and intensity of extreme weather events across the globe. These challenges primarily arise when air pollutants and greenhouse gases like carbon dioxide, methane, and nitrous oxide trap heat in the atmosphere and lead to warming the planet. Accordingly, they cause the glaciers and polar ice to melt, contribute to sea level rise, adversely affect coastal communities, and threaten infrastructure, food security, economies, and societies.

There are three (3) international environmental instruments signed and ratified in the Modern Period to address the effects of climate change, including UNFCCC (1992), the Kyoto Protocol (1997), and the Paris Agreement (2015). These instruments are already discussed in detail in Chapter II.

Despite magnitude of this global challenge, there are no regional environmental instruments signed in any region for addressing climate change. Furthermore, there are merely six (6) countries, including Algeria, Cuba, Gambia, Venezuela, Viet Nam, and Zambia, that explicitly incorporate policy directives concerning climate change in their constitutions.

These instruments and provisions primarily address the global challenge of climate change caused by human activities, particularly the emission of greenhouse gases. They require everyone, including the government authorities, to limit greenhouse gas emissions and global warming, adapt to and mitigate effects of climate change, improve energy efficiency, protect nature and biodiversity, and maintain stability and quality of the atmosphere for all living organisms.

(2) Air Pollution

Air pollution pertains to presence of harmful substances and particles into the atmosphere, which can have adverse effects on human health, the environment, and the overall quality of air and life. The most common air pollutants include particulate matter (PM), nitrogen dioxide (NO2), sulfur dioxide (SO2), carbon monoxide (CO), volatile organic compounds (VOCs), and ozone (O3). These pollutants have far-reaching consequences on human health and are major cause of premature deaths worldwide. Additionally, they can harm ecosystems, damage agriculture, contribute to acid rain, and impact soil quality and marine environments.

There are four (4) international environmental instruments signed and ratified for protection of the atmosphere from air pollution, including the Geneva Convention (1979) for protection against long-range transboundary air pollution, the Vienna Convention (1985) for protection of ozone layer, the Montreal Protocol (1987) on substances that deplete the ozone layer, and the Espoo Convention (1991) to prevent and mitigate adverse environmental effects of activities across borders. These have already been discussed in detail in Chapter II.

Despite significance of this environmental component, there are scant regional environmental instruments and constitutional environmental provisions that address protection of atmosphere from air pollution. There is only one regional environmental instrument, namely the ASEAN Pollution Agreement (2002), that addresses transboundary haze pollution in the ASEAN region.

Similarly, as discussed in Chapter IV and Column 11 of Appendix B, there are only twelve (12) countries across the globe that address air protection in their constitutions, including Algeria, Austria, Cambodia, Croatia, Eritrea, Guyana, Lithuania, Nigeria, Panama, Papua New Guinea, Uganda, and Venezuela. In addition, twenty (20) countries incorporate constitutional provisions concerning pollution in general. These countries include Algeria, Bhutan, China, North Korea, Ecuador, Guatemala, Guyana, Islamic Republic of Iran, Lithuania, Maldives, Mozambique, Oman, Palestine, Panama, Saudi Arabia, Tunisia, Turkey, Uganda, Venezuela, and Viet Nam.

These instruments and provisions seek to safeguard the Earth's atmosphere for the well-being of nature, biodiversity, and human health. They require everyone, including the government authorities, to reduce air pollution, its transboundary effects, and other ozone-depleting substances from atmosphere, and transition to renewable energy sources.
3. Water

Water is one of the environmental components that covers the marine and freshwater resources on this planet. These resources are rich in biodiversity and support a wide variety of species, habitats, and ecosystems. While freshwater is essential for sustaining life on earth, marine resources play a crucial role in regulating the climate; absorbing and storing heat; influencing weather patterns; acting as carbon sinks by absorbing and storing carbon dioxide from the atmosphere; providing food and natural resources; and offering transportation, trade, recreational, tourism, and cultural value.

Accordingly, water is a vital component of the environment, and its protection and conservation are responsibility for everyone, especially the government authorities. However, despite its significance, it is facing various threats, including overfishing, habitat destruction, pollution, climate change, and ocean acidification.

At the national level, there are twenty-four (24) countries that address this element in their constitutional provisions, including Algeria, Austria, Cambodia, Ivory Coast, Croatia, Egypt, Eritrea, Eswatini, Guatemala, Guyana, Honduras, Hungary, India, Lithuania, Mongolia, Nepal, Nicaragua, Nigeria, Panama, Papua New Guinea, Switzerland, Uganda, Uruguay, and Venezuela.

At the international and regional level, there are several instruments that impose obligations on everyone, including the government authorities, to manage, conserve, and use water and its resources, including underground water, freshwater, rivers, lakes, seas, oceans, its biodiversity, its ecosystems, and its habitat, in an equitable and sustainable manner. These environmental laws consistently rely on three (3) separate concepts, namely freshwater, marine biodiversity, and marine pollution, for protection of this environmental components:

(1) Freshwaters

There are two (2) conventions that aim to protect freshwaters. The Watercourses Use Convention (1992) protects transboundary water resources, including rivers, lakes, and groundwater, from pollution and degradation. On the other hand, the Watercourses Non-Navigational Uses Convention (1997) provides a framework for the management and use of transboundary water resources in a way that is equitable and sustainable. These instruments impose obligations to protect, manage, and use freshwaters in an environmentally friendly way. There are, however, scant regional environmental instruments that expressly protect freshwaters.

(2) Marine Biodiversity

There are a total of seven (7) international environmental instruments that specifically protect marine biodiversity, including fur seals, whales, and fisheries of different seas. Among these, four (4) multi-lateral environmental instruments were adopted by a limited number of countries during the Early Modern Period, including the Fur Seals Treaty (1911), the Whaling Convention (1946), the NWA Fisheries Convention (1949), and the NPO Fisheries

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2 The Whaling Convention (1946) was successor to the Geneva Convention for Regulation of Whaling (1931) and the International Agreement for the Regulation of Whaling (1937). Furthermore, it was based on the principles of the International Agreement for the Regulation of Whaling, London, June 8, 1937 (revised June 24, 1938 & Nov. 26, 1945).
Convention (1952). Further, during the Modern Period, three (3) international instruments were
signed and ratified, including the Law of Sea Convention (1982), the Small Cetaceans
Agreement (1992), and the ABNJ Marine Biodiversity Agreement (2023). The objectives of
these international environmental laws are already discussed in detail in Chapter II.

Despite significance of this element, there are scant regional environmental instruments that
expressly protect marine biodiversity. The EU Water Directive (2000) is an example of such
an instrument that serves this purpose and provides a framework for protection and sustainable
management of water resources across the European Union.

These instruments impose obligations on everyone, including the government authorities, to
ensure protection from marine pollution and degradation caused by dumping waste and other
material, including oil, noxious liquid substances, harmful substances, sewage, and garbage
into the marine environment.

**(3) Marine Pollution**

As discussed in Chapter II, after the 1950s, there was a notable rise in oil spill incidents from
maritime ships into the seas. Accordingly, during the Early Modern Period, four (4) multilateral
environmental instruments were signed and ratified by a limited number of countries to address
marine pollution damage and cleanup costs, including the Oil Pollution Convention (1954), the
Bonn Agreement (1969), the Liability Convention (1969), and the Compensation Convention
(1971).

During the Modern Period, the Oil Pollution Convention (1954) was replaced with the Ships
Pollution Convention (1973). Furthermore, the Bonn Agreement (1969) was succeeded by the
Bonn Agreement (1983). In addition, two (2) more international environmental instruments
were signed and ratified, including the Marine Pollution Convention (1972) and the Oil
Pollution Response Convention (1990). The objectives of all these environmental laws are
already discussed in detail in Chapter II.

Like protection of marine biodiversity, there are scant regional environmental instruments that
expressly protect marine biodiversity. The Kuwait Convention (1978), however, is an example
of such an instrument that focus on preventing and combating marine pollution in the Arab
region.

However, as discussed in Chapter IV and herein above, twenty (20) countries incorporate
constitutional provisions concerning pollution in general, including Algeria, Bhutan, China,
North Korea, Ecuador, Guatemala, Guyana, Islamic Republic of Iran, Lithuania, Maldives,
Mozambique, Oman, Palestine, Panama, Saudi Arabia, Tunisia, Turkey, Uganda, Venezuela,
and Viet Nam.

**4. Land**

This environmental component refers to the Earth's surface not covered by water. Protection
of land is essential to maintain ecological balance, conserve biodiversity, ensure food security,
and sustain human livelihoods. Despite its significance, the environmental laws do not discuss
this component separately. However, the management of hazardous material, substances, or
wastes is one of components that offers protection to land along with other environmental
components. These materials have certain physical, chemical, or biological properties or
characteristics that make them flammable, toxic, reactive, corrosive, or biohazardous. Accordingly, they pose significant risks to human health and all the environmental components due to their potential for causing harm upon release into the environment. They can adversely affect the environment by polluting soil, air, and water, and contaminating nature and biodiversity.

There are four (4) international environmental instruments signed and ratified concerning management of hazardous material during a short period of time from 1989 to 2001. These laws include the Hazardous Wastes Disposal Convention (1989), the Hazardous Chemicals Trade Convention (1998), the Industrial Accidents Convention (1992), and the POP Convention (2002). Their objectives are already discussed in detail in Chapter II.

There are, however, scant regional environmental instruments on this component of the environment. However, the African Bamako Convention (1991) serves as such an instrument to regulates the generation, transboundary movement, and disposal of hazardous wastes.

Similarly, at the national level, there are only fifteen (15) countries that address management of hazardous and toxic materials in their constitutional policy-based provisions. These countries include Argentina, Burundi, Chad, Republic of the Congo, Ivory Coast, Ecuador, El Salvador, Haiti, Hungary, Niger, Paraguay, Rwanda, Serbia, Somalia, and Venezuela.

These instruments and provisions concerning management of hazardous material require everyone to safely generate, handle, store, transport, and dispose hazardous substances and toxic wastes with proper caution and due care under the internationally established standards to prevent their adverse effects on the environment and human health.

It is essential to reiterate that land is one of the key environmental components that is subject to various threats, including deforestation, soil degradation, pollution, and urban sprawl. Land protection involves sustainable land management practices, conservation efforts, legal frameworks, and policies aimed at preserving land quality, preventing degradation, and promoting sustainable use to ensure it continues to provide ecological, economic, and social benefits for all living organisms.

5. Sustainable Development

Sustainable development is a fundamental component of environmental protection that recognizes the interconnectedness and inseparability of environmental, social, and economic dimensions and requires to create a balanced, sustainable, and harmonious relationship among them. The Brundtland Report (1987) defines ‘sustainable development’ as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.³

In simple terms, sustainable development is a concept that requires all stakeholders, predominantly the governmental authorities, to incorporate both environmental and social considerations into their economic development. While the environmental components are discussed above, the social aspect focuses on ensuring social justice, equality, and inclusion; providing basic human needs, such as education, healthcare, and housing; and addressing issues such as poverty and inequality.

As discussed in Chapter II, the international environmental arena first formally recognized this concept in 1983 with the establishment of the Brundtland Commission by UNGA to present “a report on environment and ... proposed strategies for sustainable development”.\(^4\) Subsequently, there are six (6) international declarations and widely accepted persuasive soft law international instruments focusing on sustainable development, including the Brundtland Report (1987), the Rio Declaration (1992), the Rio Agenda 21 (1992), the Johannesburg Declaration (2002), the Rio+20 The Future We Want (2012), and SDGs (2015). These international environmental instruments aim to integrate environmental, social, and economic considerations to achieve a balanced and sustainable development that meets the needs of the present and future generations.

SDGs (2015) has listed seventeen (17) interlinked objectives of sustainable development, which include no poverty; zero hunger; good health and well-being; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry, innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice, and strong institutions; and partnerships for the goals.

Despite significance of this component, there are scant regional environmental instruments primarily focusing on sustainable development. However, this concept is widely acknowledged in regional instruments and national constitutions across the globe. For instance, at the regional level, it formally became one of EU’s long-term goals under Article 3(3) of the Treaty on European Union.

Similarly, at the national level, a total of forty-eight (48) countries incorporate sustainable development in their constitutions, including Algeria, Angola, Armenia, Belgium, Bhutan, Cabo Verde (or Cape Verde), Central African Republic, Cuba, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Eswatini, Ethiopia, France, Gambia, Greece, Guatemala, Guyana, Indonesia, Kenya, Laos, Lithuania, Malawi, Maldives, Mongolia, Montenegro, Mozambique, Nepal, Panama, Paraguay, Peru, Poland, Portugal, Qatar, Senegal, Serbia, Sweden, Switzerland, Thailand, Timor-Leste, Tunisia, Uganda, Uruguay, Venezuela, Viet Nam, and Zambia.

In addition, forty-two (42) countries have explicit constitutional provisions to protect the interests of future generations, including Albania, Algeria, Andorra, Angola, Argentina, Armenia, Bangladesh, Belgium, Bhutan, Bolivia, Brazil, Burundi, Cuba, Egypt, Eritrea, Eswatini, Fiji, Gambia, Georgia, Kenya, Latvia, Lesotho, Luxemburg, Madagascar, Malawi, Maldives, Mozambique, Nepal, Niger, Palestine, Papua New Guinea, Poland, Qatar, Senegal, South Sudan, Sudan, Sweden, Timor-Leste, Tunisia, Uganda, Uruguay, and Vanuatu.

Among these countries, twenty-three (23) countries have explicit constitutional provisions regarding both sustainable development and the interest of future generations. These countries include Algeria, Angola, Armenia, Belgium, Bhutan, Cuba, Egypt, Eritrea, Eswatini, Gambia, Kenya, Malawi, Maldives, Mozambique, Nepal, Poland, Qatar, Senegal, Sweden, Timor-Leste, Tunisia, Uganda, and Uruguay.

Accordingly, this section indicates the existence and significance of the environmental components, including nature and biodiversity, atmosphere, water, land, and sustainable development, across the international, regional, and national levels.

B. Environmental Rights

As discussed at the start of the First Part, environmental laws are primarily comprised of policy directives that delineate the obligation of governing bodies and the duties of citizens for protection of the environment and its different components. The earlier section classifies these environmental components that requires collective safeguarding to ensure complete environmental protection. However, this section discusses the specific type of human rights that are recognized in parallel with the policy directives in environmental laws across the globe and are inherently related to the environment (collectively, the “environmental rights”).

In total, there are eleven (11) environmental rights that can be divided into two (2) types, namely substantive and procedural environmental rights. The substantive environmental rights provide protection for specific environmental components, such as nature, natural resources, air, water, and sustainable development. Additionally, they grant every individual the entitlement to adequate standards of living and health. A total of eight (8) substantive environmental rights are recognized in environmental laws across the globe, including the rights of nature, the right to natural resources, the right to clean air, the right to water and sanitation, the right to sustainable development, the right to adequate conditions of life or standards of living, the right to enjoyment of highest attainable standards of health, and the right to food and adequate nutrition. On the other hand, the procedural environmental rights establish complementary procedural safeguards for everyone to protect the substantive environmental rights. There are three (3) procedural environmental rights, including rights to information, public participation, and judicial remedy in environmental decision making.

However, before examining the recognition of environmental rights in environmental laws, it is necessary to establish a distinction between the environmental rights and the right to environment. They both are human rights, recognized at the international, regional, and national levels. The environmental rights possess narrow scope, either protection of specific environmental component, adequate standards of living and health, or procedural safeguards. However, the right to environment has a broad scope and entitles individuals to a clean, healthy, and sustainable quality of all environmental components. The right to environment is comprehensively discussed in the Second Part of this thesis.

1. Substantive Environmental Rights

According to James May and Erin Daly, substantive environmental rights recognize that every individual has entitlement to a certain level of environmental quality, including an adequate, clean, healthy, productive, harmonious, or sustainable environment. These substantive rights are widespread and can be effective due to their perceived self-executing and enforceable nature, their resilience to political changes, and their likelihood of long-term endurance. They provide the most durable and enforceable means for ensuring environmental protection.

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Substantive environmental rights encompass the fundamental entitlements granted to individuals and communities for protection of specific environmental components as well as living and health standards. These rights encompass a range of rights that aim to collectively secure a healthy and balanced environment for current and future generations. They underscore the inseparable link between human well-being and the health of the planet that promotes a harmonious coexistence between humanity and nature.

The environmental laws worldwide identify at least eight (8) substantive environmental rights:

**1) Rights of Nature**

This right enables nature to have inherent rights to exist, thrive, and regenerate and same entitlement to protection as people and corporations. Although this right is not recognized in international and regional environmental instruments, its acknowledgment is gaining traction across scholarly literature and national laws.6

The Rio+20 (2012) notes that “some countries recognize the rights of nature in the context of the promotion of sustainable development.”7 For example, Ecuador recognizes that nature has the “right to be restored” and the “right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes”.8 Similarly, Nicaragua contains a detailed policy-based provisions emphasizing that “[mother earth] must be loved, cared for, and regenerated … We must protect and restore the integrity of the ecosystems, with a special focus on biological diversity and all the natural processes which sustain life”.9

**2) Right to Natural Resources**

The right to natural resources pertains to the inherent entitlement of individuals, communities, and states to access, manage, utilize, and benefit from the resources that the natural environment provides. This right emphasizes the significance of responsible, equitable, and sustainable use and management of natural resources for both the present and future generations.

The international and regional environmental laws do not recognize the right to natural resources as an individual right of people. Conversely, the international environmental laws widely recognize this right, manifesting as the sovereign right of states to exploit their own resources. For instance, the Convention on Law of Seas (1982), the Biodiversity Convention (1992), the Rio Declaration (1992), and UNFCC (1992) recognize that the states have sovereign right to exploit their own resources pursuant to their own environmental and developmental policies.10

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7 Rio+20 The Future we Want (2012), para 39.

8 Constitution of Ecuador, art. 71 & 72.

9 Constitution of Nicaragua, art. 60.

10 Convention on Law of Seas (1982), art 193; Biodiversity Convention (1992), principle 3; Rio Declaration (1992), principle 2; UNFCC (1992), Preamble [right of states to exploit their own resources].
However, the right to natural resources is recognized in four (4) national constitutions, manifesting as the individuals’ entitlement to utilize and enjoy the natural resources. For example, Dominican Republic recognizes the “right … to use and sustainable enjoyment of natural resources”; 11 Ecuador recognizes the “right to benefit from the environment and the natural wealth”; 12 Somalia recognizes the “right to have a share of the natural resources of the country, whilst being protected from excessive and damaging exploitation of these natural resources”; 13 and Thailand recognizes the “right … to manage, maintain and utilise natural resources, environment and biodiversity in a balanced and sustainable manner”. 14

This recognition underscores the growing understanding of the importance of securing the well-being of both present and future generations through responsible natural resource use and management.

(3) Right to Clean Air

The right to clean air is the fundamental entitlement of individuals and communities to breathe clean and unpolluted air that is essential to sustain life, maintain overall quality of life, safeguard human health, prevent environmental degradation, addressing climate change, and support ecological balance. It stands as a corresponding right to protection of atmosphere, as a component of the broader environmental protection.

Despite significance of clean air, it is indeed astonishing that the right to clean air remains absent from the range of international and regional environmental laws, as well as from human rights instruments. There are, however, policy-based provisions within environmental laws at each level to ensure clean air. Equally striking is the fact that the recognition of this rights does not find expression within the constitutions of the 194 countries across the globe. Nevertheless, there is scholarly literature on significance of this right. 15

(4) Right to Water and Sanitation

The right to water and sanitation embodies the fundamental entitlement of individuals and communities to access clean, safe, and sufficient water for personal and domestic use, along with proper sanitation facilities that promote health and hygiene. This environmental right underscores the significance of ensuring equitable access to the basic necessities of water and sanitation for all people and functions in parallel with the protection of marine environment as a crucial component of environmental protection.

11 Constitution of Dominican Republic, art. 67(1).
12 Constitution of Ecuador, art. 74.
13 Constitution of Somalia, art. 25(2).
14 Constitution of Thailand, sec. 43(2).
At the international level, the Rio+20 (2012) reaffirms the commitment “regarding the human right to safe drinking water and sanitation”.16 While this right is not expressly recognized in regional environmental laws, the Americas Social Charter (2012) requires its member states to “ensure access to safe drinking water and sanitation services for present and future generations.”17

At the national level, this right is recognized in constitutions of six (6) countries in various forms. For instance, Costa Rica recognizes the “right of access to potable water”;18 Ecuador recognizes the right to water;19 Egypt recognized the “right to enjoy the Nile River”;20 Honduras recognizes the right to access to water and sanitation;21 Morocco recognizes the “right … to the access to water”;22 and Uruguay recognizes the right to “the access to potable water and the access to sanitation”.23

(5) Right to Sustainable Development

The right to sustainable development represents the inherent entitlement of individuals, communities, and states to engage in activities that foster economic, social, and environmental progress without compromising the ability of future generations to meet their own needs. This right emphasizes on balanced, harmonious, and responsible development that safeguards the environment, promotes social equity, and incorporates the interests of present and future generations. It stands as a corresponding right to the ethos of sustainable development, as a component of the broader environmental protection.

This right ranks among the substantive environmental rights recognized across international, regional, and national levels. The international environmental laws widely recognize this right, manifesting as the right to development of individuals and right to promote sustainable development of states. For instance, the Rio Declaration (1992) acknowledges that the “right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”.24 The Millennium Declaration (2000) and the Rio+20 (2012) have also affirmed the importance of the right to development.25 On the other hand, UNFCCC (1992) incorporates the right to promote sustainable development of states.26

Similarly, at the regional level, the Americas Escazú Agreement (2018) recognizes the right to every person of present and future generations to sustainable development.27 Likewise, at the national level, at least three (3) countries embrace this right in their constitutions. Ethiopia28

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16 Rio+20 The Future we Want (2012), para 121.
18 Constitution of Costa Rica, art. 50.
19 Constitution of Ecuador, art. 15.
20 Constitution of Egypt, art. 44.
21 Constitution of Honduras, art. 145.
22 Constitution of Morocco, art. 31.
23 Constitution of Uruguay, art. 47.
24 Rio Declaration (1992), prin. 3.
26 UNFCCC (1992), art. 3(4).
28 Constitution of Ethiopia, art. 43.
and Mauritania\textsuperscript{29} formally recognize the right to sustainable development, while Morocco identifies the “right … to lasting [durable] development”.\textsuperscript{30}

(6) Right to Adequate Conditions of Life or Standards of Living

The right to adequate conditions of life or standards of living encompasses the fundamental entitlement of individuals and communities to enjoy a dignified and wholesome quality of life that includes essential necessities such as food, clothing, housing, healthcare, and education. This right ensures that all people have the means to lead a life of well-being, security, and human dignity.

This right is recognized at international, regional, and national levels. At the international level, the Stockholm Declaration (1972) recognizes the “fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being”.\textsuperscript{31} Similarly, the Rio+20 (2012) reaffirms the importance of the “right to an adequate standard of living, including the right to food …”\textsuperscript{32} At the regional level, the Americas Pact of San José (1969) contains the right to have life respected.\textsuperscript{33} At the national level, only Ethiopia recognizes the “right to improved living standards” in its constitution.\textsuperscript{34}

(7) Right to Enjoyment of the Highest Attainable Standards of Health

The right to enjoyment of the highest attainable standards of health comprehends the inherent entitlement of individuals and communities to attain and sustain the utmost level of physical, mental, and social well-being. This right focuses on ensuring access to healthy and fulfilling lives, quality healthcare services, disease prevention, and health promotion measures.

This right is recognized in one of each international and regional environmental instrument. At the international level, the Rio+20 (2012) calls for the full realization of the “right to the enjoyment of the highest attainable standard of physical and mental health”. It further clarifies that “health is a precondition for and an outcome and indicator of all three dimensions of sustainable development.”\textsuperscript{35}

At the regional level, the Social Charter of the Americas (2012) recognizes the fundamental rights of all persons to “the enjoyment of the highest attainable standard of health” and upholds commitment of member states “to promote healthy lifestyles and to strengthen their capacity to prevent, detect, and respond to … diseases, and environmental health concerns.”\textsuperscript{36}

Similarly, at the national level, Portugal recognizes the “right to health protection … fulfilled … by creating economic, social, cultural and environmental conditions … and by developing … healthy living practices”.\textsuperscript{37}

\textsuperscript{29} Constitution of Mauritania, art. 19.
\textsuperscript{30} Constitution of Morocco, art. 31.
\textsuperscript{31} Stockholm Declaration (1972), Principle 1.
\textsuperscript{32} Rio+20 The Future we Want (2012), para 8.
\textsuperscript{33} American Convention on Human Rights, Nov. 22, 1969., art. 4.
\textsuperscript{34} Constitution of Ethiopia, art. 43.
\textsuperscript{35} Rio+20 The Future we Want (2012), para 138.
\textsuperscript{36} Social Charter of the Americas (2012), art 17.
\textsuperscript{37} Constitution of Portugal, art. 64(2)(b)
(8) Right to Food and Adequate Nutrition

The right to food and adequate nutrition includes the fundamental entitlement of individuals and communities to access sufficient, safe, and nutritious food that meets their dietary needs for a healthy and active life. This right emphasizes the importance of eradicating hunger, ensuring food security, and promoting nutrition for present and future generations.

This right also find recognition in at least one instrument at the international, regional, and national levels. At the international level, the Rio+20 (2012) reaffirms a commitment “regarding the right of everyone to have access to safe, sufficient and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger … to enhancing food security and access to adequate, safe and nutritious food for present and future generations …”38

At the regional level, the Americas San Salvador Protocol (1988) provides “the right to adequate nutrition which guarantees the possibility of enjoying the highest level of physical, emotional and intellectual development”.39 In addition, at the national level, Moldova recognizes the “right … to consume healthy food products” in its constitution.40

2. Procedural Environmental Rights

Procedural environmental rights refer to the essential guarantees that enable individuals and communities to actively engage in decision-making processes concerning the environment. In contrast to substantive environmental rights, which focus on the components of environmental protections, procedural environmental rights prioritize inclusiveness, transparency, and accountability in environmental governance. They ensure that the public and all stakeholders have a voice in shaping laws, policies, decisions, activities, and projects, that may have impact on the environment.

There are three (3) core procedural environmental rights that consistently appear in scholarly work as well as international, regional, and national instruments:41

(1) the right to appropriate access to timely, reliable, and accurate environmental information held by public authorities (the “ informational right”);

(2) the right to participate in, comment on, object to, or influence environmental decision-making processes (the “ participatory right”); and

(3) the right to effective access to judicial and administrative remedies in environmental matters (the “adjudicatory rights”).

38 Rio+20 The Future we Want (2012), para 108.
40 Constitution of Moldova, art. 37(1).
These procedural rights are either explicitly recognized or implied from the corresponding procedural obligations of the states in international, regional, and national laws. At the international level, although the Rio Declaration (1992) does not explicitly contain procedural environmental rights, it grants every individual procedural guarantees, including appropriate access to information held by public authorities concerning the environment, the opportunity to participate in decision-making processes, and access to judicial and administrative remedies in environmental matters.42

Regionally, procedural environmental rights are acknowledged in the European Aarhus Convention (1998) and the Americas Escazú Agreement (2018). Both instruments require their state parties to contribute to the protection of the right to environment by guaranteeing the rights of access to information, public participation in decision-making, and access to justice in environmental matters.43 They intentionally link these rights to the overarching right to environment, a topic that will be elaborated more in Chapter VII.

In addition, many countries have incorporated these rights in their national constitutions. As explained in Chapter IV and Appendix C, a total of thirty-nine (39) countries recognizes procedural environmental rights and guarantees or any one of them in their constitutions. Among these, only twenty-four (24) countries have included at least one (1) express procedural environmental right in their constitutions. The distribution of these rights is as follows:

(a) Fifteen (15) countries explicitly protect the informational right in environmental matters, including Albania, Azerbaijan, Belarus, Czech Republic, France, Georgia, Indonesia, Moldova, Montenegro, Poland, Russia, Serbia, Slovakia, Turkmenistan, and Ukraine.

(b) Only two (2) countries have procedural constitutional guarantees corresponding to the informational right. For instance, Latvia Constitution requires the state to protect the right to environment by providing information about environmental conditions.44 Similarly, to safeguard the right to environment, Norway Constitution entitles its citizens to be informed of the state of natural environment and of the effects of any encroachment on nature.45

(c) Only five (5) countries explicitly protect the participatory right in environmental matters, including Ethiopia, France, Georgia, Montenegro, and Tunisia.

(d) Seven (7) countries have procedural constitutional guarantees corresponding to the participatory right, including Colombia, Finland, Gambia, Mauritania, Nepal, Uruguay, and Venezuela.

(e) Thirteen (13) countries explicitly acknowledge the right to judicial remedy or compensation in environmental matters. Among these, the right to take legal action against infringement of the environment or environmental rights is recognized in five (5) countries, including Angola, Burkina Faso, Montenegro, Mozambique, and Paraguay; and the right to get compensation for damages caused to property or health because of environmental rights or violation is recognized in eight (8) countries, including Azerbaijan, Ethiopia, Kyrgyzstan, Nepal, Portugal, Russia, Turkmenistan, and Ukraine.

44 Constitution of Latvia, art. 115.
45 Constitution of Norway, art. 112.
Nine (9) countries have procedural guarantees in their constitutions, corresponding to the right to judicial remedy or compensation in environmental matters. Among these, seven (7) countries have procedural guarantees to take legal action against infringement of the environment or environmental rights, including Bolivia, Costa Rica, Kenya, Moldova, Serbia, Spain, and Viet Nam. Further, two (2) countries have incorporated constitutional guarantees regarding compensation for environmental damages or violations, including Belarus and Chad.

Few scholars discuss that there is an observable upward trajectory in the use of procedural rights for addressing environmental issues. These rights are often regarded as an integral element of the right of environment and are firmly entrenched in international human rights law, regional instruments, and the national constitutions. Their importance stems from their capacity to cultivate a transparent and participatory decision-making process, while concurrently establishing mechanisms for holding governmental bodies responsible for their actions.46

C. Environmental Principles

After meticulous analysis of the environmental components and their corresponding rights, this section identifies ten (10) recurring and common environmental principles that serve as the basis of environmental laws worldwide.47 These principles provide direction for formulating and implementing laws, policies, executive measures, and jurisprudence at international, regional, and national levels. They are interconnected enforceable principles that manage and regulate human activities and ensure a comprehensive and holistic approach to environmental protection and governance. They signify the collective responsibility of individuals, communities, and governments to preserve the environment and all its components and to protect environmental rights.

These overarching environmental principles, encompassed within the international, regional, and national laws, are elaborated in brief as follows:

1. Precautionary Approach

The precautionary approach advocates for proactive measures to prevent and minimize environmental harm in advance, even in the absence of complete scientific certainty. It underscores the need to take precautionary actions to prevent irreversible damage to the environment.

2. Integrating Environmental Considerations

The integration principle underscores the inclusion of environmental considerations into every decision-making related to economic, developmental, and social matters. This principle serves as a catalyst for achieving sustainable development and protecting the right to sustainable development. It necessitates to use, manage, conserve, and restore nature and biodiversity and prevent and reduce environmental impacts of every action. Under this principle, the businesses

46 For example, see, Sumudu Atapattu, The Right to a Healthy Life or the Right to Die Polluted?: The Emergence of a Human Right to a Healthy Environment Under International Law, 16 Tulane Environmental Law Journal 65 (2002).
and corporations have the corporate social responsibility to adopt responsible practices, minimize environmental impacts, and contribute to environmental protection.

3. Involvement of Stakeholders

The involvement of stakeholders in environmental matters is a crucial component of effective environmental governance. Stakeholders are individuals, groups, organizations, and communities that have a vested interest or are affected by environmental decisions, policies, and actions. Their involvement in environmental initiatives fosters collaboration, transparency, and inclusivity. This principle guarantees the acceptance and successful implementation of initiatives; harnesses local knowledge, expertise, needs, and perspectives; facilitates conflict resolution; and leads to comprehensive and informed outcomes. It upholds the procedural environmental rights and the corresponding guarantees available in international, regional, and national environmental laws.

4. Environmental Equity

The principle of inter-generational equity emphasizes the preservation of the environment and its resources for future generations. It calls for considering the long-term consequences of present actions and ensuring the responsible and sustainable use of nature and its resources.

5. Environmental Justice

This principle seeks to address the equitable distribution of environmental benefits and burdens, focusing on addressing disproportionate environmental impacts on marginalized communities. It emphasizes the importance of fair treatment and meaningful involvement of all individuals in environmental decision-making processes without any discrimination.

6. Transboundary Cooperation

This principle requires everyone to cooperate for addressing environmental issues that transcend their boundaries and affect their neighbors. This principle originates from the principle of transboundary cooperation to address environmental issues affecting neighboring countries. It emphasizes the need for collaborative efforts and cooperation to effectively tackle shared environmental challenges.

7. Polluter Pays Principle

The polluter pays principle requires that those responsible for pollution bear the costs and responsibilities associated with preventing, mitigating, and remedying environmental damage. This principle holds polluters accountable for the negative consequences of their actions on the environment, health, and property.

8. Common but Differentiated Responsibilities

The principle of shared but differential responsibility highlights that all countries share a collective responsibility to protect the environment. However, countries with significant historical emissions and greater capacity to address environmental issues bear a greater responsibility in addressing global environmental challenges.
This principle can be extended and applied to all levels of environmental governance, emphasizing that every individual or corporation with a history of emissions and greater capacity to address environmental issues also carry a greater responsibility towards environmental challenges within their territories.

9. Use of Science and Technology

This principle recognizes the importance of utilizing and sharing scientific knowledge and technological advancements to develop sustainable solutions and strategies for environmental protection. It mandates the promotion of green technologies, sustainable agriculture practices, renewable energy solutions, and eco-friendly practices.

10. Education and Awareness

This principle promotes environmental education and awareness to inform individuals, communities, and organizations about the importance of the environment and responsible environmental practices.

These above-mentioned ten (10) principles are integrated in several international, regional, and national environmental instruments. Their collective application is required for protection of the environment as well as each of its five (5) components, including nature and biodiversity, atmosphere, marine environment, hazardous material, and sustainable development. For every environmental element, the precautionary approach calls for proactive measures in the face of uncertainties; the integration of environmental considerations ensures well-informed decision-making; the involvement of stakeholder ensures concerns of everyone are taken into account; the environmental equity safeguards the interests of future generations; the environmental justice seeks fairness without discrimination in outcomes; the transboundary cooperation addresses shared environmental challenges; the polluter pays principle emphasizes accountability for environmental harm; the principle of common but differentiated responsibilities imposes greater responsibility of those with significant historical emissions and greater capacity to address environmental issues; the use of science and technology fosters innovative and sustainable solutions across the environmental spectrum; and lastly, education and awareness requires to promote awareness about the importance of the environment and responsible practices.

D. Conclusion

These environmental components, rights, and principles are commonly found in international, regional, and national environmental laws and they collectively shape the framework of environmental protection and governance at every level. They direct individuals and governments in their commitment to environmental stewardship and sustainability. Furthermore, they form the basis for the subsequent Parts of this thesis, articulating that they are all embodied within the broader concepts of the right to environment and EIA.
SECOND PART

RIGHT TO ENVIRONMENT

The right to environment holds significant importance in environmental laws at all levels. This Part elucidates this significance by offering a comprehensive analysis of this right and examining its recognition, definition, and significance. Many scholars have dedicated their research for exploring these aspects of the right to environment. Their scholarly contributions are documented throughout this Part. This extensive body of literature substantiates profound significance of this right among the human rights and reflects its widespread acceptance as a crucial legal concept in the environmental laws.

Drawing from extensive research, this Part is structured into two (2) chapters. Chapter VI explores the universal nature of this right emphasized by its wide recognition at international, regional, national, and sub-national levels. It explores that although this right emerged as a recent development in international environmental law in July 2022, its origin can be traced back to 1971, predating the Stockholm Declaration (1972), when the State of California acknowledged this right through a statewide referendum at the sub-national level. Since then, the recognition of this right has gained widespread acceptance at regional, national, and sub-national levels. Presently, eighty-seven (87) countries explicitly protect the right to environment within their constitutions; six (6) countries consistently recognize an implied right to environment through national jurisprudence; five (5) countries embody environmental protection within other constitutional provisions; and at least twenty (20) more countries recognize the right to environment in their national legislations. Accordingly, more than 60% countries worldwide (118 out of 194) recognize this right in their national constitutions, legislations, or jurisprudence. Furthermore, this right is also recognized at the sub-national level in Australia, Canada, Russia, and the United States. However, recently, the UN Resolution (2022) has granted this right a universal status.

Thereafter, Chapter VII defines this right and discusses its five (5) core components, including substantive, procedural, universal, intertemporal, and assessment components. In doing so, the chapter examines the integrated and inclusive nature of this right by observing its inherent connection and relationship with the environmental obligations, rights, and principles. It surveys the existing approaches used by scholars to define the contents and scope of the right to environment. It further discusses the legal precedents of the regional human rights courts and commissions to provide a comprehensive understanding, definition, and enforcement of this right. Furthermore, it identifies the obligation to conduct EIA as a fundamental component of the right to environment.

Accordingly, this Part shows that the universal recognition of the right to environment is a significant move towards an integrated and comprehensive approach to environmental conservation. It equips states with a comprehensive strategy to counter the complex and interconnected environmental challenges. In this context, the environmental obligations, rights, and principles delineated in the environmental laws become integral to enforcing the right to environment and become components of a broader and cohesive structure aimed at realizing this fundamental right. Therefore, states must safeguard the environmental obligations, rights, and principles existing in the environmental laws for an effective protection of this right.
Chapter V: Recognition of the Right to Environment

Many scholars have written about the widespread recognition of the right to environment, advocating for its universal recognition.¹ This Chapter elaborates that this right has now attained universally acceptance and recognition after the UN Resolution (2022). It provides a detailed examination of this recognition at international, regional, national, and sub-national levels.

A. Recognition at the International Level

As discussed in Chapter II, UNGA has revolutionized international environmental laws by formally recognizing the “right to a clean, healthy and sustainable environment” as a fundamental human right.² This historic milestone is a result of determined efforts of scholars and international community who advocated for this global recognition.³ This formal acknowledgment by the United Nations has elevated its importance and has solidified its position as a universal, fundamental, and indispensable human right that must be upheld and protected by all countries across the globe.

B. Recognition at the Regional Level

Several scholars have elaborated on the widespread recognition of the right to environment in regional laws.⁴ Indeed, this right is recognized in regional laws of all the global regions, including Americas, Europe, Africa, Arab, Asia, as well as the Small Island Developing States. The evolution of this right in regional instruments across the globe unfolds as follows:

(1) The African Charter (1981) is the first regional instrument to recognize “right to a general satisfactory environment favorable to their development”.⁵ This regional human rights instrument is ratified by thirty-nine (39) states from the African region.⁶

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⁴ Id.


(2) Thereafter, in the American region, the San Salvador Protocol (1988) protected the “right to live in a healthy environment and to have access to basic public services”.\(^7\) There are currently sixteen (16) state parties to this Protocol.

(3) A decade later in the European region, the Aarhus Convention (1998) recognized “the right of every person of present and future generations to live in an environment adequate to his or her health and well-being”.\(^8\) There are presently thirty-eight (38) signatories to this Convention.\(^9\)

(4) Afterwards, the Arab Charter (2004) granted every person the “right to an adequate standard of living for himself and his family, which ensures their well-being and a decent life, including food, clothing, housing, services and the right to a healthy environment”.\(^10\) There are presently sixteen (16) state parties to this Charter.

(5) Similarly, the non-binding Male Declaration (2007), adopted by the Small Island Developing States, also acknowledges “the fundamental right to an environment capable of supporting human society”.\(^11\)

(6) Subsequently, the ASEAN Human Rights Declaration (2012) guaranteed the “right to an adequate standard of living … including … right to a safe, clean and sustainable environment.”\(^12\) There are currently ten (10) states parties to this non-binding Declaration.\(^13\)

(7) Lastly, again in the American region, the Escazú Agreement (2018) recognized “the right of every person to live in a healthy environment”.\(^14\) There are presently twenty-four (24) signatories to this Agreement.\(^15\)

It is worth mentioning that two (2) regions, including the European Union and SAARC, do not have specific regional laws that explicitly recognize the right to environment. However, in the case of the European Union, all its member states are signatories to the Aarhus Convention (1998), which protects the right to live in an environment adequate to health and well-being.\(^16\)

In addition, both regions have policy-based environmental protection provisions in their charters. For instance, the EU Charter (2000) contains a policy-based provision, stating that “a high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the [European] Union and ensured in accordance with the principle of sustainable development.”\(^17\) Similarly, the SAARC Charter (2004) offers environmental protection, emphasizing the responsibility of member states “towards present

\(^8\) Aarhus Convention (1998), art. 1.
\(^10\) Arab Charter (2004), art. 38.
\(^11\) Male’ Declaration on the Human Dimension of Global Climate Change, Nov. 14, 2007, Preamble.
\(^12\) ASEAN Human Rights Declaration (2012), art. 28(f).
\(^13\) ASEAN Human Rights Declaration (2012).
\(^14\) Escazú Agreement (2018), art. 4.1.
\(^16\) Aarhus Convention (1998), art. 1.
\(^17\) EU Charter (2000), art. 37.
and future generations by ensuring equity among generations, and protecting the integrity and sustainable use of the environment".\(^\text{18}\)

The continued recognition of the right to environment in regional laws across the globe underscores its growing importance and commitment as a fundamental principle at regional level to protect and promote the well-being of individuals and the planet.

\section*{C. Recognition at the National Level}

The recognition of the right to environment in national laws worldwide has garnered considerable attention in scholarly literature. This section classifies countries with recognition of this right into four (4) categories. Firstly, it identifies countries that explicitly recognize the right to environment in their rights-based constitutional provisions. Secondly, it outlines countries where this right is solely recognized in national legislations. Thirdly, it enumerates countries where this right is not explicitly recognized, but environmental protection is embodied within the constitutional right to life or health. Lastly, it discusses the countries where this right is not recognized, but their constitutional courts have acknowledged its implicit nature within constitutional right to life, right to health, or obligations of states to protect the environment.

Furthermore, this section highlights the variations in the number of countries reported by scholars in each category. Such discrepancies often arise from interpretations and updates of constitutional provisions or jurisprudence over time and underscore the need for continued research and analysis in this field. This section also provides clarifications on these variations in numbers to offer a comprehensive understanding of the recognition of the right to environment in national constitutions, laws, and jurisprudence.

\subsection*{1. Explicit Recognition in the National Constitutions}

The rights-based environmental provisions in constitutions across the globe predominantly recognize the right to environment in explicit terms. Scholarly literature identifies Portugal as the first country to incorporate this right into its constitution in 1976, marking the beginning of a growing trend in its recognition.\(^\text{19}\) However, as discussed in next section, it is essential to highlight that the Commonwealth of Pennsylvania in the United States had already recognized this right in its constitution in 1971 through a state-wide referendum.

The literature reflects variations in the number of countries that explicitly recognize this right in their constitutions. For instance, James May reported that about fifty (50) constitutions around the globe explicitly recognized the right to environment by the mid-1990s; around sixty (60) constitutions by 2004 and 2006; sixty-five (65) constitutions by 2009; and seventy-six (76) constitutions by 2014.\(^\text{20}\) However, in 2011, David R. Boyd noted a higher number of ninety (90) countries explicitly acknowledging this right in their constitutions.\(^\text{21}\) Similarly, in 2018

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\(^{18}\) SAARC Charter (2004), art. II(2)(ii).


and 2019, James R. May and Erin Daly reaffirmed that about ninety (90) nations recognized some form of fundamental right to a quality environment in their constitutions.\textsuperscript{22} Though in 2015, Klaus Bosselmann revealed that over ninety-two (92) constitutions explicitly recognized the right to environment.\textsuperscript{23} Moreover, in 2018, David Boyd found at least a hundred (100) countries with 'direct constitutional protection' to environmental rights.\textsuperscript{24}

In addition to above scholarly work, two (2) latest publications on the recognition of the right to environment in national constitutions were published in 2021. In one of them, David Boyd reported ninety-two (92) national constitutions with explicit recognition of this right.\textsuperscript{25} However, in the other, James May yielded a slightly less count, identifying eighty-four (84) constitutions with express recognition of this right.\textsuperscript{26} From David Boyd’s list of ninety-two (92) countries, James May excluded eight (8) countries because either their constitutions contained policy-based statements or lacked express right to environment. The excluded countries are Burundi, Croatia, Finland, Gabon, Honduras, Iran, Malawi, and Sudan.

The variations in reported figures demonstrate the complexity of tracking and interpreting constitutional provisions related to environmental rights. These differences underscore the evolving and dynamic nature of constitutional provisions regarding the right to environment and ongoing efforts by nations to address this crucial right. Therefore, this area of study remains subject to ongoing scrutiny as countries grapple with the complex relationship between environmental rights and constitutional law. However, it is crucial to resolve these differences to gain a comprehensive understanding of the global landscape of the recognition of this right in constitutions.

As highlighted in Chapter IV and evident from Column 3 of Appendix C (Rights-Based Provisions in the National Constitutions), a total of eighty-seven (87) countries expressly incorporates the right to environment in their constitutions. These countries include Algeria, Angola, Argentina, Azerbaijan, Belgium, Benin, Bolivia, Brazil, Bulgaria, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Chile, Colombia, Comoros, Costa Rica, Cuba, Czech Republic, Democratic Republic of the Congo, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, Finland, France, Gambia, Georgia, Greece, Guinea, Guyana, Hungary, Indonesia, Iraq, Ivory Coast, Jamaica, Kenya, Kyrgyzstan, Latvia, Maldives, Mali, Mauritania, Mexico, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Nepal, Nicaragua, Niger, North Macedonia, Norway, Palestine, Paraguay, Peru, Philippines, Portugal, South Korea, Republic of the Congo, Romania, Russia, Rwanda, Sao Tome and Principe, Senegal, Serbia, Seychelles, Slovak Republic, Slovenia, Somalia, South Africa, South Sudan, Spain, Thailand, Timor-Leste, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, Venezuela, Viet Nam, and Zimbabwe.

\textsuperscript{24} David R. Boyd, Catalyst for Change: Evaluating Forty Years of Experience in Implementing the Right to a Healthy Environment, in The Human Right to a Healthy Environment (Knox & Pejan eds., 2018).
While all these countries recognize the right to environment of everyone, only El Salvador grants it to children.

Column 3 of Appendix C (Rights-Based Provisions in the National Constitutions) shows that these countries use different adjectives within the provision of this right to ensure quality of environment and establish a goal or benchmark. The right may be to a safe, clean, healthy, sustainable, ecological, pleasant, desirable, stable, balanced, protected, unpolluted, unharmed, satisfying, satisfactory, lasting, durable, sound, adequate, appropriate, suitable, favorable to health and well-being, benevolent, well-preserved, healthy, or living environment. These words are used interchangeably by different countries across the globe while recognizing this right. In context of this right, these words convey the same meaning and highlight the substantive element of the right to environment, as discussed in detail in Chapter VII.

2. Explicit Recognition in the National Legislation

Some scholars have also surveyed countries that only recognize the right to environment in their national legislations. In the most recent study, David Boyd listed a total of one-hundred and one (101) countries that recognize the right to environment in national legislations. According to his list, there are twenty (20) countries that do not explicitly recognize the right to environment in their constitutions but has granted the right to environment in national legislations. These countries include Armenia, Bhutan, Bosnia and Herzegovina, Djibouti, Eritrea, Gambia, Guinea-Bissau, Haiti, Kazakhstan, Lebanon, Lesotho, Madagascar, Monaco, Palau, Saudi Arabia, Tajikistan, Uruguay, Uzbekistan, Yemen, and Zambia.27

In contrast, James May presents different compilation of twenty-three (23) countries that only recognize the right to environment in their domestic legislations. James May excludes four (4) countries from the above list of David Boyd, including Lesotho, Uzbekistan, Yemen, and Zambia, and introduces seven (7) additional countries to his list, namely Cyprus, Guatemala, Liberia, Lithuania, Nigeria, Panama, and Tanzania.28

Given the inconsistencies and variations within these lists, it is evident that further research is warranted in recognition of the right to environment within national legislations. However, it is important to reiterate from Chapter IV that this level of analysis extends beyond the scope of this thesis.

3. Implicit Recognition in other Constitutional Provisions

Although no scholars have distinguished these countries, it is essential to highlight that there are five (5) countries that embody environmental protection within other constitutional provisions. For instance, in Belarus, the right to health care must be secured by measures to improve the environment.29 In Burundi, the rights and duties guaranteed by the international texts regularly ratified constitute an integral part of its constitution.30 Accordingly, the right to environment is also implied in its constitution after recognition of this right by UNGA. Further, in Croatia, the same constitutional provision guarantees the right to a healthy life and requires

29 Constitution of Belarus, art. 45.
30 Constitution of Burundi, art. 19.
state to ensure conditions for a healthy environment. In Gabon, the constitution recognizes and guarantees the inalienable and imprescriptible human rights and the protection of a preserved natural environment, rest, and leisure. Similarly, in Iran, preservation of the environment is embodied in the right of present and future generations to flourishing social existence.

4. Implicit Recognition by the National Courts

In various countries where the right to environment is not expressly recognized in their constitutions, their constitutional courts have interpreted that this right is implicit in other fundamental human rights, such as right to life, the right to health, or the government’s duty to protect the environment. However, scholars differ in identifying countries where the right to environment is implied within constitutions by the national courts. It is worth noting that in certain countries, such as the United States, the courts have rejected the implicit recognition of the constitutional right to environment.

In 2011, David R. Boyd identified twelve (12) countries with a judicially implied right to environment in the constitutions. These countries included Bangladesh, Estonia, Guatemala, India, Israel, Italy, Malaysia, Nigeria, Pakistan, Sri Lanka, Tanzania, and Uruguay. Subsequently, in 2020 and 2021, David Boyd updated the list to include total of eighteen (18) countries where national courts recognized an implicit right to environment. These countries include Bangladesh, Cyprus, El Salvador, Estonia, Ghana, Guatemala, India, Ireland, Italy, Liberia, Lithuania, Malaysia, Namibia, Nigeria, Pakistan, Panama, Sri Lanka, Tanzania.

However, in 2021, James May conducted a detailed examination of the list provided by David Boyd and made significant observations. He pointed out that out of the eighteen (18) countries listed by David Boyd, only six (6) countries, namely Bangladesh, Guatemala, India, Pakistan, Panama, and Sri Lanka, can confidently be said to consistently recognize an implied right to environment:

1. In Bangladesh, the court held in a landmark case of Dr. Mohiuddin Farooque. vs. Bangladesh and others that “right to life … encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, and sanitation without which life can hardly be enjoyed. Any act or omission contrary thereto will be violative of the said right to life.”

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31 Constitution of Croatia, art. 69.
32 Constitution of Gabon, art. I(8).
33 Constitution of Iran, art. 50.
35 Id.
(2) In Guatemala, the courts have allowed NGOs to bring lawsuits based on the constitutional right to environment. They explain that the objective of environmental measures is to guarantee the right to health and the achievement of a standard of living that guarantees the survival of future generations.39

(3) In India, its constitutional courts have implied the right to environment in the right to life and its policy-based environmental provision. In a landmark case titled Subhash Kumar vs. State of Bihar, its Supreme Court clarified that the “right to live … includes the right to enjoyment of pollution-free water and air for full enjoyment of life. If anything endangers or impairs that quality of life in derogation of laws, a citizen has the right to have recourse … for removing the pollution of water or air which may be detrimental to the quality of life.”40 This approach has consistently been followed in other cases as well.41

(4) In Pakistan, the constitutional courts have accorded the right to environment constitutional legitimacy and status as an element of the rights to life and dignity. The courts consistently hold that the rights to life and dignity under the Constitution of Pakistan (1973) include the right to environment.42

(5) Panama appears to possess relatively strong jurisprudence in support of an implied right to a healthy environment.43

(6) In Sri Lanka, the Supreme Court has endorsed the implicit recognition of the right to environment in several cases.44

James May emphasized that in the remaining twelve (12) countries from the list of David Boyd, although there is jurisprudence that could potentially support the right to environment, the claim to an implied right in their constitutions has not been firmly established. He noted that the cases cited in these countries have been reversed, ignored, or fallen into desuetude over time, creating uncertainty regarding the implicit recognition of such a right in their constitutions. Accordingly, James May analyzed David Boyd’s list of implicit recognition of the right to environment and identified various discrepancies and limitations in the following twelve (12) countries.45

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44 Id.
45 Id.
(1) Cyprus: James May pointed out that the case relied upon, titled Republic vs. Pyrgon Community, was decided twenty-five (25) years ago and did not have a lasting impact on establishing an implied right to environment.

(2) El Salvador: While its constitution limits the right to environment for children, David Boyd mentioned cases where this right was extended to be held by everyone. However, James May clarified that these cases did not confer an implied right, were decided a quarter of a century ago, and did not serve as binding precedents.

(3) Estonia: David Boyd acknowledged that in Case No. 3-3-1-101-09, its court recognized an implicit constitutional right to environment drawing from its constitutional environmental provision, the Aarhus Convention, and jurisprudence from the European Court of Human Rights. James May, however, identified the said case as old, primarily concerning procedural rights, and lacking precedential significance.

(4) Ghana: James May emphasized that the case relied upon, titled Centre for Public Interest Law vs. Environmental Protection Agency, merely commented on the governmental duties to protect the environment and did not recognize an implied right to environment.

(5) Ireland: James May noted that in the case of Friends of the Irish Environment CLG vs. Fingal County Council, its Supreme Court rejected the claim that right to life and dignity provision incorporates an implied right to environment.

(6) Italy: David Boyd relied on a case from 1989 where the right to environment was allegedly interpreted to be included in the constitutional right to health. However, James May examined the cited cases to be outdated and without an implied right to environment.

(7) Liberia: James May highlighted that it lacks implied right to environment and is solely listed due to its membership in the African Charter.

(8) Lithuania: James May pointed out that it does not have sufficient track record to support legal recognition of an implied right to environment.

(9) Malaysia: David Boyd cited the case titled Tan Teck Seng vs. Suruhanjaya Perkhidmatan Pendidikan as an example of implied recognition of this right. He also pointed out that the Malaysian case law is contradictory regarding recognition of an implicit constitutional right to environment. James May, however, emphasized that the said case is over twenty-five (25) years old from a lower court and merely contains a superfluous remark of the court.

(10) Namibia: James May noted that it does not have sufficient track record to support legal recognition of an implied right and is primarily mentioned because its constitution incorporates international agreements, and it is a member of the African Charter.

(11) Nigeria: David Boyd relied on the case titled Jonah Gbemre vs. Shell Petroleum Development Company to support the implied right to environment. He also acknowledged that the decision was under appeal and was not yet implemented.
May clarified that the said case was decided fifteen (15) years ago by a lower court, did not serve as a binding precedent, and remained unenforced.

(12) Tanzania: David Boyd highlighted its High Court’s ruling recognizing the right to environment as an integral part of the right to life. However, James May reported that Tanzania does not have sufficient record to support legal recognition of an implied right to environment.

This section confirms the nuanced analysis of James May and highlights the complexities and variations in how the right to the environment is interpreted and recognized by different national courts. It also emphasizes the importance of continuous scrutiny of legal precedents and developments to ascertain the status of implied right of environment in different jurisdictions. However, the list of countries recognizing an implied right to environment is subject to scrutiny and varying interpretations based on the examination of specific cases and their historical contexts.

D. Recognition at the Sub-National Level

The recognition of the right to environment extends beyond international, regional, and national levels to encompass provincial or sub-national levels in several countries that may not explicitly acknowledge this right in their national constitutions. Notably, this phenomenon can be observed in countries such as Australia, Canada, Russia, and the United States.

While the national constitutions of both Australia and Canada do not explicitly mention the right to environment, it is worth noting that at least one of their territories has incorporated this right within their respective legislations. For instance, Quebec Province in Canada has recognized this right through its Environment Quality Act. Similarly, the Australian Capital Territory has explicitly protected this right as a human right in its Human Rights Act of 2004.

In addition, in Chechen Republic (or Chechnya), which is no longer recognized by the United Nations and is considered a republic of Russia, the constitution grants everyone “the right to favorable environmental surroundings, reliable information about its condition and to compensation for damage caused to his/her health or property through ecological violations of the law”.

Similarly, the Constitution of the United States does not recognize the right to environment. Many scholars, however, seek recognition of this right in its constitution. It is worth noting that a total of its forty-four (44) states address the environment in their constitutions. Among these, only six (6) states formally acknowledge this right in their constitutions. One recent development took place in New York State in November 2021, where the “right to clean air and water, and a healthful environment” was granted to every individual. Furthermore, five (5) other states in the United States, namely Hawaii, Illinois, Massachusetts, Montana, and Pennsylvania, have already enshrined such a right in their respective state constitutions.

46 Constitution of Chechen Republic (2003), art. 39.
49 New York State Constitution, art. 1, sec. 19.
However, few scholars, including Maya K. van Rossum and Kacy C. Manahan, only consider the right provisions in constitutions of Pennsylvania, Montana, and New York as self-executing, enforceable, belonging to all people, protected from government overreach, and on par with other fundamental rights like speech, property, and religion. They consider most state environmental rights provisions in the United States to be public policy provisions as opposed to being enforceable rights.\textsuperscript{50}

It is remarkable to highlight that even prior to the 1972 Stockholm Declaration, the Commonwealth of Pennsylvania in the United States recognized the right to environment in a commendable manner. On 18 May 1971, Pennsylvania set a noteworthy example by incorporating the following provision into its constitution:

\textit{“§ 27. Natural resources and the public estate. The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”}\textsuperscript{51}

The provision was incorporated into the constitution of Pennsylvania through a state-wide referendum, signifying a collective decision by its citizens. This provision encompassed a wide array of crucial environmental rights, such as the right to clean air and pure water, as well as the preservation of natural, scenic, historic, and esthetic values within the environment. Additionally, this provision imposed a significant responsibility upon the Commonwealth of Pennsylvania, mandating the stewardship of its natural resources in a fiduciary capacity for the benefit of its people, including future generations.\textsuperscript{52}

These instances serve as compelling evidence that, even if the recognition of the right to environment is not acknowledged at the national level in certain countries, there is a commitment to protect this fundamental right at the sub-national level through constitutions and legislations.

\textbf{E. Conclusion}

The right to environment is widely and explicitly recognized and protected in the international, regional, national, and sub-national instruments. Although it emerges as a recent development in international environmental law in July 2022, its origin can be traced back to 1971, predating the Stockholm Declaration (1972), when the state of California acknowledged this right through a statewide referendum at the sub-national level. Since then, the recognition of this right has gained widespread acceptance at regional, national, and sub-national levels. Presently, eighty-seven (87) countries explicitly protect the right to environment within their constitutions; six (6) countries consistently recognize an implied right to environment through national jurisprudence; five (5) countries embody environmental protection within other constitutional provisions; and at least twenty (20) more countries recognize the right to environment in their national legislations. Accordingly, more than 60% countries worldwide

\textsuperscript{50} Maya K. van Rossum & Kacy C. Manahan, Constitutional Green Amendments Making Environmental Justice a Reality, 36 ABA Natural Resources & Environment (2021).
\textsuperscript{51} Constitution of Pennsylvania, art. 1, sec. 27.
(118 out of 194) recognize this right in their national constitutions or jurisprudences. Furthermore, this right is also recognized at the sub-national level in Australia, Canada, Russia, and the United States.

It is noteworthy that the members of the United Nations, which do not recognize this right, are now bound to protect it after the UN Resolution (2022). Accordingly, this right has attained its universal nature as equivalent to other fundamental rights, such as the right to property or the prohibition against torture. Consequently, any state that fails to reflect this right in its laws is considered deficient and in violation of this universal norm.
This chapter focuses on the contents, definition, and enforcement of the right to environment. It has significance at three (3) levels.

Firstly, it highlights that this right serves as a unifying, integrated, and inclusive approach to all the environmental obligations, rights, and principles embodied in environmental laws across the globe. On the one side, the recognition of this right builds upon, brings together, and consolidates the existing eleven (11) environmental rights into a single and cohesive right or framework. On the other side, the recognition of this right requires states to fulfil their environmental obligations on all the five (5) environmental components and ensure application of the ten (10) environmental principles within their territory. This chapter validates that the right to environment is a holistic and comprehensive concept that encapsulate the environmental obligations, rights, and principles. Accordingly, these environmental rights, obligations, and principles collectively form the contents of this right.

Secondly, this chapter highlights that the relationship between defining and enforcing the right to environment is tightly intertwined. The contents of the right to environment encompass the environmental obligations, rights, and principles that must be respected and upheld by states to enforce the right to environment.

Thirdly, this chapter delineates the contents of the right to environment in five (5) components, including substantive, procedural, universal, intertemporal, and assessment components. The substantive component ensures the quality of environment and includes the substantive environmental rights and corresponding states obligations; the procedural component focuses on establishing procedures by which certain environmental decisions are to be made and includes the procedural environmental rights and corresponding guarantees; the universal component extends the applicability of the right to environment to everyone without any discrimination of whatsoever nature to safeguard environmental justice; the intertemporal component further extends applicability of the right to environment to future generations to ensure intergenerational equity; and the assessment component requires states to adopt a systemic mechanism of EIA for protection of the right to environment.

However, before going any further, it is essential to look at the existing approaches used by scholars to define the contents and scope of the right to environment. At the international level, certain scholars have defined the right to environment by referencing the state obligations outlined in the UN Framework Principles of Human Rights and the Environment (2018) (the “Framework Principles (2018)”). However, this chapter outlines that the UN Resolution (2022) has brought clarity to the contents of this right. At the regional level, some scholars utilize the Male Declaration (2007) to shed light on the components of this right. They draw from the legal precedents of the regional human rights courts and commissions to provide a comprehensive understanding of this right. At the national level, certain countries incorporate the right to environment within their constitutional environmental provisions and the national courts delineate the scope of this right through their legal decisions.

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A. International Right to Environment

Few scholars rely on the international instruments to define the contents of the right to environment. For instance, David Boyd, John Knox, and Marc Limon elaborate that the contents of this right are “the human rights obligations of states in relation to the enjoyment of a safe, clean, healthy, and sustainable environment”\(^2\). They emphasize that these obligations vis-à-vis the contents of the right to environment are consolidated and summarized in sixteen (16) principles mentioned in the Framework Principles (2018). They further argue that while these principles do not impose a limit on the scope of the right to environment, they offer practical and comprehensive guidance on how to ensure and uphold this right by states.

The Framework Principles (2018) encompass various substantive and procedural obligations of states to offer a holistic approach to environmental protection as well as specific obligations of states pertaining to a variety of environmental principles discussed in Chapter V, including environmental justice, transboundary cooperation, education and awareness, and EIA:

(1) On the substantive side, the Framework Principles (2018) requires states to:

(a) ensure a safe, clean, healthy and sustainable environment to respect, protect and fulfil human rights; and respect, protect and fulfil human rights to ensure a safe, clean, healthy and sustainable environment (Principles 1 and 2);

(b) establish, maintain, and effectively enforce substantive environmental standards that are non-discriminatory, non-retrogressive and otherwise respect, protect and fulfil human rights, (Principles 11 and 12); and

(c) respect, protect and fulfil human rights to address environmental challenges and pursue sustainable development (Principle 16).

(2) On the procedural side, the Framework Principles (2018) requires states to:

(a) respect and protect the rights to freedom of expression, association and peaceful assembly in relation to environmental matters (Principle 5);

(b) provide public access to environmental information by collecting and disseminating information, and provide affordable, effective and timely access to information to any person upon request (Principle 7);

(c) provide for and facilitate public participation in decision-making related to the environment, and take the views of the public into account in the decision-making process (Principle 9); and

(d) provide for access to effective remedies for violations of human rights and domestic laws relating to the environment (Principle 10).

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(3) To ensure environmental justice, the Framework Principles (2018) requires states to:

(a) prohibit discrimination and ensure equal and effective protection against it in relation to the enjoyment of a safe, clean, healthy and sustainable environment (Principle 3);

(b) provide a safe and enabling environment in which individuals, groups and organs of society that work on human rights or environmental issues can operate free from threats, harassment, intimidation and violence (Principle 4);

(c) take additional measures to protect the rights of those who are most vulnerable to, or at particular risk from, environmental harm, taking into account their needs, risks and capacities (Principle 14); and

(d) comply with obligations to indigenous peoples and members of traditional communities (Principle 15).

(4) Furthermore, the Framework Principles (2018) require states to provide for education and public awareness on environmental matters (Principle 6); to cooperate with each other to establish, maintain and enforce effective international legal frameworks in order to prevent, reduce and remedy transboundary and global environmental harm that interferes with the full enjoyment of human rights (Principle 13); and to conduct prior assessment of the possible environmental impacts of proposed projects and policies, including their potential effects on the enjoyment of human rights (Principle 8).

However, the UN Resolution (2022) is the most recent instrument in international law that indirectly clarifies the definition of the right to environment and imposes environmental obligations on states for enforcement of this right. For instance, Article 2 of the UN Resolution (2022) affirms that the right to environment is related to other environmental rights existing in the international law; Article 3 requires full implementation of international environmental instruments; and Article 4 obliges states, international organizations, businesses, and other stakeholders to adopt policies, enhance cooperation, strengthen capacity building, share good practices, and scale up efforts to ensure a clean, healthy, and sustainable environment.

Accordingly, this discussion emphasizes that the environmental rights, obligations, and principles existing in international environmental instruments and reemphasized in the UN Resolution (2022) form the contents of the right to environment.

B. Regional Right to Environment

There is scholarly literature that use the regional instruments to define the contents of the right to environment. For instance, Elena Cima explains that the contents of this right are the human rights obligations of states listed, amongst others, in the Malé Declaration (2007).3 This Declaration, however, is more focused on the human dimension of global climate change, rather than protection of the environment as a whole.

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This section clarifies that some regional bodies have directly interpreted the already existing right to environment within their regional legal frameworks. In parallel, others have acknowledged the existence of this right within the already existing substantive environmental rights, including the right to protection of life, health, or private and family life. In essence, these interpretations define the right to environment and explain its contents.

1. Direct Interpretation of the Right to Environment by the Regional Bodies

Few authors discuss jurisprudence of regional judicial bodies in interpreting the already existing right to environment and highlight that such a jurisprudence clearly form the contents of this right. These cited authors rely on two (2) rulings that explicitly address the right to environment at the regional level, including the Ogoni Case (2001) of the African Commission on Article 24 of African Charter (1981), and the Advisory Opinion (2017) of the Inter-American Court of Human Rights (IACtHR) on the right to environment (as enshrined in the Protocol of San Salvador). These both rulings are discussed below in detail:

(1) Ogoni Case (2001)

In the Ogoni Case (2001), it was alleged that the operations of the national oil company of Nigeria had caused environmental degradation and health problems among the Ogoni people. Accordingly, the African Commission found violations of the rights of Ogoni people guaranteed under the African Charter (1981), including the right to enjoy the best attainable state of physical and mental health (art. 16) and the right to general satisfactory environment favourable to their development (art. 24). The African Commission held as follows:

“53. These rights recognise the importance of a clean and safe environment that is closely linked to economic and social rights in so far as the environment affects the quality of life and safety of the individual. … Indeed an environment degraded by pollution and defaced by the destruction of all beauty and variety is as contrary to satisfactory living conditions and the development as the breakdown of the fundamental ecologic equilibria is harmful to physical and moral health. …

54. The right to a general satisfactory environment or the right to a healthy environment, as it is widely known, therefore imposes clear obligations upon a government. It obliges the State to take reasonable and other measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources. … Reduced to their most basic level, however, the rights to health (the best attainable state of physical and mental health) and a healthy environment (general satisfactory environment favourable to their development) serve to prohibit governments from directly threatening the health and environment of their citizens. The State is under the obligation to respect and this entails largely non-interventionist conduct from the State for example … from carrying out, sponsoring or tolerating any practice, policy or legal measures violating the integrity of the individual.” (emphasis added)

4 Id.
In this case, the African Commission clearly established that the right to environment imposes obligations on the African states to take reasonable measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources.

**2) IACtHR Advisory Opinion (2017)**

IACtHR has also interpreted the right to environment, expressly contained in Article 11 of the Protocol of San Salvador. It explains in its Advisory Opinion (2017) concerning state obligations in relation to the environment in the context of the protection and guarantee of the rights, that:

“59. The human right to a healthy environment has been understood as a right that has both individual and also collective connotations. In its collective dimension, the right to a healthy environment constitutes a universal value that is owed to both present and future generations. That said, the right to a healthy environment also has an individual dimension insofar as its violation may have a direct and an indirect impact on the individual owing to its connectivity to other rights, such as the rights to health, personal integrity, and life. Environmental degradation may cause irreparable harm to human beings; thus, a healthy environment is a fundamental right for the existence of humankind.

60. The Working Group on the Protocol of San Salvador indicated that the right to a healthy environment, as established in this instrument, involved the following five State obligations: (a) guaranteeing everyone, without any discrimination, a healthy environment in which to live; (b) guaranteeing everyone, without any discrimination, basic public services; (c) promoting environmental protection; (d) promoting environmental conservation, and (e) promoting improvement of the environment. It also established that the exercise of the right to a healthy environment must be governed by the criteria of availability, accessibility, sustainability, acceptability and adaptability, as in the case of other economic, social and cultural rights. In order to examine the State reports under the Protocol of San Salvador, in 2014, the OAS General Assembly adopted specific progress indicators to evaluate the status of the environment based on: (a) atmospheric conditions; (b) quality and sufficiency of water sources; (c) air quality; (d) soil quality; (e) biodiversity; (f) production of pollutant waste and its management; (g) energy resources, and (h) status of forestry resources.

……

62. The Court considers it important to stress that, as an autonomous right, the right to a healthy environment, unlike other rights, protects the components of the environment, such as forests, rivers and seas, as legal interests in themselves, even in the absence of the certainty or evidence of a risk to individuals. This means that it protects nature and the environment, not only because of the benefits they provide to humanity or the effects that their degradation may have on other human rights, such as health, life or personal integrity, but because of their importance to the other living organisms with which we share the planet that also merit protection in their own right. In this regard, the Court notes a tendency, not only in court judgments, but also in Constitutions, to recognize legal personality and, consequently, rights to nature.

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6 Inter-American Court of Human Rights, Advisory Opinion OC-23/17, Nov. 15, 2017, available at: [https://www.corteidh.or.cr/docs/opiniones/seriea_23_ing.pdf](https://www.corteidh.or.cr/docs/opiniones/seriea_23_ing.pdf)
63. Thus, the right to a healthy environment as an autonomous right differs from the environmental content that arises from the protection of other rights, such as the right to life or the right to personal integrity.

64. That said and as previously mentioned, in addition to the right to a healthy environment, damage to the environment may affect all human rights, in the sense that the full enjoyment of all human rights depends on a suitable environment. Nevertheless, some human rights are more susceptible than others to certain types of environmental damage (supra paras. 47 to 55). The rights especially linked to the environment have been classified into two groups: (i) rights whose enjoyment is particularly vulnerable to environmental degradation, also identified as substantive rights (for example, the rights to life, personal integrity, health or property), and (ii) rights whose exercise supports better environmental policymaking, also identified as procedural rights (such as the rights to freedom of expression and association, to information, to participation in decision-making, and to an effective remedy).

127. The obligation to ensure the rights recognized in the American Convention entails the duty of States to prevent violations of these rights (supra para. 118). As previously mentioned, this obligation of prevention encompasses all the diverse measures that promote the safeguard of human rights and ensure that eventual violations of these rights are taken into account and may result in sanctions as well as compensation for their negative consequences (supra para. 118).

THE COURT DECIDES unanimously, that:

5. To respect and to ensure the rights to life and to personal integrity of the persons subject to their jurisdiction, States have the obligation to prevent significant environmental damage within or outside their territory and, to this end, must regulate, supervise and monitor activities within their jurisdiction that could produce significant environmental damage; conduct environmental impact assessments when there is a risk of significant environmental damage; prepare a contingency plan to establish safety measures and procedures to minimize the possibility of major environmental accidents, and mitigate any significant environmental damage that may have occurred, in accordance with paragraphs 127 and 174 of this Opinion.

6. States must act in accordance with the precautionary principle to protect the rights to life and to personal integrity in cases where there are plausible indications that an activity could result in serious or irreversible environmental damage, even in the absence of scientific certainty, in accordance with paragraph 180 of this Opinion.

7. To respect and to ensure the rights to life and to integrity of the persons subject to their jurisdiction, States have the obligation to cooperate, in good faith, to ensure protection against significant transboundary harm to the environment. To comply with this obligation, States must notify other potentially affected States when they become aware that an activity planned under their jurisdiction could cause significant transboundary harm and also in cases of environmental emergencies, and must consult and negotiate in good faith with States potentially affected by significant transboundary harm, in accordance with paragraphs 181 to 210 of this Opinion.
8. To ensure the rights to life and to integrity of the persons subject to their jurisdiction in relation to environmental protection, States have the obligation to ensure the right of access to information concerning potential environmental damage, the right to public participation of persons subject to their jurisdiction in policies and decision-making that could affect the environment, and also the right of access to justice in relation to the State environmental obligations set out in this Opinion, in accordance with paragraphs 211 to 241 of this Opinion.³ (emphasis added).

In the Advisory Opinion (2017), IACtHR interpreted the right to environment stipulated in Article 11 of the Protocol of San Salvador, highlighting its dual individual and collective dimensions. This right protects current and future generations, emphasizing both the intrinsic value of environmental components and their role in safeguarding other fundamental human rights. This right requires state to guarantee non-discriminatory access to a healthy environment and basic services, promoting environmental protection and conservation, governed by criteria like availability, accessibility, and sustainability. Furthermore, it mandates states to engage in prevention strategies that include regulation, supervision, and monitoring of activities with potential environmental impacts, conducting environmental impact assessments, and implementing contingency plans to mitigate potential environmental damages. In addition, it underscores the necessity for international cooperation and adherence to the precautionary principle to prevent substantial environmental damage, promoting transparency, public participation, and access to justice in environmental policy and decision-making processes. Accordingly, this advisory opinion provides a comprehensive definition and framework for the enforcement of the right to environment, emphasizing the duty to take proactive state actions.

2. Judicial Interpretation of the Implicit Right to Environment

Few scholars have discussed pronouncements of regional judicial bodies that acknowledge the existence of the right to environment within the already existing substantive environmental rights, including the right to protection of life, health, or private and family life. Their pronouncements and judicial principles embodied therein also explain the content of the right to environment.⁷

Although the right to environment was not recognized in their respective regional instruments, it has been recognized and enforced by regional bodies, including the European Committee of Social Rights (ECSR), the European Court of Human Rights (ECtHR), and the Inter-American Commission on Human Rights (IACHR), in the following three (3) cases:

(1) MFHR vs. Greece (2006)

In MFHR vs. Greece (2006), ECSR dealt with violation of the “right … to enjoy the highest possible standard of health attainable” provided in Article 11 of the European Social Charter.⁸ In the said case, an international NGO alleged that Greece did not take sufficient account of the environmental effects or developed an appropriate strategy to prevent and combat public

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health risks arising from lignite mining and thereby failed to comply with Article 11 of the European Charter. ECSR held as follows:

“195. The Committee has therefore taken account of the growing link … between the protection of health and a healthy environment, and has interpreted Article 11 of the Charter (right to protection of health) as including the right to a healthy environment. 

......

202. Under Article 11 of the Charter, everyone has the right to benefit from any measures enabling him to enjoy the highest possible standard of health attainable. The Committee sees a clear complementarity between Article 11 of the Charter and Article 2 (right to life) of the European Convention on Human Rights ... Measures required under Article 11 should be designed, in the light of current knowledge, to remove the causes of ill-health resulting from environmental threats such as pollution ...

203. In order to fulfil their obligations, national authorities must therefore:

- develop and regularly update sufficiently comprehensive environmental legislation and regulations …;
- take specific steps, such as modifying equipment, introducing threshold values for emissions and measuring air quality, to prevent air pollution at local level and to help to reduce it on a global scale …;
- ensure that environmental standards and rules are properly applied, through appropriate supervisory machinery …;
- inform and educate the public, including pupils and students at school, about both general and local environmental problems …;
- assess health risks through epidemiological monitoring of the groups concerned.

204. Admittedly, overcoming pollution is an objective that can only be achieved gradually. Nevertheless, states party must strive to attain this objective within a reasonable time, by showing measurable progress and making best possible use of the resources at their disposal ...

205. The Committee notes firstly that the Greek Constitution makes protection of the natural environment an obligation of the state and at the same time an individual right, and that Greek environmental legislation and regulations are well developed, have been regularly updated and substantially reflect the large number of European Union standards in this area. In particular, in the case of mining and fossil fuel combustion activities, an environmental impact study must be carried out, environmental criteria approved and an operating licence issued by the competent authorities. Provision is also made for the public to be informed and to participate in the decision making process. Limit values have been set for exposure to pollutants arising from lignite mining. .....” (emphasis added).

In the case of MFHR vs. Greece (2006), ECSR emphasized the escalating nexus between health protection and environmental protection and interpreted the right to health to encompass the right to environment. In this regard, the Committee delineated specific obligations for national authorities, including the development and periodic updating of robust environmental legislation and regulations, implementing preventive measures at both the local and global levels to curb air pollution, enforcing environmental norms through proficient supervision
mechanisms, fostering public education on environmental issues, and undertaking epidemiological monitoring to evaluate health risks in affected communities.

In essence, this case marks a seminal juncture in defining and enforcing the right to environment, establishing that the scope of health protection inherently demands environmental conservation and rational governance in environmental matters.

(2) Tatar & Tatar vs. Romania (2009)

The European Convention on Human Rights and Fundamental Freedoms (ECHR) protects the right to private and family life. In Tatar & Tatar vs. Romania (2009), the applicants alleged a breach of this right. Accordingly, ECtHR concluded that Romania’s failure to take positive actions to prevent an environmental disaster caused by using sodium cyanide for gold mining violated the rights to private and family life, and more generally, to the enjoyment of a healthy and protected environment. ECtHR unanimously observed that pollution could interfere with a person’s private and family life by harming their well-being, and the state had a duty to ensure protection of its citizens by regulating industrial activities, especially activities that were dangerous for the environment and human health.

ECtHR further observed that the existence of a serious and material risk for the health and well-being entailed a duty on the part of the state to assess the environmental impacts and risks at the time it granted the operating permit and to take the appropriate measures. It reiterated that the state had a duty to guarantee the right of members of the public to participate in the decision-making process concerning environmental issues. ECtHR also noted that the company continued its industrial operations in breach of the precautionary principle and the absence of certainty with regard to scientific and technical knowledge could not justify any delay on the part of the state in adopting effective and proportionate measures.

Accordingly, ECtHR concluded that the Romanian authorities had failed in their duty to assess, duty to a satisfactory degree of the health and environmental risks, and duty to take suitable measures in order to protect the rights to respect for private lives and homes, and more generally, had violated the right to enjoy a healthy and protected environment.

(3) Indigenous and Tribal Peoples’ Rights over their Ancestral Lands and Natural Resources (2009)

In a report on the effects of oil and gas development on Ecuador’s Yanomani people, IACHR concluded that toxic pollution was contaminating their water, air, and soil, and was also jeopardizing their health and lives. It discussed the indigenous and tribal people’s rights over natural resources, encompassing the right to environmental integrity and the right to effective implementation of the existing legal standards as well as the state obligations in context of projects and extractive concessions over natural resources. IACHR further observed that:

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“… The realization of the right to life, and to physical security and integrity is necessarily related to, and in some ways dependent upon one’s physical environment. Accordingly, where physical contamination and degradation pose a persistent threat to human life and health, the foregoing rights are implicated. …”\textsuperscript{11}

\textbf{C. Constitutional Right to Environment}

Many scholars explore the right to environment in context of its recognition in national or provincial constitutions.\textsuperscript{12} For instance, James May and Erin Daly conceptualized the right to environment in terms of environmental constitutionalism and defined it to include: (a) the substantive and procedural environmental rights, (b) the environmental obligations, duties, and policies, and (c) rights to water, rights of nature, climate change, and dignity.\textsuperscript{13}

The authors cited in above paragraph contend that the right to environment is a stand-alone right existing in most constitutions of the states across the globe and is independent of the human rights regime. This recognition in constitutions gives this right a normative power and backing of constitutional structure for enforcement of this right. They discuss that this right is a composition of various substantive and procedural rights, which both complement each other.

In the context of enforcement of the right to environment, it is noteworthy that many authors often refer to court rulings from various countries to define this right and explain its enforcement.\textsuperscript{14} These judicial decisions serve as pivotal interpretive tools, shedding light on the definition and enforcement of this right in real-world scenarios. However, a detailed examination and discussion of these court rulings and their implications falls beyond the scope of this thesis. The focus here is not to delve into the extensive legal definitions and interpretations evident in these rulings but to maintain a broader perspective on the subject matter.

\textsuperscript{11} Id. para 190.


D. Contents of the Right to Environment

The above sections have discussed contents of the right of environment based on the international, regional, and national instruments. This section takes the discussion to the next level and categorizes the contents of this right into five (5) components: substantive, procedural, universal, intertemporal, and assessment components. As highlighted in earlier sections, there is consensus among scholars on merely the first two (2) components. However, in a recent address to the United Nations ambassadors, Justice Brian J Preston\(^\text{15}\) has identified an additional component of this right, namely the temporal component.\(^\text{16}\)

These components reflect the comprehensive nature of this concept and its relationship with the environmental principles such as the precautionary principle, intergenerational equity, and environmental justice. For instance: (a) the substantive component ensures the quality of environment and includes the substantive environmental rights and corresponding states obligations; (b) the procedural component focuses on establishing procedures by which certain environmental decisions are to be made and includes the procedural environmental rights and corresponding guarantees; (c) the universal component extends the applicability of the right to environment to everyone without any discrimination of whatsoever nature to safeguard environmental justice; (d) the intertemporal component further extends applicability of the right to environment to future generations to ensure intergenerational equity; and (e) the assessment component requires states to adopt a systemic mechanism of EIA for protection of the right to environment.

1. Substantive Component

The substantive component of the right to environment requires the states to ensure the quality of environment and perform an assessment of what the environment is and preserve it in a condition that is safe, healthy, and clean.\(^\text{17}\) This component bifurcates into two (2) intertwined facets. Firstly, it encompasses eight (8) substantive environmental rights, including the rights of nature, right to natural resources, right to clean air, right to water and sanitation, right to sustainable development, right to adequate conditions of life or standards of living, the right to enjoyment of the highest attainable standards of health, and the right to food and adequate nutrition. Secondly, this component comprises of environmental obligations of the states listed in environmental laws across the globe to protect and preserve the environment and its five (5) components, including nature and biodiversity, atmosphere, marine environment, hazardous material, sustainable development.

Justice Brian J. Preston explains that the substantive component of the right to environment is closely linked to and partially derived from the right to life. He suggests that exploring the right to life can provide insights into what the right to environment entails. He identifies several components of the right to life. The first element is the right to simply exist without being unlawfully deprived of life. The second element is the right to access and enjoy the basic necessities of life, such as clean water, air, food, and adequate sanitation. This includes protection and preservation of the environment, ecological balance, and pollution-free resources. The third element extends beyond basic survival to include access to those aspects

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\(^{15}\) Chief Judge of the Land and Environment Court of New South Wales


of life that allow for human flourishing and dignity, both in private and social contexts. The fourth element involves a healthy environment not just for humans, but for the nature itself, adding the dimension of ecological sustainability to the right to life.\footnote{Brian J Preston, The Right to a Clean, Healthy and Sustainable Environment: How to Make it Operational and Effective, Journal of Energy & Natural Resources Law, Jan. 31, 2023.}

It is essential to highlight that wherever the right to environment is recognized, different words are used within its legislative provisions to ensure this substantive component or establish a goal or benchmark for protecting quality of environment and its five components. For instance, at the international level, the UN Resolution (2022) uses words “right to clean, healthy and sustainable environment” to ensure substantive component of the right to environment. At the regional level, the African Charter (1981) recognizes the “right to a general satisfactory environment”; the American San Salvador Protocol (1988) and the Escazu Agreement (2018) both protect the right to “live in a healthy environment”; the European Aarhus Convention (1998) grants the right to “live in an environment adequate to his or her health and well-being”; the Arab Charter (2004) includes the “right to a healthy environment”; and the ASEAN Human Rights Declaration (2012) guarantees the “right to a safe, clean and sustainable environment”.

Similarly, at the national level, the constitutions around the world use different adjectives within constitutional provisions of the right to environment to ensure quality of environment or its substantive component: the right may be to a safe, clean, healthy, sustainable, ecological, pleasant, desirable, stable, balanced, protected, unpolluted, unharmful, satisfying, satisfactory, lasting, durable, sound, adequate, appropriate, suitable, favorable to health and well-being, benevolent, well-preserved, healthy, or living environment. Likewise, at the sub-national level, the New York State has recently granted the “right to clean air and water, and a healthful environment” in 2021.

It is noteworthy that although these terminologies or adjectives used within legislative provisions exhibit nuanced variations, they generally mean the same thing in context of the right to environment and ensure the quality of environment vis-à-vis the substantive element of this right.

The scholars, however, raise certain observations in the judicial interpretation and enforcement of the substantive component of the right to environment. They argue that unclear or uncertain boundaries of the substantive component may have two (2) possible outcomes when the courts seek to enforce this substantive component. The courts may either read this component too narrowly, causing a risk of environmental damage and deleterious effects on the ecosystem and the dignity and health of the population for generations to come; or they may over-enforce substantive component or rights, causing judicial activism or unduly limiting development and economic progress.\footnote{Erin Daly, Constitutional Protection for Environmental Rights: The Benefits of Environmental Process, 17 International Journal of Peace Studies (2012).}

Accordingly, the courts and institutions seeking to enforce the substantive component or rights must constantly balance competing human rights and policy claims with environmental protection and must also weigh the costs and benefits of each decision for ensuring the quality of environment and its different components.
2. Procedural Component

The procedural component of the right to environment includes the three (3) procedural environmental rights and corresponding obligations of the states concerning the access to timely and reliable information, the public participation, and judicial remedy in environmental matters. In addition, the Framework Principles (2018) requires states to respect and protect the rights to freedom of expression, association, and peaceful assembly in relation to environmental matters.20

While the substantive component guarantees the quality of environment, the procedural component focuses on establishing procedures by which certain environmental decisions are to be made and places a greater emphasis on procedural aspect rather than ecological consideration. The scholars support that the procedural component or rights complement their substantive counterparts and are crucial for implementation, efficacy, and enforcement of the substantive component of the right to environment.21

Erin Daly notes that procedural component promotes democratic values and practices by securing procedural environmental rights of everyone and imposing corresponding obligations on states concerning information, participation, justice in environmental matters. The author also states that procedural environmental rights do not raise the same concerns as their counterpart because there is virtually no danger to their over-enforcement by the courts. The boundaries of procedural environmental rights are clearer and their judicial enforcement more verifiable and easily managed. The procedural environmental rights, however, are sometimes subject to political manipulation and require time, effort, and expense to exercise.22

3. Universal Component

The right to environment also has a universal component that extends its applicability to everyone without any discrimination and ensures that this right is not limited to specific groups or individuals but applies to all individuals and human beings, including marginalized communities and vulnerable populations. The universal component emphasizes that all individuals, regardless of their social or economic status, ethnicity, gender, or any other characteristic, have this right and are entitled to equal environmental protection.

This component emphasizes the need for equal access to environmental resources, benefits, and decision-making processes. It calls for the inclusion and participation of all individuals and communities, including marginalized groups, in environmental policies, planning, and implementation to ensure their voices are heard and their rights are protected. By recognizing the universal component, the right to the environment aims to promote environmental justice, address environmental inequalities, and ensure that no one is excluded from enjoying a safe and healthy environment.

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4. Intertemporal Component

The right to environment has intertemporal component that further extends its applicability to the present and the next generation who are already born, our children. This refers to the temporal dimension or time aspect associated with the enjoyment and fulfillment of this right. It recognizes that the right to environment is not limited to present generations but extends to future generations as well. This component highlights the idea that environmental decisions and actions taken today can have long-lasting effects on the environment, which can impact the rights and well-being of future generations. Therefore, it emphasizes the responsibility to preserve and protect the environment for the benefit of both current and future generations. It further emphasizes the need for sustainable development practices and the consideration of long-term environmental consequences when making any decisions.


In addition, the scholarly literature also recognized this obligation as the intertemporal component of the right to environment. Richard P. Hiskes has presented an argument for environmental human rights as the basis of intergenerational environmental justice. He argues that the rights to clean air, water, and soil should be seen as the environmental human rights of both present and future generations.

Accordingly, the intertemporal component of the right to the environment reflects the concept of intergenerational equity, which advocates for fairness and justice in the distribution and use of natural resources and ensures that the needs and interests of both present and future generations are taken into account. It underscores the importance of adopting a forward-looking perspective and adopting measures to ensure the sustainability and preservation of the environment for future generations. Further, the concept of sustainable development also requires the members of the present generation to take into account the interests of future generations. It constitutes a legally binding norm of both treaty and customary international law.

5. Assessment Component

In addition to above components, the right to environment has an assessment component that imposes an obligation on states to conduct assessment of environmental effects in advance. It is interesting that although such an obligation is present in numerous instruments and jurisprudence used by scholars to define the right to environment, none of the scholars have identified it as a separate component of the right to environment.

At the international level, the obligation to conduct EIA is apparent in Principle 8 of the Framework Principles (2018) that require states to conduct “the prior assessment of the possible environmental impacts of proposed projects and policies, including their potential effects on the enjoyment of human rights”.

At the regional level, at least four (4) cases of the regional judicial bodies directly include obligation to conduct EIA while interpreting the right to environment.

(1) In Ogoni Case (2001), the African Commission held as follows:

“55. On a practical level, government compliance with the spirit of Articles 16 [right to health] and 24 [right to environment] of the African Charter must also include ordering or at least permitting independent scientific monitoring of threatened environments, requiring and publicising environmental and social impact studies prior to any major industrial development, undertaking appropriate monitoring and providing information to those communities exposed to hazardous materials and activities and providing meaningful opportunities for individuals to be heard and to participate in the development decisions affecting their communities.” (emphasis added).

(2) In MFHR vs. Greece (2006), ECSR held that “in the case of mining and fossil fuel combustion activities, an environmental impact study must be carried out, environmental criteria approved and an operating licence issued by the competent authorities.”

(3) In Tatar and Tatar vs. Romania (2009), ECtHR observed that the existence of a serious and material risk for the health and well-being entailed a duty on the part of the state to assess the environmental impacts and risks at the time it granted the operating permit and to take the appropriate measures.

(4) In the IACtHR Advisory Opinion (2017), IACtHR held as follows:

“174. In order to ensure the rights to life and integrity, States have the obligation to prevent significant environmental damage within and outside their territory .... In order to comply with this obligation, States must: (i) regulate activities that could cause significant harm to the environment in order to reduce the risk to human rights … (ii) supervise and monitor activities under their jurisdiction that could produce significant environmental damage and, to this end, implement adequate and independent monitoring and accountability mechanisms that include measures of prevention and also of sanction and redress …; (iii) require an environmental impact assessment when there is a risk of significant environmental harm, regardless of whether the activity or

26 Ogoni Case (2001), para 55.
project will be carried out by a State or by private persons. These assessments must be made by independent entities with State oversight prior to implementation of the activity or project, include the cumulative impact, respect the traditions and culture of any indigenous peoples who could be affected, and the content of such assessments must be determined and defined by law or within the framework of the project authorization process, taking into account the nature and size of the project and its potential impact on the environment ...; (iv) institute a contingency plan in order to establish safety measures and procedures to minimize the possibility of major environmental accidents ... and (v) mitigate significant environmental damage, even when it has occurred despite the State’s preventive actions, using the best scientific knowledge and technology available ...” (emphasis added).28

Accordingly, the assessment component of the right to environment is a key component that obliges the states to conduct an effective assessment of projects to ensure environmental protection. The Third Part of this thesis shall elaborate on this further.

E. Conclusion

This chapter highlights the extensive body of literature on the right to environment, indicating its widespread acceptance and significant importance. Like this right is universally found in environmental instruments at the international, regional, national, and sub-national levels, the scholars also recognize and embrace this right widely. This chapter articulates that this right serves as a unifying, holistic, integrated, and comprehensive concept that incorporates all the existing environmental rights, obligations, and principles:

(1) The universal recognition of the right to environment certainly builds upon, brings together, and consolidates the existing environmental rights enshrined in the international, regional, and national instruments worldwide into a single and cohesive framework. It is an inclusive right that encompasses both substantive and procedural environmental rights. Rather than protecting these associated environmental rights separately, states can now address them collectively under the umbrella of the right to environment and can effectively ensure the fulfillment of these interconnected rights through a single framework.

(2) The right to environment encompasses the wide range of obligations that states have regarding the enjoyment of the right to environment. These obligations consist of both substantive and procedural safeguards that states must provide to their citizens, ensuring a robust protection of this fundamental right. These obligations not only establish the minimum requirements for this right but also provide practical and comprehensive guidance for states in enforcing this right. They do not limit the scope of this right, instead they offer a framework to effectively implement the right to environment by states.

(3) The right to environment is defined to include five (5) essential components, namely substantive, procedural, universal, intertemporal, and assessment components. These components reflect the comprehensive nature of this concept and its relationship with the environmental principles. By recognizing the right to environment, states can address these associated principles holistically within a single framework.

(4) One of the significant components of the right to environment is conducting EIA. It is a systematic process which obligates policy makers and developers to evaluate, mitigate, and publicly disclose the potential environmental impacts of proposed projects prior to their implementation. This requirement, however, shall be discussed in detail in the Third Part of this thesis.

In essence, the right to the environment serves as a unifying, integrated, and inclusive approach to encompass other environmental rights, principles, and obligations. It simplifies the task for states by providing a comprehensive framework for environmental protection. By recognizing and implementing this right, states can fulfill their obligations to comprehensively protect the environment and simultaneously address the associated environmental rights, principles, and challenges. Accordingly, this right enables states to address environmental concerns more cohesively, taking into account the interconnected nature of various environmental components, obligations, rights, principles, and challenges. It facilitates a more efficient and effective environmental protection for the benefit of present and future generations.
THIRD PART

ENVIRONMENTAL IMPACT ASSESSMENTS

The Second Part provides an extensive analysis of the universal right to environment, identifying the obligation to conduct EIA as its fundamental component. While the right to environment stands as a significant concept that encapsulates comprehensive environmental protection, it is not self-executing without an effective legal remedy for its enforcement. The maxim “where there is a right, there is a remedy” underscores the necessity for practical measures to attain, uphold, and enforce this right. In this context, this Third Part identifies EIA as a unique environmental tool that incorporates all the environmental obligations, rights, and principles and provides a crucial remedy for enforcement of the right to environment.

At the outset, it is essential to emphasize that the advent of this century saw the European Union pioneer a new concept of the Strategic Environmental Assessment (SEA) that holds significant relevance to EIA. EIA primarily focuses on evaluating, assessing, and mitigating the potential adverse environmental effects of individual projects or actions, such as developmental or industrial projects, during their planning stage. In contrast, SEA functions at a broader and strategic level and facilitates the integration of environmental considerations into strategic policies, plans, and programmes, such as regional development plans or transportation strategies. Accordingly, both EIAs and SEAs play complementary roles to ensure that environment is prioritized from the high-level policy formulations to the project planning stage.

The Third Part restricts its focus to EIA due to the length and time constraints. However, it is pertinent to note that most of the arguments articulated within this part hold relevance to SEA, which will be incorporated during subsequent updates.

For a comprehensive understanding of EIA, the Third Part examines three (3) case studies that represent different geographical and developmental contexts, including the European Union, the United States, and Pakistan. In the absence of a uniform international EIA framework, the European Union presents a remarkable example of a regional system, where twenty-seven (27) states have harmonized EIA requirements. It has an advanced, well-defined, and structured EIA system that transcends national boundaries and serves as a potential guide for other regions and international community aspiring to refine EIA systems.

Diverging from the regional focus, the United States is one of the most advanced national systems for EIA within the Global North. Further, since the United States is a pioneer for EIA process in 1969, it offers an opportunity to delve into the evolution of a detailed, complex, and multi-layered EIA system. In addition, the United States has rich academic literature in this area, offering nuanced insights into the intricacies of EIA and their development over time.

Shifting towards the Global South, Pakistan presents a compelling case study with a provincial based EIA system. It grapples with a diverse set of legislative and enforcement challenges within its EIA system and presents an opportunity to compare its relatively weaker system with two of the most respected global models. Accordingly, the Pakistani system provides a glimpse into the potential deficiencies within a nascent or evolving EIA legal structure, offering opportunities to identify areas for improvement and to propose legal reforms for enhancing the effectiveness of the EIA process.
The Third Part is structured into five (5) chapters. Chapter VIII discusses evolution of the obligation to conduct EIA under international, regional, and national environmental laws. It further provides a brief comparison of the regulatory frameworks of EIA within the European Union, the United States, and Pakistan.

Chapter IX provides a comparative analysis of different levels of environmental assessments for different projects in the European Union, the United States, and Pakistan. In contrast to the ‘types’ of environmental assessments namely EIA and SEA, the ‘levels’ of environmental assessments pertain to various scales, capacities, and categories of projects based on their significant environmental effects. Accordingly, this chapter begins by discussing levels of assessments in each jurisdiction. Subsequently, it explores the methods and criteria used in these jurisdictions to determine whether a project or action requires a specific assessment. The process of this determination is commonly referred to as "screening".

Chapter X elaborates various stages of the EIA processes in the European Union, the United States, and Pakistan.

The next two Chapters XI and XII distinguish between the procedural and substantive components of EIA and provide a comparative analysis of these components across the European Union, the United States, and Pakistan. Both chapters highlight the strengths and weaknesses of each jurisdiction in terms of EIA components and provide insights into which jurisdiction offers a more efficient and comprehensive EIA framework.

Finally, Chapter XIII highlights that EIA is a unique tool that ensures holistic and comprehensive environmental protection by: (a) integrating each of the environmental components, rights, and principles discussed in the First Part of the thesis; and (b) protecting, upholding, respecting, enforcing, and attaining the comprehensive right to environment. In essence, this chapter shows that both the right to environment and EIA have potential to effectively address most – if not all – the complex and interconnected environmental challenges.
Chapter VIII: Evolution of the Environmental Impact Assessment

To understand the EIA concept, it is important to start with its origins and subsequent developments that have unfolded over time. This foundational knowledge enables a thorough analysis of the evolution of this concept, which is firmly rooted in international, regional, and national environmental laws over the past few decades.

The United States pioneered this approach in 1969 by enacting the National Environmental Policy Act (NEPA).1 This landmark national legislation introduced a requirement for federal agencies to include a detailed statement – known as "Environmental Impact Statement" (EIS) – on environmental impacts and proposed alternatives into their every action significantly affecting the environment.2 Subsequently, many countries rapidly adopted this initiative in the form of EIA and incorporated this practice into their national legal frameworks. Over the span of five decades, at least 183 United Nations member states have introduced EIA-specific national legislations.3

A mere fifteen (15) years after NEPA, the concept of EIA was recognized in a regional environmental instrument when the European Economic Community (now, the European Union) embraced this concept by adopting the Council Directive 85/337/EEC of 27 June 1985 (the “1985 Directive”). This directive mandated members states to adopt all necessary measures to ensure that projects likely to have significant effects on the environment undergo comprehensive EIAs.4 More recently, this obligation is reiterated in regional environmental instrument of the Americas, the Escazu Agreement (2018).

Similarly, at the international level, the United Nations also recognized the significance of EIA in several international environmental instruments, including the Espoo Convention (1991), the Rio Declaration (1992), the Biodiversity Convention (1992), UNFCCC (1992), the Watercourses Convention (1997), and the Aarhus Convention (1998). Furthermore, the international institutions namely the International Court of Justice (ICJ), UNEP, and the World Bank increasingly mandate states to conduct EIAs.

In view of the above, this chapter discusses evolution of the obligation to conduct EIA at international, regional, and national levels. It highlights that despite the absence of a uniform international procedure, this practice has been almost universally adopted.5

A. International EIA

The obligation to conduct EIA is recognized and enforced through a combination of international agreements, judicial decisions, and institutional policies, all aiming to ensure that development and other activities do not harm the environment. Specifically, this obligation is provided within at least six (6) international environmental instruments, referenced in two

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2 Sec. 102(2)(C) [42 USC § 4332].
judgments of ICJ, and outlined in environmental policies of the World Bank. This section explores how this obligation is incorporated within all these international frameworks.

1. International Environmental Instruments

While the formal recognition of the term EIA began with the Espoo Convention (1991) in the international environmental law, the principles inherent in EIA were already incorporated in the Stockholm Declaration (1972) and the Law of Sea Convention (1982). These both instruments contained general obligations of states to manage their natural resources, wildlife, and habitat carefully and rationally and to avoid environmental risks and adverse effects.

The Stockholm Declaration (1972) contained at least six (6) principles that are now an integral part of the broader EIA concept. For instance, Principle 2 required to safeguard natural resources through “careful planning or management”; Principle 4 stressed the “special responsibility to safeguard and wisely manage” the wildlife and its habitat; Principle 13 suggested to “adopt an integrated and coordinated approach to development planning” to protect and improve environment; Principle 14 declared “rational planning” as an essential tool for development and protection of the environment; Principle 15 required the application of planning to human settlements and urbanization in order “to avoid adverse effects on the environment”; and Principle 18 obligated the use of science and technology for “the identification, avoidance and control of environmental risks and the solution of environmental problems”.

A decade later, the Law of Sea Convention (1982) reinforced obligations of states “to observe, measure, evaluate and analyse, by recognized scientific methods, the risks or effects of pollution of the marine environment” and to “keep under surveillance the effects of any [permitted or engaged] activities … to determine whether these activities are likely to pollute the marine environment”. In addition, it also required states to “assess the potential effects of such activities on the marine environment and … communicate reports of the results of such assessments”.

Thereafter, the United Nations formally introduced EIA concept in the Espoo Convention (1991) to deal with transboundary environmental effects of certain activities. This convention required its signatory states “to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities” and to undertake EIA before authorizing or initiating activities that are “likely to cause a significant adverse transboundary impact”. It streamlined the EIA process for the activities with transboundary environmental impacts by including various appendices. Specifically, it listed the activities that are likely to cause significant adverse transboundary environmental impact in Appendix I; the information to be included in EIA documentation in Appendix II; the General Criteria for determination of the environmental significance of activities in Appendix III; the Inquiry Procedure in Appendix IV; the objectives of the post-project analysis in Appendix V; the elements of bilateral and multilateral co-operation in Appendix VI; and the arbitration mechanism in Appendix VII.

It is crucial to note that the Espoo Convention (1991) remains the sole international environmental instrument specific to EIA, and even then, with a narrow focus on the projects with transboundary effects. This convention does not establish a universal standard for every

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6 Law of Sea Convention (1982), art. 204.
7 Id. art. 206.
8 Espoo Convention (1991), art. 2(1)&(3).
project requiring an EIA. Moreover, it has unfortunately failed to attain widespread recognition, which is evident from its current forty-five (45) parties.\(^9\) Accordingly, there is an absence of a uniform international EIA process.

A year later, three (3) conventions specifically highlighted the importance of EIA, including the Rio Declaration (1992), the Biodiversity Convention (1992), and UNFCCC (1992). To begin with, the Rio Declaration (1992) required states to undertake national EIAs “for proposed activities that are likely to have a significant adverse impact on the environment”.\(^10\) Moreover, it also mandated states to notify and consult with potentially affected states on activities that may have a significant adverse transboundary environmental effect in advance and in good faith.\(^11\)

Similarly, the Biodiversity Convention (1992) obligated its state parties to introduce appropriate procedures requiring EIAs for projects that are likely to have significant adverse effects on “biological diversity” for avoiding or minimizing such effects.\(^12\) Furthermore, UNFCCC (1992) enlisted a commitment for the states to “take climate change considerations into account in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments” to minimize adverse effects on the economy, the public health, and the environmental quality.\(^13\) Accordingly, both these conventions emphasized to take into account the adverse environmental effects on biological diversity and climate change considerations while conducting EIA.

Five years later, the Watercourses Convention (1997) incorporated the concept of EIA by mandating “watercourse states” to timely notify other potentially affected watercourse states and provide technical data, information, and results of EIA for planned measures which may have a significant adverse effect on them.\(^14\) Finally, in the following year, while the Aarhus Convention (1998) primarily centered on procedural environmental rights and guarantees, it obliged states to adequately, timely, and effectively notify the public about the activities undergoing a national or transboundary EIA procedure.\(^15\)

This analysis reveals that from the above-discussed international environmental instruments, only the Rio Declaration (1992) contains a blanket clause for states to conduct EIAs for activities with potential significant adverse environmental effects. In contrast, the rest of instruments are more specific in their approach to EIAs. For instance, the Espoo Convention (1991) focuses on EIAs for projects with transboundary impacts; the Biodiversity Convention (1992) emphasizes EIAs for projects with significant adverse effects on biological diversity; the UNFCCC (1992) necessitates integrating climate change considerations into EIAs; and both the Watercourses Convention (1997) and the Aarhus Convention (1998) restrict their focus to public participation in the EIA process.

Importantly, over a quarter-century has elapsed since the Aarhus Convention (1998) referencing EIA in an international environmental instrument, and an even more considerable 32 years since the Espoo Convention (1991) centered on transboundary EIA. Given this

\(^10\) Rio Declaration (1992), Principle 17.
\(^11\) Id. Principle 19.
\(^12\) Convention on Biological Diversity (1992), art. 14(1)(a).
\(^13\) UNFCCC (1992), art. 4(1)(f).
\(^14\) Watercourses Convention (1997), art. 12.
\(^15\) Aarhus Convention (1998), art. 6(2)(e).
temporal gap and the evolution of environmental challenges, there is a pressing need to institute a new convention, characterized by extensive ratification, to address the evolved challenges of EIA and to foster a cohesive and updated approach for all its aspects.

2. International Court of Justice

ICJ underscores the importance of EIA as a pivotal tool in customary international law, particularly for projects involving transboundary environmental effects. In Hungary v. Slovakia (1997) concerning hydropower Gabčíkovo-Nagymaros Project on the Danube River between both countries, ICJ ruled that the project had significant environmental impacts.\(^{16}\) Although ICJ did not explicitly refer to EIA as an obligation under customary international law, it suggested the parties to look afresh at the environmental effects of the project operations. ICJ also acknowledged the need to reconcile economic development with environmental protection and did hint at the rising importance of such assessments in international projects.

In a notable concurring opinion, Judge Weeramantry addressed the issue of EIA in a frank and detailed manner and stressed on the importance of continuous EIA of the project as long as it continues its operations.\(^{17}\) He further stated that the duty of EIA is not discharged merely by an initial assessment before the commencement of a project. He highlighted that the standards to be applied in such continuous monitoring are the standards prevalent at the time of assessment and not those in force at the project commencement.

It is essential to highlight that this judgment did not establish a solid precedent on the necessity of EIA in every cross-border project.\(^{18}\) ICJ's reluctance to strongly affirm the obligation to undertake EIA – despite its prominence in various international environmental instruments – has been a subject of critique. Many believe that Judge Weeramantry's stance would have been a more progressive and appropriate approach for ICJ to adopt. Undoubtedly, ICJ missed a crucial opportunity to unequivocally assert that EIA is a cornerstone of customary international law.

This lacuna was however covered by ICJ in the case of Argentina vs. Uruguay (2010) involving a dispute over the construction and operation of pulp mills on the Uruguay River, which forms the border between both countries. In this case, ICJ noted the gained acceptance among states to undertake an EIA where there is a risk that the project may have significant adverse impact in a transboundary context, in particular, on a shared resource. Accordingly, ICJ held that an EIA must be conducted prior to the implementation of a project and monitoring of its environmental effects must be undertaken once the operations have started and, where necessary, throughout the life of the project.\(^{19}\)

These cases highlight ICJ's recognition of EIA as an essential tool of customary international law, especially in the context of potential transboundary environmental harms. They indicate

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\(^{17}\) Id. Dissenting Opinion of Judge Weeramantry.


the increasing role of EIAs in international legal disputes and underscore the importance of understanding and adhering to this concept.

3. International Organizations

Several international organizations have increasingly stressed the importance of EIAs as an indispensable tool for sustainable development. This emphasis is further supported by an extensive body of scholarly literature that recognizes the commitment of these international institutions to the EIA practice. These organization play a pivotal role in shaping policies, defining funding criteria, offering technical assistance, enhancing capacity building, and establishing global standards for EIA practices. To illustrate the roles played in advancing this concept, it is essential to briefly highlight the contributions of two prominent international bodies, namely UNEP and the World Bank.

In 1987, UNEP adopted the Goals and Principles of Environmental Impact Assessment (1987) encouraging states to undertake EIA for proposed activities in line with its outlined principles. Advancing its further commitment in 2004, UNEP presented a comprehensive report providing information and guidance on best practices for EIA and SEA across the globe. The report outlined the essential concepts, procedures, and tools required for an integrated approach for EIA and SEA. In addition to highlighting the globally endorsed best practices, it envisaged potential future trajectories for both concepts based on prevailing innovations and endeavors.

Similarly, the World Bank has maintained a steady requirement for EIAs. It introduced the Operational Manual on Environmental Assessment (1999) mandating the responsibility of the borrower countries to conduct EIAs for the operations financed by the Bank. This manual elaborated on the detail requirements for EIA process. Furthermore, in 2016, the World Bank instituted the Environmental and Social Framework (ESF) for all its new project financings. ESF contains ten (10) environmental and social standards. Notably, the first standard articulates the responsibility of the borrower country to assess, manage, and monitor environmental and social risks and impacts during each stage of a project financed by the Bank.

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25 Id. Goal 1.
Collectively, these endeavors by international bodies underscore the globally ascending trajectory of EIA recognition, rigor, and integration in development pursuits.

B. Regional EIAs

The obligation to conduct EIA was incorporated into the regional environmental law of the European Union merely 15 years after NEPA. Regrettably, the European Union remains the only regional framework to have demonstrated a significant progress in incorporating EIAs into its regional environmental laws. Beyond the European Union, only the American region incorporates certain requirements concerning EIA in its Escazu Agreement (2018). However, this agreement lacks a detailed framework on EIA and does not mandate an obligation to conduct EIA. This scenario indicates a considerable gap in requiring EIA across regional environmental laws.

1. European Union

In 1985, the European Economic Community (now, the European Union) adopted its first regional law on EIA through the Council Directive 85/337/EEC of 27 June 1985 (the “1985 Directive”). This directive mandated its members states to adopt all necessary measures to ensure that the projects likely to have significant effects on the environment are made subject to EIA. The 1985 Directive was amended three times in 1997, 2003 and 2009. The 1997 amendment widened the scope of the 1985 Directive and brought it in line with the Espoo Convention (1991). The 2003 amendment aligned its provisions on public participation with the Aarhus Convention (1998), while the 2009 amendment expanded its scope by adding certain projects to its annexures.

However, in 2011, the 1985 Directive was repealed by the Directive 2011/92/EU of 13 December 2011 (the “EIA Directive”) in the interest of clarity and rationality. Subsequently, the consolidated EIA Directive with its 2014 Amendment is the governing regional law concerning EIA within the European Union. Many scholars have elaborated on the application of the EIA Directive in the European Union and its member states in their numerous publications.

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The main objective of the EIA Directive is to harmonize EIA system with reference to the projects, obligations of the developers, and contents of the assessment.\textsuperscript{34} It requires the projects of certain types having significant effects on the environment to be subject to a rigorous ‘systematic assessment’ as a rule. It further mandates member states to assess other projects not having significant environmental effect on a case-by-case basis and in accordance with the criteria set out in the EIA Directive.\textsuperscript{35}

In the absence of a uniform international system of EIAs, the European Union exemplifies a remarkable case of a regional system, where twenty-seven states have harmonized EIA system. It has an advanced, well-defined, and structured EIA system that transcends national boundaries and serves as a potential guide for other regions and international community aspiring to refine their EIA systems.

2. American Region

In a relatively recent development, the American region has recognized the concept of EIA in the Escazu Agreement (2018). Nonetheless, this agreement does not impose a blanket obligation for states to conduct EIAs. Instead, it requires each state party to establish environmental information systems that contain information on EIA processes;\textsuperscript{36} to emphasize on public participation in decision-making processes with respect to projects that may have significant impacts on the environment and health;\textsuperscript{37} to carry out decisions resulting from EIA in an effective and prompt manner with public participation;\textsuperscript{38} and to inform the public about the actions taken to monitor the implementation and results of EIA measures.\textsuperscript{39}

C. National EIAs

Shortly after NEPA, the EIA concept began to gain traction in legal systems around the world. Recognizing its pivotal role in environmental protection, countries started drafting and enacting their own EIA legislations. For instance, France adopted EIA laws in 1977, followed by China in 1979, Brazil in 1981, India in 1986, Mexico in 1988, and the Russian Federation in 1995.\textsuperscript{40} This global embrace of EIA has not only been evident in legislative efforts but also in academic realms, with numerous scholars tracing its evolution across countries.\textsuperscript{41} Presently, the vast majority of nations boast robust EIA legislations that scrutinize activities or projects with potential significant environmental effects.

\& Nuno Formigo, Ecosystem Services in Environmental Impact Assessment, Elsevier Ltd. & Science Direct, 2019.
\textsuperscript{34} EIA Directive, Recital (3).
\textsuperscript{35} EIA Directive, Recitals (8) to (11).
\textsuperscript{36} Escazu Agreement (2018), art. 6(3)(h).
\textsuperscript{37} Id. art. 7(2).
\textsuperscript{38} Id. art. 7(9).
\textsuperscript{39} Id. art. 7(17)(g).
\textsuperscript{40} Tseming Yang, The Emergence of the Environmental Impact Assessment Duty as a Global Legal Norm and General Principle of Law, 70 Hastings L.J. 525 (2019).
Over the past, there have been many surveys and studies concerning the existence of primary EIA legislations across the world. The first of such survey was conducted by Prof. Nicholas Robinson, who found 39 nations with EIA requirements in 1992. Subsequently, UNEP conducted a study of EIA legislations across the globe in 1990s, the International Association for Impact Assessment (IAIA) in 1996, and the International Institute for Environment and Development (IIED) in 1998. Within six (6) years after the first survey, there were 108 nations with legislations imposing an EIA duty and 120 systems with some kind of EIA mechanism.

More recently in 2019, a comprehensive study examined legislations and regulations mandating the performance of EIAs across United Nations member countries. It concludes that a substantial 183 out of 197 countries have now embraced EIA laws, indicating that the EIA norm (requiring an EIA when a project is likely to have a significant environmental impact) has been nearly universally adopted. It highlights that EIA laws have been enacted in emerging economies and developing countries such as China, India, and Brazil; in the least developed nations in Africa; in former communist nations, such as the Russian Federation; and even in politically isolated states such as North Korea and Cuba.

It is noteworthy that the above survey also identified six (6) states that did not possess an EIA requirement, namely South Sudan, Somalia, Eritrea, Suriname, Singapore, and Nauru. Furthermore, the survey was unable to ascertain with sufficient confidence the status of eight (8) other states concerning the EIA norm, including Central African Republic, Holy See, San Marino, Monaco, St. Vincent and Grenadines, St. Lucia, St. Kitts and Nevis, and Barbados. In addition, it also found few jurisdictions, including Andorra and DR Congo, that apply EIA process only on a sectoral basis, such as the mining industry, land development, infrastructure projects, or other specific sectors of the economy.

The focus of these studies was the general umbrella norm – the duty to conduct an EIA for projects or activities that were likely to have a significant impact on the environment. In order to determine whether the EIA duty was legally mandated, the surveys identified specific legislation or regulations that imposed that duty. These surveys, however, did not attempt to classify subsidiary requirements within EIA such as scoping, contents of EIA report, public participation, or judicial review.

To analyze the EIA concept at the national level, this thesis presents a comparative analysis between two different approaches used in the United States and Pakistan. The United States has one of the most sophisticated national-based EIA systems, enriched by a comprehensive body of scholarly literature. Conversely, Pakistan has a relatively weaker provincial-based

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43 Id.
44 Id.
EIA framework and implementation and lacks the depth of academic exploration. In context of the United States, this thesis presents an opportunity to study the evolution of a detailed, complex, and multi-layered EIA system and to recommend improvements drawing from the well-established EIA practices. In examining Pakistan, it provides a glimpse into the potential deficiencies within a nascent and evolving EIA legal structure, identifying areas for improvement and proposing legal reforms aimed at enhancing the effectiveness of its EIA process.

1. United States

As discussed at the start of this chapter, the United States is pioneer across the globe in legislating an EIA law and devising this system. The primary purpose of NEPA is to give appropriate considerations to the environmental factors in federal planning and decision-making along with other social, economic, and technical considerations. As its basic policy, NEPA directs all “federal agencies” to “include” in every “major federal actions significantly affecting the quality of the human environment”, a “detailed statement” on, amongst others, the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided, and alternatives to the proposed action. These detailed statements are commonly referred to as the Environmental Impact Statements (EIS).

Prior to making such statements, NEPA requires the federal agencies to consult with and obtain comments of any other federal, state, local or tribal agencies which have jurisdiction by law or special expertise with respect to any environmental impacts. These statements and comments are also published for public review. Accordingly, EISs in the United States fundamentally align with and parallel the functions of EIA in the European Union.

In addition, NEPA also establishes the Council on Environmental Quality (CEQ) with multiple obligations, including to ensure that federal agencies meet their obligations under NEPA, to oversee implementation of NEPA process, and to issue regulations and guidance for NEPA compliance. In 1978, CEQ issued the National Environmental Policy Act Implementing Regulations (the “NEPA Regulations”) and provided a mandatory procedure for NEPA compliance. The NEPA Regulations are applicable to and binding on all federal agencies in the United States. Additionally, the NEPA Regulations are periodically updated to address
emerging environmental challenges and align with contemporary ecological needs. These regulations are currently under the process of revision.51

2. Pakistan

Pakistan is a developing country in the Global South with Islamabad as its Federal Capital and four (4) provinces, namely Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan (collectively, the “Pakistani provinces”). Since its independence in 1947, Pakistan has undergone several constitutional changes. The first two Constitutions of Pakistan, promulgated in 1956 and 1962, did not have any environmental protection provision. However, at the time of its enactment, the latest Constitution of the Islamic Republic of Pakistan 1973 (the “Pakistani Constitution”) included the subject of “environmental pollution and ecology” in its Concurrent Legislative List.52 In theory, this list allowed both the Federal and Provincial Governments in Pakistan to legislate on the subject of environment.53

Accordingly, Pakistan introduced its first comprehensive national environmental legislation, the Pakistan Environmental Protection Ordinance (1983) (the “1983 Ordinance”), to control the pollution and preserve the living environment.54 The 1983 Ordinance established several institutions in Pakistan, including the Pakistan Environmental Protection Council (the “Federal EPC”)55 and the Pakistan Environmental Protection Agency (the “Federal EPA”)56, with specific purposes.

Under the 1983 Ordinance, every proponent of a project in Pakistan was required to file a detailed environmental impact statement (“EIS”) at the time of planning of the project, containing information on (a) the impact on the environment of the proposed industrial activity; (b) the treatment works of the project; (c) the unavoidable adverse environmental effects of the project; and (d) the steps proposed to be taken by the proponent to minimise its adverse environmental effects.57 Importantly, the Federal EPA could only involve public participation in the assessment of EIS if it deemed appropriate,58 and could either approve EIS or recommend to the Federal Government to modify or reject the project in the interest of environmental objectives.59 The Federal EPA was required to prescribe regulations for application of this provision on different projects and persons,60 and to issue guidelines for preparation of EISs.61

53 Before the Eighteenth Amendment, there were two (2) legislative lists in the Constitution: Federal Legislative List and Concurrent Legislative List. The National Assembly had the exclusive legislative jurisdiction on matters included in the Federal Legislative List, and in theory, both the National and Provincial Assemblies had legislative jurisdiction on matters included in the Concurrent Legislative List. However, in practice, the Federal Government mostly abstained from legislating on the subjects contained in the Concurrent Legislative List, leaving the Provinces to legislate on the subjects. See https://portals.iucn.org/library/sites/library/files/documents/ELC-016-1.pdf
54 Pakistan Environmental Protection Ordinance, 1983 (the “1983 Ordinance”), Preamble.
55 Id. Section 3.
56 Id. Section 5.
57 Id. Section 8(2).
58 Id. Section 8(4).
59 Id. Section 8(5).
60 Id. Section 8(1).
61 Id. Section 8(3).
However, no such regulations or guidelines were prescribed by the Federal EPA under the 1983 Ordinance.

Thereafter, in 1997, Pakistan repealed the earlier 1983 Ordinance with a relatively progressive Pakistan Environmental Protection Act 1997 (the “Federal Act”). This was also a national statute and contained detailed provisions with respect to the protection, conservation, rehabilitation, and improvement of the environment, for prevention and control of pollution, and for promotion of sustainable development. In essence, under the Federal Act, the “proponent” of a “project” is required to file with the Federal EPA an Initial Environmental Examination (“IEE”), or an Environmental Impact Assessment (“EIA”) if the project is likely to cause an “adverse environmental effect”, before starting construction or operations of project and to obtain “approval” of the Federal EPA in this regard.

The Federal Act also revised the role of the Federal EPC and the Federal EPA. From time to time, the Federal Government has made rules for carrying out the purposes of the Federal Act. Similarly, the Federal EPA has notified several regulations under the Federal Act from time to time. While no rules are made concerning EIA, the Federal EPA has notified the Pakistan EPA Review of IEE and EIA Regulations, 2000 (the “Federal Regulations”) containing detailed provisions for EIA practices in Pakistan.

In 2010, the Pakistani Constitution was amended through the Constitution (Eighteenth Amendment) Act 2010 (the “Eighteenth Amendment”) that redefined the role of the Federal and Provincial Governments in Pakistan. This amendment abolished the Concurrent Legislative List of the Constitution, which had the subject of “environmental pollution and ecology”. The Constitution, however, still has the Federal Legislative List, which contains subjects within the legislative domain of the Federation and does not include the subject of environment. As a consequence, the environment is a provincial subject and the Pakistani provinces remain with the exclusive jurisdiction to frame laws on this subject within their territorial jurisdictions.

At the outset, it is essential to highlight that the Federal Government has also passed some environmental laws, including the Pakistan Climate Change Act, 2017, and have adopted various policies from time to time in this regard. The power of federation to introduce such laws on the subject of environment or climate change is questioned by various scholars.

Accordingly, after the Eighteenth Amendment, the Pakistani provinces enacted their own environmental legislations. Punjab adopted replica of the Federal Act with necessary modifications, the Punjab Environmental Protection Act 1997 (the “Punjab Act”); Sindh legislated the Sindh Environmental Protection Act 2014 (the “Sindh Act”); Khyber Pakhtunkhwa (KPK) passed the Khyber Pakhtunkhwa Environmental Protection Act 2014 (the

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62 Pakistan Environmental Protection Act, 1997 (“Federal Act”), Section 1(2).
63 Federal Act, Preamble.
64 Id. Section 12.
65 Id. Section 31.
66 Id. Section 33.
67 The Federal Regulations are made under Section 33 of the Federal Act.
68 Pakistani Constitution, Fourth Schedule.
69 Umair Saleem, Strengthening the Legal Framework to address Climate Change in Pakistan, IUCN Law Journal (2022).
70 By amending the Federal Act through the Punjab Environmental Protection (Amendment) Act, 2012.
“KPK Act”), and Balochistan enacted the Balochistan Environmental Protection Act 2012 (the “Balochistan Act”).

These provincial environmental legislations in Pakistan establish identical authorities, namely the Environmental Protection Council (EPC) and the Environmental Protection Agency (EPA), each endowed with comparable administrative powers within their respective jurisdictions. Further, these legislations have repealed the Federal Act to the extent of its applicability to the Pakistani provinces. Since Islamabad is a capital territory and not part of any province, therefore, the Federal Act continues to apply to Islamabad.71

Similarly, while the Federal Regulations continue to apply to Islamabad, Punjab and KPK have extended the applicability of the Federal Regulations to their provinces.72 Therefore, the Federal Regulations are now applicable in Federal territory, Punjab, and KPK. However, Sindh and Balochistan have adopted their own regulations, namely Sindh EPA (Review of IEE and EIA) Regulations, 2014 (the “Sindh Regulations”) and Balochistan EPA (Review of IEE and EIA) Regulations, 2020 (the “Balochistan Regulations”), which lay out the procedural framework for EIAs within their areas of jurisdiction.73

Accordingly, in Pakistan, all the four provinces and the capital territory possess their own set of environmental laws, rules, and regulations establishing varied standards. Furthermore, they also have specific environmental governing authorities, namely EPCs and EPAs, functioning within their respective territorial jurisdictions to enforce these different standards.

For the purpose of this thesis, the Federal Act, the Punjab Act, the Sindh Act, the KPK Act, and the Balochistan Act are collectively referred to as the “Pakistani laws”. Similarly, the Federal Regulations, the Sindh Regulations, and the Balochistan Regulations are jointly termed as the “Pakistani regulations”. Given the multiple versions of these Pakistani laws and regulations available online, this thesis includes a detailed comparison of the definitions and provisions contained in the Pakistani laws, attached as Appendixes D and E. Additionally, a comparative table of the requirements for EIA under the Pakistani regulations is annexed in Appendix F. The specific provisions detailed in these appendices are deliberated upon throughout the thesis.

D. Conclusion

This chapter reveals that while a substantial 183 out of 197 countries have now embraced EIA laws, the international and regional environmental laws lack an advanced framework on EIA. At the international level, while the formal recognition of the term EIA began with the Espoo Convention (1991), the principles inherent in EIA were already incorporated in the Stockholm Declaration (1972) and the Law of the Sea Convention (1982). These both instruments contained general obligations of states to manage their natural resources, wildlife, and habitat carefully and rationally and to avoid environmental risks and adverse effects.

Thereafter, only the Rio Declaration (1992) contains a blanket clause for states to conduct EIAs for activities with potential significant adverse environmental effects. In contrast, five (5) of such instruments are more specific in their approach to EIAs. For instance, the Espoo Convention (1991) focuses on EIAs for projects with transboundary impacts; the Biodiversity

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71 Pakistani Constitution, Article 142(d)
72 Section 34(2) of the Punjab Act and Section 40(2) of the KPK Act.
73 Regulation 25 of the Sindh Regulations and Regulation 27 of the Balochistan Regulations.
Convention (1992) emphasizes EIAs for projects with significant adverse effects on biological diversity; the UNFCCC (1992) necessitates integrating climate change considerations into EIAs; and both the Watercourses Convention (1997) and the Aarhus Convention (1998) restrict their focus to public participation in the EIA process.

Importantly, over a quarter-century has elapsed since the Aarhus Convention (1998) referencing EIA in an international environmental instrument, and an even more considerable 32 years since the Espoo Convention (1991) centered on transboundary EIA. Given this temporal gap and the evolution of environmental challenges, there is a pressing need to institute a new convention, characterized by extensive ratification, to address the evolved challenges of EIA and to foster a cohesive and updated approach for all its aspects.

Furthermore, many of the international institutions recognize the EIA concept within their influential frameworks. For instance, ICJ underscores the importance of EIA as a pivotal tool in customary international law, particularly for projects involving transboundary environmental effects. Moreover, several international organizations have increasingly stressed the importance of EIAs as an indispensable tool for sustainable development, including UNEP and the World Bank.

At the regional level, regrettably, the European Union remains the only regional framework to have demonstrated a significant progress in incorporating EIAs into its regional environmental laws. Beyond the European Union, only the American region incorporates certain requirements concerning EIA in its Escazu Agreement (2018). However, this agreement lacks a detailed framework on EIA and does not mandate an obligation to conduct EIA. This scenario indicates a considerable gap in requiring EIA across regional environmental laws.

The European Union has a simple and structured directive that sets minimum requirements for EIA in all its 27 member states. It further allows the member states to set stricter criteria based on the principle of subsidiarity and proportionality. The simplicity of having one directive stands as a considerable strength, allowing for a harmonized approach that can foster consistency and cooperation among member states and promote uniformity and coherence in EIA practices.

At the national level, this chapter described two different national legal frameworks for EIA. The United States operates under NEPA and its Regulations, which offer a structured federal system. However, it does not require its fifty (50) states to maintain the same standards of EIS for their respective actions. This allows for significant variations in state-specific EIA laws.

On the other hand, Pakistan has a segmented approach with different laws applicable in federal and provincial territories, which creates a complex and fragmented EIA system. It has a territorial-based provincial system characterized by plethora of laws and regulations – specifically five (5) different laws and three distinct regulations that are applicable within their respective territories. This leads to varied standards and approaches in EIA as well as inconsistencies, complexities, and challenges in their implementation across several regions. This, however, allows for region-specific customization, which can be seen as a strength in addressing unique environmental issues within different territories.
Chapter IX: Levels of Assessments and Screening

At the outset, ‘types’ and ‘levels’ of environmental assessments are two different concepts. Two types of assessments – EIA and SEA – are already elaborated in the start of the Third Part of this thesis. In contrast, various jurisdictions delineate different levels of environmental assessments that pertain to various scales, capacities, and categories of projects based on their significant environmental effects.

This chapter provides a comparative analysis of different levels of environmental assessments for different projects in the European Union, the United States, and Pakistan. It begins by discussing these levels in each jurisdiction and then explores the methods and criteria used in these jurisdictions to determine whether a project or action requires a specific assessment. The process of this determination is commonly referred to as "screening". It serves as a preliminary fundamental step in an EIA process and ensures that EIA is strategically applied to projects with significant environmental implications.

A. European Union

In the European Union, the EIA Directive provides the criteria and selection process for the projects that require EIAs. It is applicable to both “public and private projects” which are likely to have significant effects on the environment. The European Union has simplified the selection process for the projects that fulfil such criteria by listing them in annexures to the EIA Directive. These projects are predominantly divided into the following two categories:

Firstly, the projects listed in Annex I of the EIA Directive are mandatorily subject to a rigorous EIA in all the member states of the European Union. These projects include specific installations relating to crude oil, gasification, liquefaction, thermal and nuclear power station, smelting, non-ferrous crude metals, extraction of asbestos, chemical installations, long distance railway traffic and airports, motorway and express roads, waterways, ports, waste disposal, waste water treatment plants, groundwater abstraction, artificial groundwater recharge schemes, extraction of petroleum and natural gas, dams, industrial plants, rearing of poultry or pigs, cast mining, electrical power lines, storage of petroleum, petrochemical or chemical products, storage sites, or any change to or extension of such project.

Secondly, the projects listed in Annex II of the EIA Directive are left for discretion of the member states to determine whether they are subject to EIA or not. These projects include the industries relating to agriculture, silviculture and aquaculture, extractive industry, energy industry, production and processing of metals, mineral industry, chemical industry (not included in Annex I), food industry, textile, leather, wood and paper industries, rubber industry, infrastructure projects, other projects, tourism, and leisure.

The EU member states are required to make their determination for selection of projects listed in Annex II of the EIA Directive through a case-by-case examination and the criteria set by the respective EU member state. The EIA Directive has also set out a detailed selection criteria in

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1 EIA Directive, Article 1(1).
2 Id. Article 4.
3 Id. Annex I.
4 Id. Article 4(2)&(3).
its Annex III based on the characteristics and location of the projects and the type and characteristics of their potential impacts.\(^5\)

Accordingly, any project falling into Annex I of the EIA Directive is mandatorily subject to a rigorous EIA within all member states of the European Union. This structure facilitates a simple, cohesive, uniform, and harmonized approach to EIA within all EU member states for Annex I projects.

However, for Annex II projects, the European Union allows member states the flexibility and adaptability by allowing them discretion to determine the necessity of assessment for the projects with relatively less significant impacts than Annex I projects. The study of different levels of assessments for Annex II projects necessitates reviewing practices from different member states, which is out of scope of this thesis.

### B. United States

The United States utilizes a distinctive approach in the form of EIS, which closely resembles to and parallels the functions of EIAs in the European Union. In the United States, NEPA and its Regulations both require a mandatory obligation for the “federal agencies” to include EIS in “major Federal actions” significantly affecting the quality of the human environment.\(^6\) These major federal actions “may include new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by Federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals.”\(^7\)

These major federal actions tend to fall in any of the four categories, including (i) adoption of official policy (rules, regulations, and interpretations etc.) and implementation of treaties, conventions, or agreements; (ii) adoption of formal plans or documents by federal agencies, prescribing alternative uses of federal resources; (iii) adoption of programs or concerted actions to implement a specific policy or plan, or a systematic and connected agency decision allocating agency resources; or (iv) approval of specific projects (i.e. actions, federal activities and federally assisted activities) by permit or other regulatory decision such as construction or management activities located in a defined geographic area.\(^8\)

These actions, however, do not include the activities or decisions: (i) that have effects located entirely outside of the United States; (ii) that are non-discretionary and made in accordance with the agency's statutory authority; (iii) that do not result in “final agency action”; (iv) judicial or administrative civil or criminal enforcement actions; (v) funding assistance solely in the form of general revenue sharing funds without federal agency control over their subsequent use; (vi) non-federal projects with minimal federal funding or involvement; and (vii) loans or other forms of financial assistance where the agency does not exercise sufficient control and responsibility over the effects of such assistance.\(^9\)

The definition of major federal actions covers a vast spectrum of actions, encompassing almost every action of any federal agency except the few noted above. Given the varieties of federal

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\(^5\) Id. Annex III.

\(^6\) NEPA Regulations, sec. 1502.3; and NEPA sec. 102(2)(C).

\(^7\) NEPA Regulations, sec. 1508.1(q)(2).

\(^8\) Id. 1508.1(q)(3).

\(^9\) Id. 1508.1(q)(1).
actions, the United States has formulated different types of assessments for different agency actions based on their significant environmental effects. The types of assessments are briefly discussed below:

(1) Firstly, the federal agencies are required to identify categories of their actions that do not normally have significant effects on the human environment through a cumbersome process of public participation and consultation. The actions falling under these categories are categorically excluded from any type of assessment in the United States.

(2) Secondly, the federal agencies are required to prepare an ‘environmental assessment’ document (“EA”) for a proposed action that is ‘not likely’ to have significant effects or the significance of its effects is ‘unknown’.

(3) Thirdly, based on an EA, if an agency determines that the proposed action does not have significant environmental effects and an EIS is not needed, a finding of no significant impact (FONSI) is prepared by the agency.

(4) Finally, based on EA document, if the agency determines that the proposed action is likely to have significant effects on the human environment, the agency is required to prepare an EIS.

It is essential to clarify that if a major federal action is already known to significantly affect the environment, EIS is prepared without preparing an EA. The standards and process for preparing an EIS are rigorous than those for a FONSI or EA and are elaborated in the next three chapters.

Before discussing these types of assessments in detail, it must be acknowledged that in the United States, only the federal actions that potentially have significant effects on the human environment are subject to these types of assessments. This framework potentially omits actions of state agencies from assessments and does not mandate uniform standards for state actions in the United States. However, many of the states in the United States have developed their own EIA laws and regulations, which vary in stringency. While recognizing these state-specific approaches is crucial, it is beyond the scope of this thesis due to length and time constraints.

1. Categorical Exclusions (CEs)

For efficiency, the federal agencies are required to identify categories of actions that normally do not have a significant effect on the human environment and therefore do not require preparation of an EA or EIS.10 These categories of actions are known as “categorical exclusions” (CEs). The federal agencies use CEs to exempt their certain actions, which do not have any significant environmental effect, from any type of assessment in the United States. Therefore, CEs allow agencies to reduce delays and paperwork for listed actions and allocate resources to other actions with significant environmental effects.11

To understand the implications of this mandate, it is essential to understand what constitutes a “federal agency”. This term encompasses all the bureaucratic entities of the federal

10 Id. 1508.1(d) & 1501.4(a).
11 Id. 1500.5(a).
government, excluding the Congress, the Judiciary, and the President.\textsuperscript{12} The United States has over 435 federal agencies, each with its specific functions.\textsuperscript{13} Each of these agencies is required to develop its own CE for its actions that do not have any significant environmental impact. Furthermore, before establishing or revising CEs, these agencies must also consult with the public and CEQ.\textsuperscript{14}

For guidance of these federal agencies, CEQ has established criteria for establishing, applying, and revising CEs, based on NEPA, its Regulations, legal precedents, and agency experiences and practices.\textsuperscript{15} When establishing or revising a CE, federal agencies are expected to follow these nine (9) steps:\textsuperscript{16}

(a) prepare a draft CE based on its experience and substantiating information;
(b) consult with CEQ on the draft CE;
(c) consult with other federal agencies that conduct similar activities to coordinate with their current procedures;
(d) publish a notice of the draft CE in the Federal Register for public review and comments;
(e) consider public comments and prepare the final CE;
(f) consult with CEQ on the public comments and the final CE to obtain its written determination of conformity with NEPA and its Regulations;
(g) publish the final CE in the Federal Register;
(h) file the final CE with CEQ; and
(i) make CE available to the public through the agency's website and other means.

Numerous federal agencies have established their CEs for actions that normally do not have any significant environmental effect. These agencies include the U.S. EPA, U.S. Forest Service, Bureau of Land Management, U.S. Army Corps of Engineers, Federal Highway Administration, U.S. Fish and Wildlife Service, and the National Park Service, among others. Their CEs generally cover a broad range of actions, including administrative functions, maintenance activities, research and information collection, emergency response, and certain land management.

However, even if an agency determines that a proposed action is covered by its CE, it is required to evaluate such an action for extraordinary circumstances in which it may have a significant environmental effect.\textsuperscript{17} If an extraordinary circumstance is present, the agency may categorically exclude the proposed action if there are circumstances that reduce its impacts or other sufficient conditions to avoid its significant effects.\textsuperscript{18} If an agency cannot categorically exclude the proposed action, it must prepare an EA or EIS, as appropriate.\textsuperscript{19}

\textsuperscript{12} Id. 1508.1(k).
\textsuperscript{13} See, \url{https://www.federalregister.gov/agencies}
\textsuperscript{14} NEPA Regulations, sec. 1507.3(a).
\textsuperscript{16} Id. Section IV, at p. 10.
\textsuperscript{17} NEPA Regulations, sec. 1501.4(b).
\textsuperscript{18} Id. 1501.4(b)(1).
\textsuperscript{19} Id. 1501.4(b)(2).
2. Environmental Assessments (EAs)

An agency is required to prepare an EA for a proposed action that is “not likely” to have significant effects or when the significance of its effects is “unknown”.\(^{20}\)

EA is a “concise public document” that helps an agency's compliance with NEPA and provides “sufficient evidence and analysis” for determining whether to prepare an EIS or a FONSI.\(^{21}\) An EA briefly discusses the purpose and need for the proposed action, its alternatives and environmental impacts, and the lists of agencies and person consulted.\(^{22}\) The text of an EA cannot be more than 75 pages, excluding appendices, unless a senior agency official approves a new page limit.\(^{23}\)

The agencies are required to involve the public, State, Tribal, and local governments, relevant agencies, and any applicants, to the extent practicable in preparing EAs.\(^{24}\)

3. Findings Of No Significant Impact (FONSI)

Based on the EA, if an agency determines that the proposed action will not have significant effects and EIS is not needed, it is required to prepare a FONSI.\(^{25}\) In this case, the agency must make FONSI available for the public review of thirty (30) days before making its final determination on preparing EIS.\(^{26}\)

FONSI is used to reduced delays.\(^{27}\) It is a document briefly presenting the “reasons” why an action will not have a significant effect on the human environment and for which an EIS will not be prepared.\(^ {28}\) FONSI needs not repeat any of the discussion held in an EA. It includes EA or incorporates it by reference as well as any other documents related to it.\(^ {29}\) It must state the “authority for any mitigation that agency has adopted and any applicable monitoring or enforcement provisions”. If the agency finds no significant impacts based on mitigation, the ‘mitigated FONSI’ must state any enforceable mitigation requirements or commitments that are undertaken to avoid significant impacts.\(^ {30}\)

4. Environmental Impact Statements

Based on EA, if an agency determines that the proposed action will have significant effects on the human environment, it is required to prepare an EIS. Even otherwise, if a major federal action is already known to significantly affect the environment, EIS is prepared without preparing an EA.

The primary purpose of an EIS is “to ensure agencies consider the environmental impacts of their actions in decision making”. It is a document that provides full and fair discussion of

\(^{20}\) Id. 1501.5(a).
\(^{21}\) Id. 1508.1(h) & 1501.5(c)(1).
\(^{22}\) Id. 1501.5(h) & 1501.5(c)(1).
\(^{23}\) Id. 1505.5(c)(2).
\(^{24}\) Id. 1505.5(f).
\(^{25}\) Id. 1501.5(e).
\(^{26}\) Id. 1501.6(a).
\(^{27}\) Id. 1501.6(a)(1)&(2).
\(^{28}\) Id. 1500.5(b).
\(^{29}\) Id. 1508.1(l).
\(^{30}\) Id. 1501.6(b).
significant environmental impacts. It informs decision makers and the public of reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment. In an EIS, the agencies are required to focus on significant environmental issues and alternatives. EISs must be concise, clear, to the point, and supported by evidence.\(^\text{31}\) The agencies are required to prepare EISs in two stages and, where necessary, supplement them.\(^\text{32}\)

The process for EISs is discussed in the next chapter in detail.

**C. Pakistan**

Pakistan adopts an EIA system that exhibits similarities with both systems of the European Union and the United States. Much like the United States, Pakistan determines the level of assessments for different projects based on their potential environmental effects. Moreover, mirroring the European Union, it provides lists of the projects that are subject to these different assessments.

In essence, Pakistan has identified three (3) types of assessments and corresponding categories of projects. Firstly, before commencing construction and operations of a project, its proponent is required to file an IEE with the relevant EPA to determine whether the project is likely to cause an adverse environmental effect. These projects are listed in Schedules I of the Pakistani regulations and are subject to a less stringent requirements where consultation and public participation are not required. After submission of an IEE, the relevant EPA is required to accord its approval or require submission of an EIA by the project proponent.

Secondly, a proponent of a project, which is likely to cause an adverse environmental effect, is required to file an EIA with the relevant EPA and obtain an EIA approval before commencing project construction and operations. The Pakistani regulations have listed some of the projects with significant environmental effects in their Schedules II. These projects are subject to undergo a rigorous process of EIA that integrates consultation and public participation. After submission of an EIA, the relevant EPA is required to accord its approval with appropriate terms and conditions, or require its resubmission after modification, or reject the project being contrary to environmental objectives.

Thirdly, there are certain reporting requirements in three provinces of Pakistan for small scale projects that generally do not have adverse environmental effects and are not covered under the scope of IEEs and EIAs. For instance, in Sindh province, a project proponent must conduct environmental screening and file an “environmental checklist” if the project is listed in Schedule III of the Sindh Regulations. Similarly, in Balochistan province, a project proponent is required to file an “IEE Perfora” if such project is listed in Schedule III of the Balochistan Regulations. Furthermore, in KPK province, a project proponent is required to obtain a “general environmental approval” if such project is not covered for IEE or EIA approvals. There are, however, no parallel requirements for the federal territory and the Punjab province.

While the next chapter discusses the process for obtaining IEE and EIA approvals in Pakistan, different types of assessments and projects are elaborated below:

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\(^{31}\) Id. 1502.1.

\(^{32}\) Id. 1502.9(a).
1. Initial Environmental Examination (IEE) Approval in Pakistan

Before commencing construction and operations of a project, its proponent is required to file an IEE with the relevant EPA for determining whether such project is likely to cause an adverse environmental effect. An IEE is “a preliminary environmental review of the reasonably foreseeable qualitative and quantitative impacts on the environment of a proposed project to determine whether it is likely to cause an adverse environmental effect”. After its submission, the relevant EPA is required to review IEE, and accord its approval or require the submission of an EIA by the proponent. The process for obtaining IEE approval is elaborated in the next chapter.

For practical purposes, the Pakistani regulations have listed the projects requiring IEE approval in their Schedules I. These projects belong to ten (10) different categories, including (a) agriculture, livestock, and fisheries, (b) energy, (c) oil and gas projects, (d) manufacturing and processing, (e) mining and mineral processing, (f) transport, (g) water management and flood protection, (h) water supply and treatment, (i) waste disposal, and (j) urban development and tourism. Within these categories, these Schedules provide the lists of various projects with different scales and capacities that are subject to IEE approvals. These projects in their respective categories are listed Appendix G and discussed in the next section with EIA approvals.

There are many variations in the scales and capacities of the projects requiring IEE approvals across different territories in Pakistan. For instance, in Balochistan province, a hydroelectric power generation project with capacity of less than 100 MW is subject to an IEE approval. However, in all other territories except Balochistan, the same hydroelectric power generation project with capacity of less than 50 MW is subject to an IEE approval.

It is pertinent to note that IEE in Pakistan parallels the functions of an EA in the United States. As discussed in the previous section, an EA in the United States is prepared for an action that is “not likely” to have significant effects or when the significance of its effects is “unknown”. Based on EA, if it is determined that the action will not have a significant environmental effect, a FONSI is prepared. Otherwise, an EIS is prepared. Similarly, IEE in Pakistan is a preliminary environmental review to determine whether a project is likely to cause an adverse environmental effect. After reviewing IEE, an EPA may require the project proponent to submit an EIA for approval and follow its stringent requirements.

2. Environmental Impact Assessment (EIA) Approval in Pakistan

A proponent of a project, which is likely to cause an adverse environmental effect, is required to file an EIA with the relevant EPA and obtain an EIA approval before commencing project construction and operation. An EIA is defined as “an environmental study comprising collection of data, prediction of qualitative and quantitative impacts, comparison of

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33 Section 12(1) of the Federal Act and Punjab Act, Section 17(1) of the Sindh Act, Section 13(1) of the KPK Act and Section 15(1) of the Balochistan Act.
34 IEE is defined in an identical manner in Section 2(xxiv) of the Federal and Punjab Acts; Section 2(xxx) of the Sindh Act; Section 2(ff) of the KPK and Balochistan Acts.
35 Section 12(2)(a) of the Federal Act and Punjab Act, Section 17(2)(a) of the Sindh Act, Section 13(2)(a) of the KPK Act and Section 15(2)(a) of the Balochistan Act.
36 Section 12(1) of the Federal Act and Punjab Act, Section 17(1) of the Sindh Act, Section 13(1) of the KPK Act and Section 15(1) of the Balochistan Act.
alternatives, evaluation of preventive, mitigatory and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations and such other components”.

The Pakistani regulations provide four (4) instances where a project proponent is obliged to submit an EIA with the respective EPA and obtain an EIA approval. Firstly, after reviewing IEE submitted by a project proponent, an EPA may require submission of an EIA for its approval. Secondly, the Pakistani regulations provide lists of the projects requiring EIA approvals in their Schedules II. Thirdly, even if a project is not enlisted in Schedules II of the Pakistani regulations, its proponent must file an EIA and obtain approval when the project is likely to cause an adverse environmental effect. Finally, if a project is in an “environmentally sensitive area”, its proponent must also file an EIA and obtain approval.

After submission of EIAs, the respective EPAs is required to review them and accord their approval with appropriate terms and conditions, or require its resubmission after modification, or reject the project being contrary to environmental objectives. The process for obtaining an EIA approval is elaborated in the next chapter.

The Pakistani regulations have identified nine (9) categories of projects in their Schedules II that are subject to an EIA approval. These categories are same as listed in Schedules I of the Pakistani regulations, which provide lists of the projects for IEE approvals. However, the scale and capacity of the projects within these categories are different for both approvals. The categories for an EIA approval include: (a) energy, (b) oil and gas projects, (c) manufacturing and processing, (d) mining and mineral processing, (e) transport, (f) water management and flood protection, (g) water supply and treatment, (h) waste disposal, and (i) urban development and tourism.

A table comparing the categories and projects that require IEE and EIA approvals is annexed in Appendix G. It provides a comparison of all the projects listed in Schedules I and II of the Pakistani regulation within these categories. It indicates that the projects with less capacity and scale are subject to the IEE approvals and the projects with the larger scale and capacity are subject to the EIA approvals. For instance, in Balochistan province, a hydroelectric power generation project with capacity of less than 100 MW is subject to an IEE approval and the same type of project with more than 100 MW capacity is subject to an EIA approval.

Furthermore, there are several variations within these IEE and EIA standards in Pakistan. For example, in all territories in Pakistan except Balochistan, the same hydroelectric power generation project with capacity of less than 50 MW is subject to an IEE approval and the same type of project with over 50 MW capacity is subject to an EIA approval. However, since the Federal Regulations are applicable to the federal territory as well as Punjab and KPK provinces, these three territories have similar standards for IEE and EIA projects. On the other hand, Sindh

37 Section 2(xi) of the Punjab and Federal Acts. The Sindh, KPK, and Balochistan Acts also provide an identical definition of EIA.
38 Section 12(2)(a) of the Federal Act and Punjab Act, Section 17(2)(a) of the Sindh Act, Section 13(2)(a) of the KPK Act and Section 15(2)(a) of the Balochistan Act.
39 Regulation 5(1) of the Federal Regulations, and Regulation 6(1) of the Sindh Regulations and Balochistan Regulations.
41 Section 12(2)(b) of the Federal Act and Punjab Act, Section 17(2)(b) of the Sindh Act, Section 13(2)(b) of the KPK Act and Section 15(2)(b) of the Balochistan Act.
and Balochistan have their own respective standards for these projects under their respective regulations.

It is pertinent to note that the list of projects in Pakistan that necessitate an EIA is not as comprehensive as the European Union's list. Pakistan does not specifically include, among others, nuclear power stations, electrical power lines, and storage sites that are explicitly mentioned in list of the European Union.

3. Reporting Requirements in Sindh, Balochistan, and KPK Provinces

There are certain reporting requirements for small scale projects in Pakistan that generally do not have adverse environmental effects and are not covered under the scope of IEEs and EIAs. These requirements are only existing in three provinces of Pakistan, namely Sindh, Balochistan, and KPK. The federal territory and the Punjab province do not impose any such requirements.

It is pertinent to note that these reporting requirements bear resemblance to the functions of a CE in the United States. As elaborated in the previous section, the federal agencies use CEs to exempt their certain actions, which do not have any significant environmental effect, from any type of assessment in the United States. Similarly, the Sindh and Balochistan Regulations have identified lists of the projects that solely need to meet these reporting requirements criteria and do not need IEE and EIA approvals. These reporting requirements are elaborated below:

(1) Environmental Screening in Sindh

Schedule III of the Sindh Regulations provides a list of projects which only require environmental screening by submitting a checklist in Sindh. These projects include: (a) construction of offices and 16 story small commercial buildings, home industrial units, warehouses, marriage banquet facilities, large scale motor vehicles workshops, restaurants/food suppliers, large baking units, (b) reconstruction or rehabilitation of small roads in urban areas and farm to market roads of more than 2 km, (c) on-farm dams and fish farms, (d) pulses mills, (e) flour mills, (f) small scale projects promoting energy efficiency, (g) lining of existing minor canals and/or water courses, (h) canal cleaning, (i) forest harvesting operations, (j) rain harvesting projects, (k) rural Secondary and Higher Secondary schools and rural basic health units having at least 10 beds capacity, (l) BTS Towers, (m) lime kilns, (n) ice factories and cold storages, (o) cotton oil mill, and (p) construction of LPG or CNG filling stations and petrol pumps.

The proponent of project in Sindh is required to pay Rs. 15,000 for environmental screening through checklist for BTS Towers and Rs. 30,000 in every other project.42

(2) IEE Performa in Balochistan

Schedule III of the Balochistan Regulations provides a list of projects which require filing of IEE Performa in Balochistan. These projects include: (a) construction and lining of water courses, (b) rural schools and basic health units, (c) construction of roads in urban areas up to 10 km, (d) small to medium size water supply and sanitation schemes, (e) canal cleaning and

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42 Schedule IV of the Sindh Regulations.
de-siltation in urban areas, (f) establishment and operation of petrol and CNG stations, and (g) establishment and operation of brick kiln units.

A proponent of project in Balochistan which do not fall under Schedule I and II of the Balochistan Act is required to pay Rs. 25,000 as an environmental approval fee to the Balochistan EPA.43

(3) General Environmental Approval in KPK

Section 13(7) of the KPK Act requires proponent of a project not covered for IEE or EIA to obtain a “general environmental approval” in KPK in a manner prescribed in guidelines. However, no such guidelines have been prescribed by KPK for functioning of this provision.

D. Conclusion

This chapter has discussed different levels of assessments required for different projects in the European Union, the United States, and Pakistan. It also explored the methods and criteria used for screening process in these jurisdictions to determine whether a project or action requires an EIA. This is a preliminary fundamental step in an EIA process and ensures that EIA is strategically applied to projects with significant environmental implications. Accordingly, it is essential to discuss various approaches used by these jurisdictions for this preliminary step.

At the outset, two practices are common in all these jurisdictions. Firstly, they all require to conduct these assessments for projects or actions which are likely to have significant environmental effects. Secondly, these assessments must be conducted in project planning stage before commencing its construction and operations.

Among these jurisdictions, the European Union has two levels of assessments for different types of projects. Firstly, it provides an exhaustive list of projects in Annex I of the EIA Directive that mandatorily requires rigorous EIA in all its member state. It facilitates a simple, cohesive, uniform, and harmonized approach to EIA within all EU member states for Annex I projects. Secondly, it leaves certain projects, mentioned in Annex II of the EIA Directive, for discretion of its member states to decide whether they should be subject to the EIA process. Additionally, the European Union has also determined criteria, listed in Annex III of the EIA Directive, for each member state to be used for such determination. Accordingly, for Annex II projects, the European Union allows member states the flexibility and adaptability to determine the necessity of assessment for the projects with relatively less significant impacts than Annex I projects. The study of different levels of assessments for Annex II projects necessitates reviewing practices from different member states, which is out of scope of this thesis. Nonetheless, the EU’s approach seems to strike a balance between flexibility and oversight, allowing member states to tailor stricter assessments based on local conditions.

However, the United States has a different and complex legal structure under NEPA and its Regulations. It requires a mandatory obligation for the “federal agencies” to include EIS in their “major Federal actions” significantly affecting the quality of the human environment.44 Since the definition of major federal actions covers a vast spectrum of actions, the United States has four (4) levels of assessments for different actions. Firstly, many of its 435 federal agencies

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43 Section 15(17) of the Balochistan Act.
44 NEPA Regulations, sec. 1502.3; and NEPA, sec. 102(2)(C).
have identified their lists of categories of actions, known as CEs, that do not generally have significant effects on the human environment. Their actions falling under these categories are categorically excluded from any type of assessment in the United States. Secondly, if an action is not listed in CEs, it undergoes a less stringent process of the preparation of EA. Thirdly, based on EA, if an action is determined to have no significant effects on environment, a FONSI is prepared. Or otherwise, finally, the agency action is selected for preparing an EIS. It must be clarified that if an action is already known to have significant effects, it is directly selected for an EIS in the United States. Furthermore, the public participation and consultation is mandatory for all levels of assessments in the United States.

It must also be acknowledged that in the United States, only the federal actions that potentially have significant effects on the human environment are subject to these types of assessments. This framework potentially omits actions of state agencies from assessment and does not mandate uniform standards for state actions in the United States. However, many of the states in the United States have developed their own EIA laws and regulations, which may vary in stringency. For example, among these states, California and New York have stringent requirements for EIA. While recognizing these state-specific approaches is crucial, it is beyond the scope of this thesis due to length and time constraints.

On the other hand, Pakistan adopts an EIA system that exhibits similarities with both systems of the European Union and the United States. Mirroring the European Union, Pakistan provides respective lists of the projects subject to various approvals in Schedules of the Pakistani regulations. Furthermore, much like the United States, it determines three levels of assessments for projects based on their potential environmental effects.

Firstly, a project proponent is required to file an IEE with the relevant EPA to determine whether the project is likely to cause an adverse environmental effect. After submission of an IEE, the relevant EPA may accord an IEE approval or require submission of an EIA. This requirement parallels the functions of an EA in the United States, which determines whether to prepare FONSI if an action does not have adverse effects or to prepare an EIS otherwise. However, like European Union, Pakistan has listed the projects, in Schedules I of the Pakistani regulations, that are subject to a less stringent requirements of an IEE approval where consultation and public participation are not required.

Secondly, a proponent of a project, which is likely to cause an adverse environmental effect, is required to file an EIA with the relevant EPA and obtain an EIA approval. The Pakistani regulations have listed some of the projects with significant environmental effects in their Schedules II. These projects are subject to undergo a rigorous process of EIA that integrates consultation and public participation. After submission of an EIA, the relevant EPA is required to accord its approval with appropriate terms and conditions, or require its resubmission after modification, or reject the project being contrary to environmental objectives.

Thirdly, there are certain reporting requirements in three (3) provinces of Pakistan for small scale projects that generally do not have adverse environmental effects and are not covered under the scope of IEEs and EIAs approvals. In Sindh, a project proponent must conduct environmental screening and file an “environmental checklist” if the project is listed in Schedule III of the Sindh Regulations. Similarly, in Balochistan, a project proponent is required to file an “IEE Performa” if such project is listed in Schedule III of the Balochistan Regulations. Furthermore, in KPK, a project proponent is required to obtain a “general environmental approval” if such project is not covered for IEE or EIA approvals. There are, however, no
parallel requirements for the federal territory and the Punjab province. These reporting requirements bear resemblance to the functions of a CE in the United States that are used to exempt certain actions, which do not have any significant environmental effect, from any type of assessment.

It is also crucial to highlight that Schedules I of the Pakistani regulations have listed the projects that are subject to an IEE approval in ten (10) categories. On the other hand, Schedules II of the Pakistani regulations have enumerated the project requiring an EIA approval in nine (9) common categories. However, the scales and capacities of the projects within these categories are different. The projects with less capacity and scale are subject to the IEE approvals and the projects with the larger scale and capacity are subject to the EIA approvals. For instance, in Balochistan province, a hydroelectric power generation project with capacity of less than 100 MW is subject to an IEE approval and the same type of project with more than 100 MW capacity is subject to an EIA approval.

Furthermore, there are several variations within these IEE and EIA standards in Pakistan. For example, in all territories in Pakistan except Balochistan, the same hydroelectric power generation project with capacity of less than 50 MW is subject to an IEE approval and the same type of project with over 50 MW capacity is subject to an EIA approval. However, since the Federal Regulations are applicable to the federal territory as well as Punjab and KPK provinces, these three territories have similar standards for IEE and EIA projects. On the other hand, Sindh and Balochistan have their own respective standards for these projects under their respective regulations.

It is pertinent to note that the list of projects in Pakistan that necessitate an EIA is not as comprehensive as the European Union's list. Pakistan does not specifically include, among others, nuclear power stations, electrical power lines, and storage sites that are explicitly mentioned in list of the European Union.

The above discussion is necessary to elaborate different approaches and criteria used in the screening process as a preliminary step in an EIA process. This ensures that EIA is strategically applied to projects with significant environmental implications, ensuring resource optimization.
Chapter X: EIA Process in the European Union, the United States, and Pakistan

This chapter elaborates various stages of the EIA processes of the European Union, the United States, and Pakistan. This is essential to establish core components of EIA and to show that EIA is a comprehensive mechanism that incorporates the environmental components, obligations, rights, and principles within its various stages. This sets the stage for comparative analysis of the EIA stages for the next two (2) chapter.

A. European Union

In the European Union, EIA is defined as a process consisting of five (5) stages: (i) preparation of an EIA report by the developer; (ii) carrying out the consultations and public participation; (iii) examination by the competent authority of the information in the EIA report, supplementary information, and any other relevant information received; (iv) reasoned conclusion by the competent authority on the significant environmental effects of the project, taking into account the results of the examination and, where appropriate, its own supplementary examination; and (v) integration of the reasoned conclusion into the decision to grant development consent.\(^1\) This process is generally handled by the local authority designated by each member states for performing duties arising from the EIA Directive. Such an authority is known as “competent authority”.\(^2\)

The five (5) stages of EIA process in the European Union are highlighted in Chart 10.1 and discussed in detail as follows:

1. Preparing and Submitting EIA Report

The developer is required to prepare and submit EIA report. This report must include the information that may reasonably be required for reaching a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment.\(^3\)

In order to ensure the completeness and quality of EIA report, the developer must ensure that EIA report is prepared by competent experts.\(^4\) Further, the competent authority must ensure that it has, or has access to, sufficient expertise to examine EIA report and, where necessary, it must seek from the developer supplementary information, in accordance with Annex IV of the EIA Directive, which is directly relevant to reaching the reasoned conclusion on the significant effects of the project on the environment.\(^5\)

A developer may also require the competent authority to give an opinion on the scope and level of detail of the information to be included in EIA report. Before it gives its opinion, the competent authority must consult the authorities that are likely to be concerned by the project by reason of their specific environmental responsibilities or local and regional competences.\(^6\)

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\(^1\) EIA Directive, Article 2(g).
\(^2\) Id. Article 1(2)(f).
\(^3\) Id. art. 5(1).
\(^4\) Id. art.5(3).
\(^5\) Id.
\(^6\) Id. art. 5(2).
2. Consultations and Public Participation

In the European Union, the public participation and consultations with the concerned authorities and the affected member states is simultaneously handled:

(1) Consultation with the Concerned Authorities

After submission of an EIA report, the authorities that are likely to be concerned by the project by reason of their specific environmental responsibilities or local and regional competences (the “concerned authorities”) are given an opportunity to express their opinion on the information supplied by the developer. To that end, the member states are required to lay down the detailed arrangements for consultation and to designate the concerned authorities to be
consulted, either in general terms or on a case-by-case basis. In this regard, the reasonable timeframes for different phases must be provided to allow sufficient time to the authorities to prepare and participate effectively in the environmental decision-making.

(2) Public Participation

Simultaneously, the public is informed electronically, by public notices, and by other appropriate means about: (a) the request for development consent; (b) the fact that the project is subject to an EIA procedure; (c) details of the competent authorities responsible for taking the decision, those from which relevant information can be obtained, those to which comments or questions can be submitted, and details of the time schedule for transmitting comments or questions; (d) the nature of possible decisions or, where there is one, the draft decision; (e) an indication of the availability of the information provided by the developer; (f) times, places and means by which, the relevant information will be made available; and (g) details of the arrangements for public participation.

Thereafter, concerned public is given effective opportunities to participate in the environmental decision-making and is entitled to express comments and opinions before the decision on the request for development consent is taken. The timeframes for consulting the public cannot be shorter than 30 days. In this regard, the reasonable timeframes for different phases must be provided for allowing sufficient time to the public concerned to prepare and participate effectively in the environmental decision-making.

(3) Participation of and Consultation with the Affected Member States

Where a project is likely to have significant effects on the environment of another member state (the “affected member state”), the member state is required to provide the information consisting of project description, possible transboundary impact of the project, and nature of decision which may be taken, to the affected member state. This must be done no later than when a member state informs its own public during public participation stage. The affected member state is given a reasonable time to decide if it wishes to participate in EIA process.

If the affected member state wishes to participate in the process, the list of information – provided in above public participation stage – is also made available to affected member state. Thereafter, the affected member state is also required to make the same information available to its own authorities and public within a reasonable time. The affected member state must also ensure that its public and concerned authorities have an opportunity to forward their opinion on the information to the competent authority in the member state in whose territory the project is intended to be carried out.

In addition, the ‘concerned member states’ are also required to enter into consultations regarding the potential transboundary effects of the project and the measures envisaged to

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7 Id. art. 6(1).
8 Id. art. 6(6).
9 Id. art. 6(2).
10 Id. art. 6(4).
11 Id. art. 6(7).
12 Id. art. 6(6).
13 Id. art. 7(1).
14 Id. art. 7(2).
15 Id. art. 7(3).
reduce or eliminate such effects. They must also agree on a reasonable timeframe for the duration of the consultation period and such consultations may also be conducted through an appropriate joint body.16

3. Examination of the Information

During this stage of EIA, the competent authority examines the information contained in the EIA report, supplementary information, the results of consultation, and the information gathered during the previous consultations and public participation stage.17

(iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and

4. Development Consent based on the Reasoned Conclusion

After the examination, the development of project may be allowed or refused. The decision to grant development consent must incorporate, at least, the reasoned conclusion, environmental conditions attached to the decision, a description of any features of the project, and measures envisaged to avoid, prevent or reduce and, if possible, offset its significant adverse effects on the environment as well as, where appropriate, monitoring measures.18 On the other hand, the decision to refuse development consent must state the main reasons for its refusal.19 The member states are required to ensure that the competent authority takes such decisions within a reasonable period of time.20

5. Integration of Reasoned Decision

The member states are required to ensure that the features of the project and/or measures envisaged to avoid, prevent, or reduce and, if possible, offset significant adverse effects on the environment are implemented by the developer. They are further mandated to determine the procedures regarding the monitoring of significant adverse effects on the environment.21 The type of parameters to be monitored and the duration of the monitoring must, however, be proportionate to the nature, location and size of the project and the significance of its effects on the environment.22

When a decision to grant or refuse development consent is taken, the competent authority must promptly inform the public and the concerned authorities, in accordance with their national procedures, about the following information: (a) the content of the decision and its conditions; (b) the main reasons and considerations on which the decision is based, including information about the public participation process; and (c) the summary of the results of consultations and information gathering, and how those results have been incorporated or addressed.23 Furthermore, the competent authority or authorities must inform and forward this information

16 Id. art. 7(4).
17 Id. art. 1(2)(g)(iii) & 8.
18 Id. art. 8a(1).
19 Id. art. 8a(2).
20 Id. art. 8a(5).
21 Id. art. 8a(4).
22 Id. art. 8a(4).
23 Id. art. 9(1).
to any member state which has been consulted, and such member states must also ensure that that information is made available to its public in an appropriate manner.24 Accordingly, an EIA process comes to an end in the European Union.

B. United States

It is essential to briefly reiterate different levels of assessments in the United States discussed in the last chapter. If a proposed action falls in the list of categories identified for categorical exclusions (CEs), it is excluded from any type of environmental assessment in the United States. However, the federal agencies are required to prepare an EA if a proposed action is not ‘likely’ to have significant effects or when the significance of its effects is ‘unknown’. Based on EA, if it is determined that the proposed action does not have significant environmental effects, a FONSI is prepared. Otherwise, based on EA, if a proposed action is determined to be major federal action significantly affecting the quality of the human environment, EIS is prepared. Furthermore, if a major federal action is already known to significantly affect the environment, EIS is prepared without preparing an EA.

The regulatory requirements for an EIS are more detailed and rigorous than requirements for an EA. The detailed steps for different types of environmental assessments in the United States are highlighted in Chart 10.2 and below:

1. Lead and Cooperating Agencies

In the EIS process, the first step is determining two types of agencies involved, namely lead and cooperating agencies.

When multiple federal agencies are involved in a proposed action or are considering funding or permitting it, one agency is determined as the “lead agency” to supervise EIS preparation.25 There can also be ‘joint lead agencies’ for certain actions.26 On the other hand, “cooperating agencies” are other federal, state, tribal, or local agencies that have “jurisdiction by law” or possess “special expertise” with respect to any environmental issues.27 An agency can request the lead agency to designate it as a cooperating agency and, if denied, may appeal to CEQ.28

The potential lead agencies must promptly determine, by letter or memorandum, which agency will serve as the lead agency, and which will act as cooperating agencies. If there is disagreement among the agencies, the decision is based on following factors (with descending importance): (i) magnitude of agency's involvement, (ii) project approval or disapproval authority, (iii) expertise concerning the action's environmental effects, (iv) duration of agency's involvement, and (v) sequence of agency's involvement.29
Chart 10.2: Processes of Environmental Assessments in the United States

Major Federal Action

- **NO significant environmental effects**
  - Categorical Exclusion
  - Evaluate for Extraordinary Circumstances

- **“likely” or “unknown” significant environmental effects**
  - Environmental Assessment (EA)
    - (provides sufficient evidence and analysis for determining whether to prepare EIS or FONSI)
  - Selection of Lead and Cooperating Agency
    - based on EA, if the agency determines to prepare EIS
  - Finding Of No Significant Impact (FONSI)
    - (based on EA, if the action does not have significant effects and EIS is not needed)
  - Public Review
    - (for 30 days before making final determination on preparing EIS)

- **YES significant environmental effects**
  - Environmental Impact Statement (EIS)
  - Selection of Lead and Cooperating Agency
  - Scoping
    - (with agency and public participation)
      - (a) determines scope of issues for analysis;
        - (b) identifies significant issues by elimination;
        - (c) invites participation of other agencies, governments, proponent, and likely affected or interested persons
  - Notice of Intent
    - In the Federal Register to prepare EIS
  - Draft EIS
    - Must be: (a) in accordance with the scope; and (b) published and transmitted to other agencies, governments, proponent, and likely affected or interested persons
  - Commenting and Public Participation
    - Request, analyze and publish comments from:
      - (a) federal agencies with jurisdiction or special expertise;
      - (b) state, tribal and local agencies affected or authorized to develop and enforce environmental standards;
      - (c) the applicant (if any); and
      - (d) interested or affected public or organizations
  - Supplemental EIS
    - Only if a major federal action remains to occur; and (i) substantial changes to the proposed action, or (ii) significant new circumstances or information.
  - Final EIS
    - Must: (a) discuss responsible opposing views that were not adequately discussed in Draft EIS;
      - (b) address comments with its responses; and (c) publish and transmit the entire final EIS.
  - Decision
    - Must prepare and timely publish a concise public or joint record of decision.

Diagram Key

-☐ Process
-☐ Preparation
-☐ Decision
-☐ Document
Any agency or private person substantially affected by the absence of lead agency designation, is authorized to make a written request to the senior agency officials of the potential lead agencies to designate lead agency. 30 If federal agencies are unable to agree on the lead agency or if it has not been designated within 45 days, any of the agencies or persons concerned may file a request with CEQ for determination of the lead agency. 31 Any potential lead agency may file a response within twenty (20) days after a request is filed with CEQ. Thereafter, CEQ is required to determine the lead and cooperating agencies within next twenty (20) days after receiving the request and all responses to it. 32

A lead agency has a number of obligations, including: (a) to request participation of each cooperating agency in the NEPA process at the earliest practicable time; (b) to use the environmental analysis and proposals of cooperating agencies to the maximum extent practicable; (c) to meet with a cooperating agency at its request; (d) to determine the purpose, need, and alternatives in consultation with any cooperating agency; 33 (e) to develop a schedule, setting milestones for all environmental reviews and authorizations required for implementation of the action, in consultation with any applicant and all joint lead, cooperating, and participating agencies, as soon as practicable; 34 and (f) to notify the responsible agencies, and as soon as practicable, if the lead agency anticipates that a milestone will be missed. 35

On the other hand, each cooperating agency has various obligations, including (a) to participate in the NEPA process at the earliest practicable time and the scoping process; (b) to develop information and preparing environmental analyses, including portions of an EIS or EA, on request of the lead agency; (c) to make available staff support to the lead agency on its request; (d) normally use its own funds; (e) consult with the lead agency in developing the schedule; (f) meet schedule for providing comments and limit its comments to those matters for which it has jurisdiction by law or special expertise with respect to any environmental issue; and (g) to the maximum extent practicable, jointly issue environmental documents with the lead agency. 36

2. Scoping

The agencies use an early and open process to determine the scope of issues for analysis in an EIS, including identifying the significant issues and eliminating non-significant issues from further study. This process is called scoping. “Scope” is defined to consist of “range of actions, alternatives, and impacts to be considered in an [EIS]”. 37 This process begins after the proposal for action is sufficiently developed for agency consideration and includes work conducted prior to publication of the notice of intent. 38

As part of this scoping process, the lead agency invites the participation of likely affected agencies and governments, the proponent of the action, and other likely affected or interested persons. 39 The lead agency may also hold scoping meetings, publish scoping information, or

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30 Id. sec. 1501.7(d).
31 Id. sec. 1501.7(e).
32 Id. sec. 1501.7(f).
33 Id. sec. 1501.7(h).
34 Id. sec. 1501.7(i).
35 Id. sec. 1501.7(j).
36 Id. sec. 1501.8(b).
37 Id. sec. 1508.1(cc).
38 Id. sec. 1501.9 (a).
39 Id. sec. 1501.9(b).
use other means to communicate with those persons or agencies who may be interested or affected.\(^{40}\)

As part of the scoping process, the lead agency determines the ‘scope’ and the ‘significant’ issues to be analyzed in depth in EIS.\(^{41}\) To determine the scope of EIS, agencies consider three things: (a) connected or closely related actions to be discussed in the EIS;\(^{42}\) (b) alternatives, which include the no action alternative, other reasonable courses of action, and mitigation measures (not in the proposed action); and (c) impacts.\(^{43}\) To determine the significant issues, the lead agency identifies and eliminates issues that are not significant or have been covered by prior environmental review(s), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.\(^{44}\)

During this process, the lead agency also allocates assignments for preparation of EIS among the lead and cooperating agencies, with the lead agency retaining responsibility for EIS.\(^{45}\) It also indicates any other EIS that are being or will be prepared and are related to but are not part of the scope of the EIS,\(^{46}\) and identifies other environmental review, authorization, and consultation requirements.\(^{47}\) In addition, the lead agency also indicates the timing of environmental analyses and the agencies' tentative planning and decision-making schedule.\(^{48}\)

An agency is required to “revise” the scoping process “if substantial changes are made later in the proposed action, or if significant new circumstances or information arise which bear on the proposal or its impacts”.\(^{49}\)

3. Notice of Intent

Once a lead agency determines that a proposal is sufficiently developed to allow for meaningful public comments and requires an EIS, it publishes a notice of intent to prepare an EIS in the U.S. Federal Register, for public involvement.\(^{50}\) The notice includes: (1) the purpose and need for the proposed action; (2) a preliminary description of the proposed action and alternatives EIS will consider; (3) a brief summary of expected impacts; (4) anticipated permits and other authorizations; (5) a schedule for the decision-making process; (6) a description of the public scoping process, including any scoping meeting(s); (7) a request for identification of potential alternatives, information, and analyses relevant to the proposed action; and (8) contact information for a person within the agency who can answer questions about the proposed action and EIS.\(^{51}\)

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\(^{40}\) Id. sec. 1501.9(c).

\(^{41}\) Id. sec. 1501.9(e).

\(^{42}\) Actions are connected if they:
(i) Automatically trigger other actions that may require environmental impact statements;
(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously; or
(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

\(^{43}\) NEPA Regulations, sec. 1501.9(e).

\(^{44}\) Id. sec. 1501.9(f)(1).

\(^{45}\) Id. sec. 1501.9(f)(2).

\(^{46}\) Id. sec. 1501.9(f)(3).

\(^{47}\) Id. sec. 1501.9(f)(4).

\(^{48}\) Id. sec. 1501.9(f)(5).

\(^{49}\) Id. sec. 1501.9(g).

\(^{50}\) Id. sec. 1501.9(d).

\(^{51}\) Id. sec. 1501.9(d).
4. Draft EIS

The agencies prepare draft EISs in accordance with the scope decided upon in the scoping process. To the fullest extent practicable, the draft EISs must meet the requirements established for final EISs. The agency must discuss all major points of view on the environmental impacts of the alternatives including the proposed action.52

The draft EIS must include a summary that identifies all alternatives, information, and analyses submitted by the state, tribal, and local governments and other public commenters during the scoping process for consideration in developing EIS.53 The agency must append to the draft EIS or otherwise publish all comments (or their summaries) received during the scoping process that identified alternatives, information, and analyses for its consideration.54 The lead agency is also required to invite comments on the summary identifying all submitted alternatives, information, and analyses in the draft EIS.55

The agencies are required to publish the entire draft EIS and unchanged statements. They also must transmit the entire statement electronically or in paper copy to any federal or other agency, the applicant, if any, and any person, organization, or agency requesting it.56

The agencies are also required to prepare supplements to draft EISs if a major federal action remains to occur, and (i) the agency makes substantial changes to the proposed action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.57 The agencies are required to prepare, publish, and file a supplement to such draft EIS as is appropriate to the stage of the statement involved, unless CEQ approves alternative procedures.58

5. Commenting and Public Participation

After preparing a draft EIS, the lead agency is required to obtain comments of any federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved or is authorized to develop and enforce environmental standards.59 The lead agency is also required to request comments from the appropriate state, tribal and local agencies affected by the proposed action or authorized to develop and enforce environmental standards; the applicant (if any); and the interested or affected public or organizations by the proposed action.60 These comments are invited specifically on the submitted alternatives, information, and analyses.61 A lead agency is required to provide a platform for electronic submission of public comments, with reasonable measures to ensure the comment process is accessible to affected persons.62

52 Id. sec. 1502.9(b).
53 Id. sec. 1502.17(a).
54 Id. sec. 1502.17(a)(1).
55 Id. sec. 1502.17(a)(2).
56 Id. sec. 1502.20.
57 Id. sec. 1502.9 (d)(1).
58 Id. sec. 1502.9 (d)(3).
59 Id. sec. 1503.1(a)(1).
60 Id. sec. 1503.1(a)(2).
61 Id. sec. 1503.1(a)(3).
62 Id. sec. 1503.1(c).
The cooperating and other authorized agencies have duty to comment on statements within their jurisdiction, expertise, or authority within the time specified for comment. A federal agency may respond that it has no comment, and if a cooperating agency is satisfied that EIS adequately reflects its views, it may also reply that it has no comment.\(^63\)

An agency preparing a final EIS must consider substantive comments timely submitted during the public comment period. Through the agencies are not required to respond to each comment, they may respond to individual comments or groups of comments.\(^64\) In the final EIS, the agency may respond by: (1) modifying alternatives including the proposed action, (2) developing and evaluating alternatives not previously given serious consideration by the agency, (3) supplementing, improving, or modifying its analyses, (4) making factual corrections, or (5) explaining why the comments do not warrant further agency response.\(^65\)

An agency must append or otherwise publish all substantive comments received on the draft EIS (or summaries thereof where the response has been exceptionally voluminous).\(^66\) If changes in response to comments are minor and are confined to the responses, an agency may write any changes on errata sheets and attach the responses to the statement instead of rewriting the draft EIS. In such cases, only the comments, the responses, and the changes – and not the final EIS – need be published. The agency must file the entire document with a new cover sheet with the EIS as the final statement.\(^67\)

6. Final EIS

The final EIS must include a summary that identifies all alternatives, information, and analyses submitted by the state, tribal and local governments and other public commenters for consideration in developing the final EIS.\(^68\) At appropriate points in the final EIS, the agency must discuss any responsible opposing view that was not adequately discussed in the draft EIS and must address comments with its responses to the issues raised.\(^69\)

The agencies are required to publish the entire final EIS and unchanged statements. They also must transmit the entire statement electronically or in paper copy to any federal or other agency, the applicant, and any person, organization, or agency requesting the entire EIS.\(^70\) Final EIS must also be transmitted to any person, organization, or agency that submitted substantive comments on the draft.\(^71\) An agency may request comments on a final EIS before the final decision and set a deadline for providing such comments.\(^72\)

7. Supplemental EISs

The agencies are required to prepare supplements to draft and final EISs if a major federal action remains to occur, and (i) the agency makes substantial changes to the proposed action that are relevant to environmental concerns; or (ii) there are significant new circumstances or

\(^{63}\) Id. sec. 1503.2.
\(^{64}\) Id. sec. 1503.4(a).
\(^{65}\) Id. sec. 1503.4(a).
\(^{66}\) Id. sec. 1503.4(b).
\(^{67}\) Id. sec. 1503.4(c).
\(^{68}\) Id. sec. 1502.17(b).
\(^{69}\) Id. sec. 1502.9 (c).
\(^{70}\) Id. sec. 1502.20.
\(^{71}\) Id. sec. 1502.20(d).
\(^{72}\) Id. sec. 1503.1(b).
information relevant to environmental concerns and bearing on the proposed action or its impacts. The agencies may also prepare supplements when the agency determines that the purposes of NEPA will be furthered by doing so.

The agencies are required to prepare, publish, and file a supplement to final EIS as is appropriate to the stage of the statement involved, unless CEQ approves alternative procedures. The agencies may find that changes to the proposed action or new circumstances or information relevant to environmental concerns are not significant and therefore do not require a supplement. The agency should document the finding consistent with its agency NEPA procedures, or, if necessary, in a FONSI supported by an EA.

8. Decision

At the time of its decision, each agency must prepare and timely publish a concise public or joint record of decision. This record must: (a) state the decision; (b) identify alternatives considered by the agency in reaching its decision, specifying the alternatives considered environmentally preferable; and (c) state whether the agency has adopted all practicable means to avoid or minimize environmental harm from the alternative selected, and if not, why the agency did not. The decision maker certifies in the record of decision that the agency has considered all of the alternatives, information, analyses, and objections submitted by state, tribal, and local governments and public commenters in developing EIS.

It must be noted that the agencies are required to complete an EIS within two (2) years unless a senior agency official of the lead agency approves a longer period. This time is measured from the date of the issuance of the notice of intent.

9. Monitoring and Implementation

The agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases. Mitigation and other conditions established in EIS or during its review and committed as part of the decision are implemented by the lead or other appropriate consenting agency. The lead agency must: (a) include appropriate conditions in grants, permits, or other approvals; (b) condition funding of actions on mitigation; (c) upon request, inform cooperating or participating agencies on progress in carrying out mitigation measures that they have proposed and were adopted by the agency making the decision; and (d) upon request, publish the results of relevant monitoring.

C. Pakistan

It is essential to reiterate that there are five (5) territories in Pakistan with their own environmental laws, namely the Federal Act, the Punjab Act, the Sindh Act, the KPK Act, and the Balochistan Act (collectively, the “Pakistani laws”). These laws are applicable within their

73 Id. sec. 1502.9 (d)(1).
74 Id. sec. 1502.9 (d)(2).
75 Id. sec. 1502.9 (d)(3).
76 Id. sec. 1502.9 (d)(4).
77 Id. sec. 1505.2(d).
78 Id. sec. 1505.2(b).
79 Id. sec. 1501.10(b)(2).
80 Id. sec. 1505.3.
respective territories and provide similar obligations for project proponents to obtain two (2) environmental approvals, namely IEE and EIA approvals (the “Pakistani approvals”). Each of the Pakistani laws establish an EPA to govern within its territorial jurisdiction and empower it to issue these approvals.

In addition, two of the provinces, Sindh and Balochistan, have adopted their own regulations that provide procedural frameworks concerning the Pakistani approvals within these provinces. However, Punjab and KPK have extended the applicability of the Federal Regulations to their provinces. Consequently, the Federal Regulations are applicable in the federal territory as well as Punjab and KPK provinces. These three regulations, namely the Federal Regulations, the Sindh Regulations, and the Balochistan Regulations (collectively, the “Pakistani regulations”), provide the lists of projects and procedural framework for obtaining the Pakistani approvals within their areas of jurisdiction.

Under the Pakistani laws and regulations, the procedure for obtaining both the Pakistani approvals is broadly consistent across different territories, with slight variations. Furthermore, the criteria for obtaining an EIA approval are more stringent than for an IEE approval, particularly because the EIA process incorporates public participation and consultation. Apart from this distinction, the procedures for both approvals remain largely identical. A comprehensive breakdown of the steps to obtain these approvals in Pakistan can be found in Chart 10.3 and is elaborated further below:

**1. Screening**

Before starting process to obtain any of the Pakistani approvals, a project proponent must determine three aspects: (a) the relevant Pakistani laws and regulations for the project, (b) the specific EPA authorized to grant the approval, and (c) the type of approval (IEE or EIA) needed for the project.

Since the applicability of the Pakistani laws and regulations is territorial based, the location of the project plays essential role for determining first two aspects. Specifically, there could only be following instances:

1. A federally located project is governed by the Federal Act and the Federal Regulations, and the Federal EPA is empowered to issue an IEE or EIA approval for it.

2. A Punjab-based project is governed by the Punjab Act and the Federal Regulations, and the Punjab EPA is empowered to issue an IEE or EIA approval for it.

3. A KPK-based project is governed by the KPK Act and the Federal Regulations, and the KPK EPA is empowered to issue an IEE or EIA approval for it.

4. A Sindh-based province is governed by the Sindh Act and the Sindh Regulations, and the Sindh EPA is empowered to issue an IEE or EIA approval for it.

5. A Balochistan-based project is governed by the Balochistan Act and the Balochistan Regulations, and the Balochistan EPA is empowered to issue an IEE or EIA approval for it.
Chart 10.3: Process for IEE and EIA Approvals in Pakistan

Proposed Project

IEE in Pakistan
(Schedule I of the Regulations)

Preparation of IEE Report

Application for IEE Approval

Preliminary Scrutiny by EPA

IEE Review

Decision

Monitoring and Compliance

EIA in Pakistan
(Schedule II of the Regulations)

Preparation of EIA Report

Application for EIA Approval

Preliminary Scrutiny by EPA

Public Participation and Consultation

EIA Review

Decision

Monitoring and Compliance
Once the applicable regulations and responsible EPA are identified based on location of the project, the next step is to determine whether the project needs an IEE or EIA approval. As highlighted in the last chapter, Schedules I of the Pakistani regulations provide a list of the projects for an IEE approval, while Schedules II specify the projects for an EIA approval. Accordingly, a project proponent must consult the entries in these Schedules to determine the correct approval. However, it must be clarified that even if a project does not fall under any of the Schedules, its proponent is required to obtain an EIA approval if the project is likely to cause an adverse environmental effect or is in an environmentally sensitive area. A detailed comparison of the categories and projects for IEE and EIA approvals is already provided in last chapter and Appendix G.

Although the Schedules in the Pakistani regulations have clearly specified the categories and lists of the projects requiring these approvals, there remains a significant confusion as to which approval must be obtained if the project falls under multiple entries. This confusion is clarified by the Pakistani courts. They have held that if a project comprises of multiple components that, if considered separately, may come within the scope of different approvals, then the project as a whole must be tested on and held to more stringent standard of EIA – even if it is more onerous and imposes a greater burden or inconvenience on the proponents.81 The courts emphasize that the legislative intent behind these approvals is to protect, conserve, rehabilitate, and improve the environment and it is better to caution and test the project on more stringent standards.

2. Preparation of Reports

Once the type of approval needed for the project is determined, the next question is preparation of the respective report for the approval.

All EPAs are authorized to issue guidelines for preparation of IEE and EIA reports, including guidelines of general applicability and sectoral guidelines indicating specific assessment requirements for planning, construction, and operations of projects.82 These guidelines cannot be departed from without any justification.83 However, EPAs have not issued any of such guidelines and there are no other provisions in the Pakistani laws and regulations specifying the criteria for preparation of IEE and EIA reports. In practice, since project proponents are required to obtain the approvals, they seek assistance of experts to prepare and submit IEE and EIA reports to the respective EPAs.

In Balochistan province, its EPA is specifically required to register consultants with certain qualifications and experience for conducting IEEs and EIAs.84 However, only the project proponent is competent to prepare IEE and EIA reports for their approval.85 The license of a consultant is renewed annually by the Balochistan EPA. In case of any violation of the license or issued guidelines, the Balochistan EPA is required to cancel the registration and the license, ban such consultant for a period of three (3) to five (5) years, and forfeit his security.86 Though,

81 Pakistan Defence Officers Housing Authority vs. Federation of Pakistan, 2014 CLD 1279, para 18; and Shehri-CBE vs. Sindh Environmental Protection Agency, 2010 CLD 859 [Sindh Tribunal].
82 Regulation 6 of the Federal Regulations, and Regulation 7 of the Sindh Regulations and Balochistan Regulations.
83 Id.
84 Regulation 23(1) of the Balochistan Regulations.
85 Id.
86 Id.
the Balochistan EPA must grant an opportunity of hearing to the license holder before issuing a cancellation order.\textsuperscript{87} An aggrieved person may file an appeal within 30 days of such an order before the Balochistan Government.\textsuperscript{88}

3. Application for Approval

Once the report is prepared, the project proponent is required to submit an application for the respective approval to the concerned EPA.

For both approvals, this application must be accompanied by the IEE or EIA report as well as the receipt for payment of a non-refundable “review fee”.\textsuperscript{89} Additionally, for an EIA approval in Sindh and Balochistan provinces, the proponent must also submit a “no objection certificate” from their provincial departments.\textsuperscript{90}

Notably, the formalities for submitting this application manifest disparities across different Pakistani territories. For instance, in Balochistan, only an electronic copy of an IEE or EIA report must be filed with the Balochistan EPA.\textsuperscript{91} However, in all other Pakistani territories, ten (10) hard copies and two (2) electronic copies of IEE or EIA report must be filed with the respective EPAs.\textsuperscript{92}

Similarly, the payment of review fee varies across different territories. A comparison of this fee is delineated in \textbf{Chart 10.4:}

\begin{center}
\textbf{Chart 10.4: Comparison of Review Fee for IEE and EIA Approvals in Pakistan}
\end{center}

\begin{center}

\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Pakistani Approvals} & \textbf{Federal Territory, Punjab Province, and KPK Province} & \textbf{Sindh Province} & \textbf{Balochistan Province} \\
 & (Schedule III of the Federal Regulations) & (Schedule IV of Sindh Regulations) & (Section 15(16) of the Balochistan Act) \\
\hline
\textbf{IEE} & Rs. 10,000 (projects with cost between 5 to 10 million) & Rs. 100,000 & Rs. 50,000 \\
 & Rs. 15,000 (projects with cost above 10 million) & & \\
\hline
\textbf{EIA} & Rs. 15,000 (projects with cost between 5 to 10 million) & Rs. 200,000 & Rs. 100,000 \\
 & Rs. 30,000 (projects with cost above 10 million) & & \\
\hline
\end{tabular}
\end{center}

\textsuperscript{87} Id.
\textsuperscript{88} Regulation 23(2) of the Balochistan Regulations.
\textsuperscript{89} Regulation 8 of the Federal Regulations and Regulation 9 of the Sindh and Balochistan Regulations.
\textsuperscript{90} Regulation 8 of the Federal Regulations and Regulation 9 of the Sindh and Balochistan Regulations.
\textsuperscript{91} Regulation 9 of the Balochistan Regulations.
\textsuperscript{92} Regulation 8 of the Federal Regulations and Regulation 9 of the Sindh Regulations.
4. Preliminary Scrutiny by EPAs

Once an application for approval is filed, EPAs must conduct a preliminary scrutiny of the application and the documents filed with it and issue a “confirmation of completeness” (the “confirmation”).

At this stage, EPAs must confirm that the application is complete for initiation of the review process, or require the project proponent to submit additional information, or return the application for revision clearly listing the points for further study and examination.93 In Sindh and Balochistan provinces, EPAs are obliged to provide the confirmation within fifteen (15) days of filing the application. Conversely, for the remaining Pakistani territories, the stipulated timeframe is within (10) “working” days.94

5. Review by EPAs

After the issuance of the confirmation, the review processes for both IEE and EIA approvals are different. However, some of the requirements for both IEE and EIA reviews are similar.

For instance, for both reviews, the Balochistan EPA is ‘authorized’ to consult an internal Committee of Experts where an “expert opinion is required”.95 However, in other Pakistani territories, the respective EPAs are ‘required’ to consult with an internal “Committee of Experts”.96 Moreover, they may also solicit views of an “Advisory Committee” constituted by the respective governments.97

Similarly, IEE and EIA review must be based on “quantitative and qualitative assessment” of the documents and data furnished by the proponent, comments from the public and government agencies, and views of the committees, where available.98 Furthermore, EPAs must in the first instance look at the environmental impacts of a project before considering its cost.99

The different requirements for these reviews are discussed below:

(1) IEE Review

In case of an IEE, once EPAs have reviewed the documents in line with above requirements, they may accord their IEE approval or require the submission of an EIA by the proponent.100 They do not need to undergo any public participation or further consultation with any of the government agencies.

93 Regulation 9(1) of the Federal Regulations, and Regulation 10(1) of the Sindh and Balochistan Regulations.
94 Regulation 9(1) of the Federal Regulations, and Regulation 10(1) of the Sindh and Balochistan Regulations.
95 Regulation 12(2) of the Balochistan Regulations.
96 Regulation 11(2) of the Federal Regulations and Regulation 12(2) of the Sindh Regulations. [The DG of EPA is authorized to constitute a committee to inspect the site of the project and submit its report on specific matters (See Regulation 11(3) of the Federal Regulations and Regulation 12(3) of the Sindh and Balochistan Regulations). In addition to this, DG of the Sindh EPA may constitute a committee of officers from within the Sindh EPA on case to case basis to extend final recommendations about the approval or rejection of an IEE, or may direct the proponent of a project to present any report, or may invite environmental experts for its assistance (See Regulation 12(4) & (5) of the Sindh Regulations)]
97 Regulation 11(2) of the Federal Regulations and Regulation 12(2) of the Sindh Regulations.
98 Regulation 11(4) of the Federal Regulations and Regulation 12(6) of the Sindh and Balochistan Regulations.
99 Director-General EPA vs. RB Poultry Farm, 2018 CLD 1484 [Punjab Tribunal].
100 Section 12(2)(a) of the Federal Act and Punjab Act, Section 17(2)(a) of the Sindh Act, Section 13(2)(a) of the KPK Act and Section 15(2)(a) of the Balochistan Act.
In Balochistan, its EPA is specifically required to carry out IEE review within 45 days from issuance of the confirmation.\(^\text{101}\) In the remaining Pakistani territories, EPAs are required to “make every effort” to carry out their IEE reviews within 45 days – within 60 days in case of Sindh – from issuance of the confirmation.\(^\text{102}\)

(2) EIA Review

In case of an EIA approval, EPAs are required to undergo a process of public participation and consultation with concerned government agencies.

Firstly, every EIA is required to be carried out with public participation, subject to confidentiality of the information concerning trade, business, process or techniques, international relations, national security, maintenance of law and order, and legal professional privilege.\(^\text{103}\) However, in case of Sindh, EIAs are carried out with public participation after full disclosure of the particulars of the project.\(^\text{104}\) EPAs are empowered to issue guidelines indicating the basic techniques and measures to ensure effective public consultation, involvement and participation in EIA assessment.\(^\text{105}\)

In case of an EIA, simultaneously with the confirmation, EPAs are required to publish a public notice mentioning the type of project, its exact location, the name and address of the proponent, and the places at which the EIA of the project can be accessed.\(^\text{106}\) This notice must be published in any national newspaper as well as a local newspaper having circulation in the area affected by the project.\(^\text{107}\) This notice must fix a date, time and place after at least thirty (30) days – or after fifteen (15) days in case of Sindh – for public hearing of any comments on the project or its EIA.\(^\text{108}\)

In Sindh and Balochistan, the proponent of the project is required to submit documentary evidence of public hearings in soft copies to the respective EPA at the time of environmental approval or at any stage of review process.\(^\text{109}\) In Balochistan, the proponent or consultant of the project may also be asked to make a presentation of the project during the review process of IEE or EIA.\(^\text{110}\)

Secondly, EPAs are required to ensure circulation of the EIA to the concerned “government agencies” and solicit their comments thereon.\(^\text{111}\) But the Balochistan EPA does not have such obligation and may only do so if it deems it necessary.\(^\text{112}\) It is essential to highlight that Punjab,

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101 Regulation 12 (1) of the Balochistan Regulations.
102 Regulation 11(1) of the Federal Regulations and Regulation 12 (1) of the Sindh Regulations.
103 The Director General of EPAs are authorized to deny the request for confidentiality if it is not well founded or the public interest in the disclosure outweighs the possible prejudice to the competitive position of the project. Section 12(3) of the Federal Act and Punjab Act, Section 17(3) of the Sindh Act, Section 13(3) of the KPK Act and Section 15(3) of the Balochistan Act.
104 Section 17(3) of the Sindh Act.
105 Regulation 10(6) of the Federal Regulations and Regulation 11(6) of the Sindh and Balochistan Regulations.
106 Regulation 10(1) of the Federal Regulations, and Regulation 11(1) of the Sindh and Balochistan Regulations.
107 Id.
108 Regulation 10(2) & (3) of the Federal Regulations, and Regulation 11(2)&(3) of the Sindh and Balochistan Regulations.
109 Regulation 13(1) of the Sindh Regulations and Regulation 12(8) of the Balochistan Regulations.
110 Regulation 12(5) of the Balochistan Regulations.
111 Regulation 10(4) of the Federal Regulations and Regulation 11(4) of the Sindh Regulations.
112 Regulation 11(4) of the Balochistan Regulations.
Sindh, and KPK provinces have defined the “government agencies” to include a department, an attached department, an office, a development or local authority, a company, or a body corporate of their provincial governments. However, the federal territory and Balochistan province have included respective EPAs in this definition.

EPAs are, generally, required to collect, tabulate, and consider all the comments of public and government agencies before its decision on EIA. The Balochistan EPA has an additional obligation to respond to such comments and record them in the final decision on EIA. Similarly, Sindh EPA is required to communicate its decision or action to the persons who have furnished the said comments.

The Balochistan EPA is specifically required to carry out its EIA review within 90 days of the confirmation. However, in all other Pakistani territories, EPAs are required to “make every effort” to carry out its review of EIA within 90 days – in case of Sindh within 4 months – of issue of the confirmation.

The courts in Pakistan have clarified that EIA reviews are not inter-parties or an adversarial exercise but are inquisitorial proceedings carried out under the public gaze and are open to public scrutiny. The review process of EIA is incomplete without effective public participation and technical advice of the expert.

6. Decision by EPAs

After completion of the review, EPAs are required to communicate their decision to the project proponent.

In case of IEE, EPAs are required to communicate their approval or decision within a period of four (4) months – or two (2) months in the case of Sindh – from issuance of the confirmation. Similarly, in case of EIA, EPAs are required to communicate their approval or decision within four (4) months from issuance of the confirmation.

In Sindh, while there is no provision for extension of the period for IEE review, the Sindh EPA may extend the period for EIA review for the reasons to be recorded in writing. In all other Pakistani territories, the relevant governments are empowered to extend the period of IEE and

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113 Section 2(xvii) of the Punjab Act; Section 2(xxiii) of the Sindh Act; and Section 2(z) of the KPK Act
114 Section 2(xvii) of the Federal Act; Section 2(x) of the Balochistan Regulations
115 Regulation 10(5) of the Federal Regulations and Regulation 11(5) of the Sindh Regulations.
116 Regulation 11(5) of the Balochistan Regulations.
117 Section 31(3) of the Sindh Act.
118 Regulation 12 (1) of the Balochistan Regulations.
119 Regulation 11(1) of the Federal Regulations and Regulation 12 (1) of the Sindh Regulations.
120 Imrana Tiwana Case, 2015 CLD 983 [Lahore], and also see, Haji Muhammad Ismail vs. Director General EPA, 2019 CLD 80 [Punjab Tribunal].
121 Regulation 12 of the Federal Regulations, Regulation 13(2) of the Sindh Regulations, and Regulation 13(1) of the Balochistan Regulations.
122 Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act; Section 15(4) of the Balochistan Act; Regulation 15 of the Federal Regulations and Regulation 16 of the Sindh and Balochistan Regulations
123 Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act; Section 15(4) of the Balochistan Act; Regulation 15 of the Federal Regulations and Regulation 16 of the Sindh and Balochistan Regulations
124 Regulation 17 of the Sindh Regulations.
EIA reviews, depending upon the nature of the project. In case of such extension, the government or EPA must indicate various steps of the review process to be taken during the extended period and the estimated time required for each step.

The Supreme Court has held while examining the environment impacts, the authorities cannot withhold an approval on any ground other than relevant factor for determining environmental impact of the project.

7. Deemed Approval

If EPAs do not communicate their decision within above time, IEE or EIA of the project is deemed to be approved, to the extent it does not contravene the provisions of the respective statute, the rules, or regulations. However, in KPK, such delay must not be caused by proponent for providing additional information asked for during the review process or public hearings.

8. Monitoring and Compliance

Every IEE and EIA approval contains conditions imposed by the respective EPA. The project must adhere strictly to these conditions as well as the design, construction, and mitigation measures outlined in the IEE or EIA report. Pakistan is well-equipped with an effective regulatory framework for rigorous oversight, monitoring, and compliance of these conditions. For this purpose, there are at least the following five (5) mechanisms in Pakistan:

Firstly, before commencing project construction, the proponent must acknowledge acceptance of the conditions imposed in an IEE or EIA approval by executing an undertaking. Thereafter, they must submit a report on competition of construction.

Secondly, before commencing project operations, the proponent must submit a request and obtain a written operational confirmation from the respective EPA confirming that the conditions of the approval and the requirements in the IEE or EIA report are complied with.

Thirdly, IEE and EIA approvals are granted for a period of three (3) years and are subject to renewal. This allows EPAs to review environmental compliance periodically.

Fourthly, EPAs are entitled to enter and inspect the project site, installed machinery, and other equipment for verification of any matter relating to conditions of an IEE or EIA approval. They may exercise these powers throughout the life of the project.

Lastly, EPAs are empowered to issue show cause notice if any approval conditions are not complied with. Thereafter, they may either cancel the approval or require the proponent to take

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125 Section 12(5) of the Federal Act and Punjab Act, Section 13(5) of the KPK Act and Section 15(5) of the Balochistan Act.
126 Regulation 16 of the Federal Regulations and Regulation 17 of the Balochistan Regulations.
127 Farooq Hamid vs. LDA, 2008 SCMR 483.
128 See Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act and Section 15(4) of the Balochistan Act.
129 Section 13(4) of the KPK Act.
130 Regulation 13(1) of the Federal Regulations and Regulation 14(1) of the Sindh and Balochistan Regulations.
131 Balochistan does not have this requirement.
such measures to comply with conditions within specific period, failing which the approval stands cancelled.

These regulatory powers are explained below:

(1) Construction Compliance

After obtaining an IEE or EIA approval, and before commencing project “construction”, the project proponent must acknowledge acceptance of the approval conditions by executing an “undertaking”.132 Thereafter, except in Balochistan, the proponent must also submit a report to the respective EPA on “completion of construction” of the project.133

(2) Operational Confirmation

Similarly, after obtaining an IEE or EIA approval, and before commencing the project “operations”, the proponent must also obtain a written confirmation of compliance – named as the Environmental Approval for Operational Phase in Balochistan (collectively, the “Operational Confirmation”) – from the respective EPA confirming that the conditions of the approval and the requirements in the IEE or EIA report are complied with.134

A request for the Operational Confirmation must be accompanied by an Environmental Management Plan (“EMP”) indicating the measures and procedures proposed to be taken to manage or mitigate the environmental impacts for the life of the project, including monitoring, reporting, and auditing requirements.135 In addition, in Balochistan, a project proponent is also required to submit an “environmental audit” of construction phase clearly indicating compliance with conditions of the respective approval.136

After receiving the request for the Operational Confirmation, EPAs have the authority to inspect the site, plant, and machinery, as well as request additional information from the proponent.137 Furthermore, EPAs are required to make “every effort” to provide their decision on such request within a specific time. For instance, the Federal, Punjab, and KPK EPAs have fifteen (15) days, the Sindh EPA has twenty (20) days, and the Balochistan EPA has forty-five (45) days to provide a decision on such request.138

EPAs are authorized to impose further conditions while issuing the Operational Confirmation.139 Moreover, after its issuance, the proponent is required to submit an annual report – an environmental audit of project operations in Balochistan – to respective EPA summarizing “operational performance” of the project, with reference to the approval conditions as well as maintenance and mitigatory measures adopted by the project.140

132 Regulation 13(2)(a) of the Federal Regulations and Regulation 14(2)(a) of the Sindh and Balochistan Regulations.
133 Regulation 19(1) of the Federal Regulations and Regulation 20(1) of the Sindh Regulations.
134 Regulation 13(2)(b) of the Federal Regulations and Regulation 14(2)(b) of the Sindh and Balochistan Regulations.
135 Regulation 14(1) of the Federal Regulations and Regulation 15(1) of the Sindh and Balochistan Regulations.
136 Regulation 14(1) of the Balochistan Regulations.
137 Regulation 14(2) of the Federal Regulations and Regulation 15(2) of the Sindh and Balochistan Regulations.
138 Regulation 14(2) of the Federal Regulations and Regulation 15(2) of the Sindh and Balochistan Regulations.
139 Regulation 14(3) of the Federal Regulation and Regulation 15(3) of the Sindh and Balochistan Regulations.
140 Regulation 19(2) of the Federal Regulations and Regulation 20(2) of the Sindh and Balochistan Regulations.
The Operational Confirmation is valid for a period of three (3) years from the date of its issuance.\footnote{Regulation 17(3) of the Federal Regulations and Regulation 18(3) of the Sindh Regulations.} However, in Balochistan, it is only valid for a period of one (1) year from the date of its issuance.\footnote{Regulation 18(3) of the Balochistan Regulations.}

(3) Validity of Approvals

IEE or EIA approvals are valid for “commencement of construction” for a period of three (3) years from the date of their issuance.\footnote{Regulation 17(1) of the Federal Regulations and Regulation 18(1) of the Sindh and Balochistan Regulations.} If construction is commenced during the initial three (3) years, the validity of the approval extends for a further period of three (3) years.\footnote{Regulation 17(2) of the Federal Regulations and Regulation 18(2) of the Sindh and Balochistan Regulations.}

The proponent may apply to the respective EPA for extension in these validity periods, which may be granted by the respective EPA in its discretion for a period not exceeding three (3) years at a time. However, there must not be any “significant change” in the project, or “any change” in the project in case of Balochistan.\footnote{Regulation 17(4) of the Federal Regulations and Regulation 18(4) of the Sindh and Balochistan Regulations.} EPAs may also require the proponent to submit fresh IEE or EIA in case of any change in location, design, construction, and operations of the project.\footnote{Regulation 17(4) of the Federal Regulations, Regulation 18(4) of the Sindh Regulations and Regulation 18(4)&(5) of the Balochistan Regulations.}

(4) Entry and inspection

The authorized staff of EPAs is entitled to enter and inspect the project site, factory building, installed plant, and equipment for purposes of verification of any matter relating to the review stage or conditions of an IEE or EIA approval.\footnote{Regulation 18(1) of the Federal Regulations and Regulation 19(1) of the Sindh and Balochistan Regulations.} They may exercise these powers prior to, during, or after commencement of construction or operations of the project.\footnote{Regulation 18(1) of the Federal Regulations and Regulation 19(1) of the Sindh and Balochistan Regulations.} In this case, the proponent is also required to ensure full cooperation at the site to facilitate the inspection and provide such information as may be required by EPA.\footnote{Regulation 18(2) of the Federal Regulations and Regulation 19(2) of the Sindh and Balochistan Regulations.}

(5) Cancellation of Approvals

The respective EPA is required to issue a show cause notice to the proponent if any approval conditions are not complied with or the information supplied by a proponent in the approved IEE or EIA is incorrect.\footnote{Regulation 20(1) of the Federal Regulations and Regulation 21(1) of the Sindh and Balochistan Regulations.} The show cause notices may be issued on the basis of information or report received by EPAs or inspection carried out by EPAs.\footnote{Id.} The proponent has to reply to such notice within two (2) weeks of its receipt stating that why the approval should not be cancelled.\footnote{Id.}

If reply is unsatisfactory or is not received, EPAs may either cancel the approval or require the proponent to take such measures to comply with conditions within specific period, failing
which the approval stands cancelled.\footnote{Regulation 20(2) of the Federal Regulations and Regulation 21(2) of the Sindh and Balochistan Regulations.} However, EPAs may only cancel the approval after giving the proponent an opportunity of hearing. On cancellation of the approval, the proponent is required to cease construction and operations of the project forthwith.\footnote{Regulation 20(3) of the Federal Regulations and Regulation 21(3) of the Sindh and Balochistan Regulations.}

D. Conclusion

This chapter described various stages of the EIA process across the European Union, the United States, and Pakistan.

However, it is essential to clarify that EIA is not merely a procedure. Much like the right to environment, environmental rights, and environmental laws in general, EIA also encompasses certain substantive components that form the core contents of the report and assessment. While procedural components undoubtedly are foundational to an EIA, there is a complimentary and undeniable significance of the substantive core that adds depth to these procedures and breathes life and meaning into its architectural skeleton. Both the procedural and substantive components together synergistically facilitate a comprehensive environmental analysis within EIA and offer a holistic environmental protection.

Accordingly, the next two chapters distinguish between the procedural and substantive components of EIA and compare each of these components across the aforementioned jurisdictions. They highlight the strengths and weaknesses of each jurisdiction with respect to each component and offer insights into which approach appears to be efficient and comprehensive.
Chapter XI: Comparative Analysis of EIA Procedural Components

Much like the inherent distribution within the right to environment, environmental rights, and environmental laws, discussed in detail in Chapter V and VII, EIA also embodies an intricate nexus of procedural and substantive components. While procedural elements undoubtedly are foundational to an EIA, there is a complimentary and undeniable significance of the substantive core that adds depth to these procedures and breathes life and meaning into its architectural skeleton. These components together synergistically facilitate a comprehensive environmental analysis within EIA and ensure protection of the environmental rights.

The procedural components of an EIA delineate a structured sequence of steps and collaborative initiatives to harmonize developmental interests with environmental conservation. These procedural components encompass the designated responsibility to prepare the EIA report, specifying the contents within the EIA report, issuing public notices, fostering public participation, engaging in consultation with concerned authorities, conducting transboundary consultation, determining the final decision on EIA, ascertaining the time involved in EIA, emphasizing on monitoring and compliance after EIA, and evaluating the extent of judicial review in EIA.

In parallel, EIA has four (4) substantive components, including the identification and evaluation of environmental factors, the assessment of potential impacts, the mitigation of significant effects, and the contemplation of reasonable project alternatives. These substantive components constitute the core content of the assessment as well as the corresponding EIA report. Collectively, these components provide a comprehensive depth to EIA process, ensuring that environmental considerations are thoroughly integrated into every project with significant environmental effects. They amplify the efficacy of their procedural counterparts, ensuring that EIA transcends a mere procedural checklist to become a dynamic tool for a holistic environmental protection.

While the next chapter elaborates on substantive components of EIA, this chapter presents a detailed cross-jurisdictional analysis of procedural components of EIA. This analysis identifies the prevalent similarities and differences across these systems in terms of each EIA component. By drawing upon the exemplary practices and shortcomings observed in the EIA systems of the European Union, the United States, and Pakistan, this chapter concludes by suggesting which approach appears to be the most efficient and comprehensive for general adoption.

At the outset, it is essential to highlight that since the United States is pioneer in the EIA system and has one of the strong systems globally despite its certain deficiencies, it has frequently been compared by scholars with the EIA systems in other regions. To illustrate, in 1995, Mark Squillace presented a critical comparison between the EIA process of the United States and Australia, highlighting the weaknesses in both processes and recommending changes.1 Similarly, in 2001, William A. Wilcox, Jr. compared systems of dealing with environmental information within EIA in the United States and the United Kingdom.2 Further, in 2007, Jesse L. Moorman and Zhang Ge evaluated China’s efforts on public participation in the EIA process.

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In addition, several scholars have also compared different components of EIA within the European Union and the United States. For instance, in 1994, Paul D. McHugh referred to the United States as the father of EIA legislation and examined its similarities and differences with the then applicable 1985 Directive of the European Union. The author compared background, procedure, and public participation in EIA as well as international problems associated with EIA application. Similarly, in 1995, William A. Tilleman published a comparative study of public participation in EIA in Canada, the United States, and the then European Community (now the European Union). Despite these studies, it is important to highlight that since the adoption of the EIA Directive by the European Union, there are scant studies presenting its comparison of EIA practices with the United States. However, several scholars have separately examined EIA practices of both jurisdictions.

Accordingly, both the chapters on comparison of procedural and substantive components of EIA stand out for their novel contributions and hold importance in the literature for several reasons. Firstly, they offer an updated comparative analysis of the complete EIA practices in the European Union and the United States, bridging a gap in literature that has persisted since the EU's legislative amendments. Secondly, comparing Pakistan's approach with the advanced frameworks of both the European Union and the United States is a pioneering effort. This unique comparison provides an opportunity to discern the potential shortcomings in the Pakistani EIA system and to recommend improvements, drawing from two of the most esteemed global models.

However, considering the significant differences in the EIA legal frameworks across the European Union, the United States, and Pakistan discussed in Chapters IX and X, it is crucial to provide a brief overview of the EIA legal framework of these jurisdictions.

The European Union has a simple and structured directive that sets minimum requirements for EIA in all its 27 member states, while allowing the member states to set stricter criteria based on the principle of subsidiarity and proportionality. The EIA Directive presents a streamlined and efficient EIA system. Briefly, as explained in Chapter X, the EIA process consists of a few crucial stages. It starts with the screening phase delineated in Chapter XI, where it is determined that whether a project falls under any of the Annex I and II of the EIA Directive and necessitates

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7 For example, see, Kevin Hanna, Routledge Handbook of Environmental Impact Assessment, Routledge (2022).
an EIA. Subsequently, the project developer prepares and submits the EIA report with assistance of a competent expert. After submission of the report, the consultation and participation of the public, the concerned authorities, and the affected member states are simultaneously handled during the EIA process. Thereafter, the collected information is analyzed, and the development of project is allowed or refused based on a reasoned conclusion. Lastly, the project is monitored during its implementation stage to assess its environmental effects and ensure compliance with the conditions imposed in the reasoned decision.

Therefore, the simplicity of having one directive in the European Union stands as a considerable strength, allowing for a harmonized as well as flexible approach that can foster consistency and cooperation among member states and promote uniformity and coherence in EIA practices. This approach not only cultivates consistency, uniformity, and simplicity across different countries, but it also nurtures a comprehensive and flexible system conducive to a localized and efficient environmental governance. Furthermore, the efficiency of the EIA process is significantly augmented with simultaneous handling of public participation and consultation with concerned local and transboundary authorities. This reduces time needed to conduct an EIA in the European Union.

In contrast, the United States operates under NEPA and its Regulations, which offer a structured and complex federal system. However, the United States does not require its 50 states to maintain the same standards of EIS for their respective actions. This allows for significant variations in state-specific EIA laws. Nevertheless, the United States adopts a more exhaustive approach in its EIS process with multiple stages. It employs a dual-structure model for its EIS system, wherein the public and concerned authorities participate in the process at least twice and the EIS is also prepared in two stages. To clarify, the United States incorporates a “scoping” stage in its process before the preparation of a draft EIS. During this stage, the agencies are required to follow a comprehensive process of public participation and consultation with the concerned authorities. Further, after preparing the draft EIS, the agencies undertake a second round the comprehensive participation and consultation process to finalize the EIS report. Even thereafter, the agencies have discretion to request comments on the final EIS before reaching a final decision. Accordingly, while this approach is thorough, it significantly extends the timeframe necessary to finalize a single EIS in the United States.

On the other hand, Pakistan has a segmented approach with different laws applicable in federal and provincial territories, which creates a complex and fragmented EIA system. It has a territorial-based provincial system characterized by plethora of laws and regulations – specifically five (5) different laws and three (3) distinct regulations that are applicable within their respective territories. This leads to varied standards and approaches in EIA as well as inconsistencies, complexities, and challenges in their implementation across several regions. This, however, allows for region-specific customization, which can be seen as a strength in addressing unique environmental issues within different territories. In addition, EPAs are yet to frame regulations on various components of EIAs in Pakistan.

After briefly examining the EIA systems of these jurisdictions, this chapter discusses their distinct approaches on ten (10) procedural components of EIA, encompassing the designated responsibility to prepare the EIA report, specifying the contents within the EIA report, issuing public notices, fostering public participation, engaging in consultation with concerned authorities, conducting transboundary consultation, determining the final decision on EIA, ascertaining the time involved in EIA, emphasizing on monitoring and compliance after EIA,
and evaluating the extent of judicial review in EIA. Accordingly, a comparative analysis of these procedural components of EIA across these jurisdictions unfolds as follows:

1. Report Preparation

The preparation of the EIA report is one of the procedural components of EIA. There are some differences and similarities in preparing these reports across the European Union, the United States, and Pakistan.

In the European Union, the developer is required to prepare and submit an EIA report. In order to ensure the completeness and quality of EIA report, the developer must ensure that an EIA report is prepared by the competent experts. A developer may also require the competent authority to give an opinion on the scope and level of detail of the information to be included in an EIA report.

Pakistan follows the same model for preparing the IEE and EIA reports. Although EPAs in Pakistan are empowered to establish guidelines for the preparation of IEE and EIA reports, they have not yet formulated the same. Accordingly, the Pakistani laws and regulations do not clearly specify responsibility for preparing these reports. In practice, since the proponents are required to obtain environmental approvals, they seek assistance of experts to prepare and submit IEE and EIA reports to the respective EPAs.

However, in Balochistan province, its EPA is specifically required to register consultants with certain qualifications and experience for conducting IEEs and EIAs. It remains clear that even in this province, only the project proponent is competent to prepare IEE and EIA reports for their approval.

Alternatively, in the United States, the lead and cooperating agencies are required to prepare EISs, whereas the lead agency is required to supervise its preparation. The disciplines of the preparers must be appropriate to the scope and issues identified in the scoping process.

Across these systems, the preparation of reports by experts is a common element, albeit with variations in their appointment. In the United States, government-appointed experts in federal agencies prepare EISs, while in the European Union and Pakistan, experts from the private sector are engaged for this purpose. While the United States’ approach of preparing each report by the federal agencies may be time consuming, the approaches in the European Union and Pakistan may foster efficiency and swiftness in the EIA process. However, they may raise certain suspicions about the credibility and thoroughness, necessitating the regulatory oversight through a structured registration and verification process for the experts. This gap in the process may potentially undermine the impartiality and comprehensiveness of the EIA reports, posing a significant concern for the effective environmental assessments. Pakistan already follows this regulatory oversight in one of its provinces, Balochistan.

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8 EIA Directive, Article 5(1).
9 Id. Article 5(3).
10 Id. Article 5(2).
11 Regulation 6 of the Federal Regulations, and Regulation 7 of the Sindh Regulations and Balochistan Regulations.
12 Regulation 23(1) of the Balochistan Regulations.
13 Id.
14 NEPA Regulations, sec. 1501.7(a).
15 Id. sec. 1502.6.
2. Administrative or Procedural Contents of the EIA Report

An EIA report itself consists of substantive and procedural components. While the substantive components are discussed in the next chapter, this section provides comparison of procedural elements in an EIA report across the European Union, the United States, and Pakistan.

In the European Union, the EIA Directive contains a list of the minimum information to be included in an EIA report in Article 5(1). While most of the list corresponds to the substantive components of EIA that are discussed in the next chapter, it explicitly requires to include the project description with information on its site, design, size, and other relevant features as well as a non-technical summary of all the information presented in the EIA report.\(^\text{16}\) Annex IV of the EIA Directive further provides guidelines on the information to be included in the EIA report, which also mostly corresponds to the substantive components of EIA.

Alternatively, the United States adheres to a more rigorous approach. The EIS reports must be concise, clear, and to the point, and must be supported by evidence on the necessary environmental analyses.\(^\text{17}\) The agencies are required to write EISs in plain language and may also use appropriate graphics so that decision makers and the public can readily understand such statements.\(^\text{18}\) The text of final EISs must be 150 pages or fewer and, for proposals of unusual scope or complexity, must be 300 pages or fewer. However, a senior agency official of the lead agency may establish a new page limit.\(^\text{19}\)

Furthermore, in the United States, the agencies are required to use a format for EISs that encourages good analysis and clear presentation of the alternatives including the proposed action.\(^\text{20}\) The NEPA Regulations also provide a standard format to follow in an EIS, consisting of: (a) Cover; (b) Summary; (c) Table of Contents; (d) Purpose of and Need for Action;\(^\text{21}\) (e) Alternatives including the Proposed Action;\(^\text{22}\) (f) Affected Environment and Environmental Consequences;\(^\text{23}\) (g) Submitted Alternatives, Information, and Analyses; (h) List of Preparers; and (i) Appendices (if any).\(^\text{24}\)

However, as discussed in the preceding section, Pakistan has yet to formulate regulations and guidelines concerning the contents of the IEE and EIA reports. This is a clear lacuna in the Pakistani system, which necessitates urgent and concerted efforts to institute comprehensive regulations that can potentially contribute to enhance environmental protection.

A comparative analysis of these jurisdictions demonstrates that the United States manifests a higher level of procedural efficacy and comprehensiveness for the procedural contents of the EIS reports. The structured and detailed guidelines for clear presentation format in the United States hold a considerable edge over the less defined and somewhat lax frameworks existing in the European Union and Pakistan.

\(^{16}\) EIA Directive, Article 5(1).
\(^{17}\) NEPA Regulations, sec. 1502.1
\(^{18}\) Id. sec. 1502.8.
\(^{19}\) Id. sec. 1502.7.
\(^{20}\) Id. sec. 1502.10(a)
\(^{21}\) Id. sec. 1502.13 Purpose and need. The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.
\(^{22}\) sections 102(2)(C)(iii) and 102(2)(E) of NEPA
\(^{23}\) especially sections 102(2)(C)(i), (ii), (iv), and (v) of NEPA
\(^{24}\) NEPA Regulations, sec. 1502.10(a)
3. Public Notice

The requirement for public notice is a significant procedural component of an EIA. A comparative analysis of this component across the European Union, the United States, and Pakistan illuminates three different strategies, each carrying its own merits and shortcomings.

The United States adopts an intricate and multi-layered approach to public notices, engaging public throughout the EIS process:

Firstly, as part of the scoping process, the lead agency invites the participation of, amongst others, likely affected or interested persons. In this regard, the lead agency is authorized to hold scoping meetings, publish scoping information, or use other means to communicate with those persons or agencies who may be interested or affected.

Secondly, after the scoping process, once a lead agency determines that a proposal is sufficiently developed to allow for meaningful public comments and requires an EIS, it publishes a notice of intent to prepare an EIS in the United States Federal Register, for public involvement. The notice includes: (1) the purpose and need for the proposed action; (2) a preliminary description of the proposed action and alternatives EIS will consider; (3) a brief summary of expected impacts; (4) anticipated permits and other authorizations; (5) a schedule for the decision-making process; (6) a description of the public scoping process, including any scoping meeting(s); (7) a request for identification of potential alternatives, information, and analyses relevant to the proposed action; and (8) contact information for a person within the agency who can answer questions about the proposed action and EIS.

Thirdly, the agencies are required to publish the entire “draft EIS” with unchanged statements. In this case, they must transmit the entire statements electronically or in paper copy to any person, organization, or agency requesting it.

Fourthly, after incorporating comments, the agencies are required to publish the entire “final EIS” and unchanged statements. They must transmit the entire statement, electronically or in paper copy, to anyone requesting it, as well as the submitted substantive comments on the draft.

Finally, at the time of its decision on EIS, each agency must prepare and timely publish a concise public or joint record of decision. This record must: (a) state the decision; (b) identify alternatives considered by the agency in reaching its decision, specifying the alternatives considered environmentally preferable; and (c) state whether the agency has adopted all practicable means to avoid or minimize environmental harm from the alternative selected, and if not, why the agency did not.

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25 Id. sec. 1501.9(b)
26 Id. sec. 1501.9(c)
27 Id. sec. 1501.9(d)
28 Id. sec. 1501.9(d)
29 Id. sec. 1502.20.
30 Id. sec. 1502.20.
31 Id. sec. 1502.20(d).
32 Id. sec. 1505.2(a).
In contrast, the European Union necessitates two different public notices in an EIA process: the first after submission of an EIA report by the developer, and the second after decision of the competent authority to grant or refuse the development consent.

After submission of an EIA report, the public is given a public notice through electronic and other appropriate means. This notice includes information about: (a) the request for development consent; (b) the fact that the project is subject to an EIA procedure; (c) details of the competent authorities responsible for taking the decision, those from which relevant information can be obtained, those to which comments or questions can be submitted, and details of the time schedule for transmitting comments or questions; (d) the nature of possible decisions or a draft decision; (e) an indication of the availability of the information provided by the developer; (f) times, places and means by which, the relevant information will be made available; and (g) details of the arrangements for public participation.33

Furthermore, in the European Union, when a decision to grant or refuse development consent is taken, the competent authority again promptly informs the public and the concerned authorities, in accordance with national procedures, about the following information: (a) the content of the decision and its conditions; (b) the main reasons and considerations on which the decision is based, including information about the public participation process; and (c) the summary of the results of consultations and information gathering, and how those results have been incorporated or addressed.34

On the other hand, Pakistan integrates public notice only once into the EIA process, and there is no such requirement for informing the public in an IEE process. Notably, after submission of an EIA report by the proponent, EPAs are required to publish a public notice mentioning the type of project, its exact location, the name and address of the proponent, and the places at which the EIA of the project can be accessed.35 This notice must be published in a national newspaper as well as a local newspaper with circulation in the area affected by the project.36 This notice must fix a date, time and place after at least thirty (30) days – or after fifteen (15) days in case of Sindh – for public hearing of any comments on the project or its EIA.37 However, it requires inclusion of very limited information in the public notice.

In evaluating the three distinct approaches, the United States stands out with its intricate and comprehensive strategy that ensures the public is continuously informed throughout the EIA process. Every stage, from scoping to the final decision, is communicated to the stakeholders, ensuring maximum transparency and engagement. This detailed engagement certainly fosters trust and collaboration but comes at the cost of time, making the entire process more protracted than might be ideal. However, the depth of information required at each stage for each EIS action of over 435 federal agencies, though thorough, might be overwhelming and could potentially deter meaningful engagement from the public due to its intricacies.

The European Union adopts a balanced approach, streamlining the process to two distinct and comprehensive public notices. This structured methodology ensures that the public is kept abreast of the major developments without overwhelming them with the minutiae at every

33 EIA Directive, Article 6(2).
34 Id. Article 9(1).
35 Regulation 10(1) of the Federal Regulations, and Regulation 11(1) of the Sindh and Balochistan Regulations.
36 Id.
37 Regulation 10(2) & (3) of the Federal Regulations, and Regulation 11(2)&(3) of the Sindh and Balochistan Regulations.
juncture. The two-step notification system strikes a compromise between the thoroughness of the US system and the brevity of Pakistan's. It might serve as an efficient model for countries aiming to enhance their EIA public notice practices.

Pakistan's approach, however, appears to be the most abbreviated of the three. While the country mandates a single public notice after the submission of an EIA report, it notably falls short in offering comprehensive information to the public. The notice encompasses only rudimentary project details, conspicuously omitting substantive environmental components that are pivotal for a well-informed public discourse. Such an approach not only undermines the informational rights of the public but also risks insufficient stakeholder engagement, which could lead to less holistic and potentially contentious project outcomes. For a more democratic and environmentally conscious EIA process, Pakistan may need to reevaluate and enhance its public notice practices.

4. Public Participation

The requirement for public notice is a significant procedural component of an EIA. Several scholars discuss this component of EIA in their scholarly work. An exploration of this component within the legal frameworks of the European Union, the United States, and Pakistan reveals discernible differences and several strengths and weaknesses.

Both the European Union and Pakistan have a single designated stage for public participation in the EIA process. In the European Union, after submission of an EIA report, the concerned public is given effective opportunities to participate in the environmental decision-making and is entitled to express comments and opinions before the decision on the request for development consent is taken. In this regard, the reasonable timeframes must be provided for allowing sufficient time to the public concerned to prepare and participate effectively in the environmental decision-making.

The timeframes for consulting the public cannot be shorter than 30 days.

Similarly, in case of an EIA approval in Pakistan, EPAs are required to ensure that EIA is carried out with public participation. They are empowered to issue guidelines indicating the basic techniques and measures to ensure effective public consultation, involvement, and participation in EIA assessment. However, none of the EPAs have formulated these guidelines. Nonetheless, EPAs must collect, tabulate, and consider all the comments of public

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39 EIA Directive, Article 6(4).
40 Id. Article 6(6).
41 Id. Article 6(7).
42 Section 12(3) of the Federal Act and Punjab Act, Section 17(3) of the Sindh Act, Section 13(3) of the KPK Act and Section 15(3) of the Balochistan Act.
43 Regulation 10(6) of the Federal Regulations and Regulation 11(6) of the Sindh and Balochistan Regulations.
and any government agency before their decisions on EIAs. The Balochistan EPA has an additional obligation to respond to such comments and record them in the final decision on EIA. Similarly, Sindh EPA is required to communicate its decision or action to the persons who have furnished the said comments.

In contrast, the United States involves a two-stage participation in an EIS process. Firstly, as part of the scoping process, the lead agency invites the participation of, amongst others, likely affected or interested persons. In this regard, the lead agency is authorized to hold scoping meetings, publish scoping information, or use other means to communicate with those persons or agencies who may be interested or affected. Secondly, the lead agency is also required to request comments from, among others, the interested or affected public or organizations by the proposed action on the “draft EIS”. These comments are invited specifically on the submitted alternatives, information, and analyses. A lead agency must provide a platform for electronic submission of public comments, with reasonable measures to ensure the comment process is accessible to the affected persons. In addition to these two, an agency is also authorized to request comments on a “final EIS” before the final decision and set a deadline for providing these comments.

The comparative analysis of all these jurisdictions reveals that the United States adopts a more multifaceted approach, incorporating public participation at two stages during the EIS process. This strategy facilitates continuous engagement with the public, allowing for feedback and adjustments at multiple stages of project development. This ensures a more dynamic and responsive process, albeit potentially prolonging the EIS timeline due to the reiterative consultations. The repeated cycles of public consultations at various stages, while ensuring ongoing dialogue, could potentially lead to project delays and increased complexities.

In contrast, both the European Union and Pakistan have a single stage in an EIA process. However, a significant drawback in Pakistani system is the absence of formulated guidelines by the EPAs to guide effective public participation, potentially impeding its quality. On the other hand, the European Union’s approach emerges as particularly efficient and beneficial where the process is characterized by a single and well-delineated phase of public participation. The streamlined single phase allows for a more focused and consolidated feedback process, minimizing the risk of prolonging the project timeline due to repeated public participations. This singular yet intensive phase ensures that public participation is meaningful and substantial. It embodies a balanced amalgamation of depth and efficiency, facilitating informed public participation without the potential bureaucratic delays seen in multi-staged approaches like that of the United States. The European Union’s approach not only fosters a sense of inclusivity but also potentially streamlines the EIA process, making it a commendable model to consider for broader application in fostering effective public participation in environmental decision-making.

44 Regulation 10(5) of the Federal Regulations and Regulation 11(5) of the Sindh Regulations.
45 Regulation 11(5) of the Balochistan Regulations.
46 Section 31(3) of the Sindh Act.
47 NEPA Regulations, sec. 1501.9(b).
48 Id. sec. 1501.9(c).
49 Id. sec. 1503.1(a)(2).
50 Id. sec. 1503.1(a)(3).
51 Id. sec. 1503.1(c).
52 Id. sec. 1503.1(b).
5. Consultation with the Concerned Authorities

The practice of consultation with concerned authorities during an EIA process is instrumental in ensuring a comprehensive review of potential environmental impacts. Each jurisdiction – the European Union, the United States, and Pakistan – follows unique procedures that offer both strengths and limitations.

In the European Union, after submission of the EIA report, and coinciding with public participation, the authorities that are likely to be concerned by the project by reason of their specific environmental responsibilities or local and regional competences are given an opportunity to express their opinion on the information supplied by the developer. However, the member states are required to lay down the detailed arrangements for consultation and to designate the authorities to be consulted, either in general terms or on a case-by-case basis. In this regard, the reasonable timeframes for different phases must be provided by the member states to allow sufficient time to the authorities to prepare and participate effectively in the environmental decision-making.

Similarly, in Pakistan, EPAs are required to ensure circulation of the EIA to the concerned “government agencies” and solicit their comments thereon. But the Balochistan EPA does not have such obligation and may only do so if it deems it necessary. Furthermore, the “government agencies” are defined to include a department, an attached department, an office, a development or local authority, a company, or a body corporate of their provincial governments. However, the federal territory and Balochistan province additionally include their respective EPAs in this definition.

In contrast, the United States engages government agencies from the early start in an EIS process by designating the lead and cooperating agencies. Notably, any federal agency can be determined to be “lead agency” to supervise preparation of an EIS or a complex EA document. On the other hand, any other federal, state, tribal, or local agencies that have “jurisdiction by law” or possess “special expertise” with respect to any environmental issues may be designated as “cooperating agencies”. The lead agency is required to request the participation of each cooperating agency in the EIS process at the earliest practicable time; use their environmental analysis and proposals to the maximum extent practicable; meet them at their request; and consult with them to determine the purpose, need, and alternatives of the potential actions. Both types of agencies carry out an EIS in accordance with the responsibilities identified during the scoping stage.

A critical analysis suggests that the United States embodies a comprehensive, yet a complex, approach for the consultation process in an EIS. Although the early and continuous engagement of relevant agencies guarantees a holistic review of projects and a deep and meticulous analysis, it significantly prolongs the decision-making process. Despite its strengths in fostering

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53 EIA Directive, Article 6(1).
54 Id. Article 6(6).
55 Regulation 10(4) of the Federal Regulations and Regulation 11(4) of the Sindh Regulations.
56 Regulation 11(4) of the Balochistan Regulations.
57 Section 2(xvii) of the Punjab Act; Section 2(xxii) of the Sindh Act; and Section 2(z) of the KPK Act.
58 Section 2(xvii) of the Federal Act; Section 2(x) of the Balochistan Regulations.
59 NEPA Regulations, sec. 1501.7(a).
60 Id. sec. 1501.8(a).
61 Id. sec. 1501.7(h).
62 Id. sec. 1501.9(f)(2).
collaboration and comprehensive analysis, this approach might be criticized for potential delays and bureaucratic complexities ensuing from the continuous consultation processes across various stages.

Upon reflection, it appears that the European Union's methodology of engaging concerned authorities at the stage of public participation stands out as both efficient and comprehensive. Its approach astutely amalgamates structured engagement with concerned authorities within reasonable timeframes, thereby ensuring a well-rounded and time-efficient consultation process. This methodology, therefore, seems to present a promising blueprint for fostering effective consultation with authorities in environmental decision-making, striking a harmonious balance between inclusivity and procedural efficiency and making it a preferred model to emulate globally. However, the responsibility of specifying detailed consultation arrangements and choosing the authorities to be consulted rests on member states. This could lead to variations and inconsistencies among states.

Conversely, while Pakistani approach somewhat mirrors that of the European Union, it appears to be fragmented. Although EPAs are required to circulate the EIA report to concerned government agencies, an obvious discrepancy manifests in the Balochistan province where soliciting comments from pertinent agencies remains discretionary. This approach may undermine the comprehensiveness of the EIA process by potentially omitting critical perspectives and insights that could be instrumental in fostering an effective EIA.

### 6. Transboundary Consultation

Transboundary consultation is a critical procedural component of EIA, especially for projects with potential cross-border impacts. Several scholars have elaborated the significance of this component in their scholarly work.\(^{63}\) In addition, ICJ has also recognized the duty for transboundary consultation as customary international law in Argentina vs. Uruguay (2010). Furthermore, this duty has also been elaborated in various environmental instruments, including the Espoo Convention (1991).

In the European Union, where a project is likely to have significant effects on the environment in another member state, the “affected member state” is notified about the information about the description and possible transboundary impact of the project as well as the nature of decision to be taken. This must be done simultaneously when the member state informs its own public so that the affected member state is given a reasonable time to decide if it wishes to participate in EIA process.\(^{64}\) If the affected member state wishes to participate in the process,

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\(^{64}\) EIA Directive, Article 7(1).
the public information is also made available to affected member state.\textsuperscript{65} Thereafter, the affected member state is required to inform its own authorities and public and to ensure their participation within a reasonable time.\textsuperscript{66}

In addition, any “concerned member states” may also be consulted regarding the potential transboundary effects of the project and the measures to reduce or eliminate such effects. Such consultations may also be conducted through an appropriate joint body.\textsuperscript{67} Accordingly, transboundary consultation is a notable strength in the European Union, promoting cooperation and shared decision-making with affected and concerned member states as well as ensuring that transboundary impacts are adequately addressed.

In contrast, both the United States and Pakistan lack provisions for transboundary consultations, potentially overlooking significant cross-border environmental impacts and missing out on opportunities for regional cooperation and shared expertise in environmental governance. However, the United States has special transboundary arrangements through independent agreements with neighboring countries like Canada and Mexico.\textsuperscript{68} On the other hand, Pakistan lacks similar arrangements with its neighboring countries. Given the existing transboundary environmental challenges with neighboring countries, particularly India,\textsuperscript{69} Pakistan would greatly benefit from integrating transboundary consultations within its EIA processes to effectively address and resolve these challenges.

\textbf{7. Decision Making}

Decision making is an intrinsic part of an EIA process. A comparative glance at the European Union, the United States, and Pakistan reveals diverse approaches and methodologies for decision making.

In the European Union, after considering results of the public participation and consultations, a development consent is awarded to the developer to allow or refuse the development of project within a reasonable period of time.\textsuperscript{70} The decision to allow or grant development consent incorporates, at least: (a) the reasoned conclusion, (b) environmental conditions attached to the decision, (c) a description of any features of the project, and (d) measures envisaged to avoid, prevent or reduce and, if possible, offset its significant adverse effects on the environment as well as, where appropriate, monitoring measures.\textsuperscript{71} On the other hand, the decision to refuse development consent must state the main reasons for its refusal.\textsuperscript{72}

In contrast, there is no concept of development consent in the United States. After preparing the final EIS, the agencies are required to publish a concise public or joint record of decision. This record must: (a) state the decision; (b) identify alternatives considered by the agency in reaching its decision, specifying the alternatives considered environmentally preferable; and (c) state whether the agency has adopted all practicable means to avoid or minimize

\begin{footnotes}
\item[65] Id. Article 7(2).
\item[66] Id. Article 7(3).
\item[67] Id. Article 7(4).
\item[70] EIA Directive, Article 8a(5).
\item[71] Id. Article 8a(1).
\item[72] Id. Article 8a(2).
\end{footnotes}
environmental harm from the alternative selected, and if not, why the agency did not.\textsuperscript{73} The decision maker certifies in the record of decision that the agency has considered all of the alternatives, information, analyses, and objections submitted by state, tribal, and local governments and public commenters in developing EIS.\textsuperscript{74}

On the other hand, in Pakistan, EPAs are required to communicate their approval or decision on EIA within four (4) months from the date of issuance of confirmation of completeness.\textsuperscript{75} If EPAs do not communicate their decision within above time, IEE or EIA of the project is deemed to be approved, to the extent it does not contravene the provisions of the respective statute, the rules or regulations.\textsuperscript{76} However, in KPK, such delay must not be caused by proponent for providing additional information asked for during the review process or public hearings.\textsuperscript{77} This deemed provision may potentially cause to overlook detailed scrutiny, as the process might allow projects with significant adverse environmental effects to proceed, especially in cases of administrative delays.

A comparative analysis of the decision-making processes across these jurisdictions reveals considerable differences in their approaches towards decision making in EIA. The European Union upholds a more stringent and methodical framework, where the granting of development consent is backed by reasoned conclusions. The consent is a formal and comprehensive decision on EIAs and ensures adherence to the defined environmental standards. This approach potentially fosters a more controlled and accountable system.

In contrast, the United States maintains a system, where agencies are only required to publish a record of decision on the EIS – a document prepared by the agencies themselves without any supervisory intervention. This approach lacks a deeper level of scrutiny on the analysis in EIS, which potentially compromises its thoroughness and leaves room for oversight. Meanwhile, the effectiveness of the Pakistani system is undermined by the existing deeming provision, which allows for an implicit approval of projects if not explicitly rejected within a stipulated time frame. This loophole could potentially foster a landscape where critical environmental analyses are bypassed, thereby defeating the core objective of EIAs.

Therefore, the European Union's approach emerges as the most robust and effective model, emphasizing a harmonized adherence to environmental standards through well-reasoned and formal consent or refusal. In striving for more efficient and responsible environmental governance globally, adapting a consent model aligned with the EU's stringent and analytical approach could potentially be a constructive pathway forward.

\textbf{8. Time-Limit}

Time management is an essential factor in an EIA process. The timeframes for an EIA process differ across the European Union, the United States, and Pakistan.

\textsuperscript{73} NEPA Regulations, sec. 1505.2(a).
\textsuperscript{74} Id. sec. 1505.2(b).
\textsuperscript{75} Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act; Section 15(4) of the Balochistan Act; Regulation 15 of the Federal Regulations; and Regulation 16 of the Sindh and Balochistan Regulations
\textsuperscript{76} See Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act and Section 15(4) of the Balochistan Act.
\textsuperscript{77} Section 13(4) of the KPK Act.
The European Union does not provide a specific time for completion of an EIA process. The EIA Directive requires the member states to ensure that the decisions on EIA are taken within “a reasonable period of time”.\(^7\) This approach harbors the advantage of flexibility, allowing member states to adapt the time frame to the specific circumstances of each project within their jurisdiction. However, the vagueness of what constitutes a reasonable period can potentially introduce ambiguity and inconsistencies, possibly leading to extended delays in some instances.

Alternatively, in the United States, the agencies are required to complete EA within one (1) year unless a senior agency official of the lead agency approves a longer period. One year is measured from the date of agency decision to prepare an EA.\(^8\) Similarly, the agencies are required to complete EIS within two (2) years unless a senior agency official of the lead agency approves a longer period. This time is also measured from the date of the issuance of the notice of intent for EIS preparation.\(^9\)

Additionally, the senior agency official may set overall time limits or limits for each constituent part of NEPA process.\(^10\) They may consider different factors in determining the time limits, including potential for environmental harm, size of the proposed action, analytic techniques, degree of public need for the proposed action, consequences of delay, number of persons and agencies affected, availability of relevant information, and other time limits imposed by law, regulations or any executive order.\(^11\)

On the other hand, Pakistan follows a strict timeline for EPAs to issue their approvals on the EIA reports. EPAs are required to communicate their approval or decision on IEE within a period of four (4) months or two (2) months in the case of Sindh.\(^12\) Similarly, they are required to communicate their approval or decision on EIA within four (4) months.\(^13\) The period in both cases commences from the date of issuance of confirmation of completeness by the respective EPA and includes the time taken during participation and consultation stages.\(^14\) If EPAs do not communicate their decision within above time, IEE or EIA of the project is deemed to be approved, to the extent it does not contravene the provisions of the respective statute, the rules or regulations.\(^15\) However, in KPK, such delay must not be caused by proponent for providing additional information asked for during the review process or public hearings.\(^16\) This deeming provision has already been criticized in the last section.

From this analysis, it appears that the United States' approach presents a balanced, clear, and structured timeframes with the possibility for nuanced consideration of individual project complexities. Therefore, this model seemingly offers a pathway that is both efficient and

\(^7\) EIA Directive, Article 8a(5).
\(^8\) NEPA Regulations, sec. 1501.10(b)(1).
\(^9\) Id. sec. 1501.10(b)(1).
\(^10\) Id. sec. 1501.10(b)(2).
\(^11\) Id. sec. 1501.10(d).
\(^12\) Id. sec. 1501.10(c).
\(^13\) Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act and Section 15(4) of the Balochistan Act.
\(^14\) Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act and Section 15(4) of the Balochistan Act.
\(^15\) Regulation 15 of the Federal Regulations and Regulation 16 of the Sindh and Balochistan Regulations
\(^16\) See Section 12(4) of the Federal Act and Punjab Act, Section 17(4) of the Sindh Act, Section 13(4) of the KPK Act and Section 15(4) of the Balochistan Act.
comprehensive, potentially serving as a robust model for holistic environmental governance in project implementations globally.

9. Monitoring and Compliance

Monitoring is one of the last stages in an EIA process. After the decision making on EIA, the project transitions into the implementation phase. At this stage, environmental impacts of the project are monitored to ensure that the mitigation measures are effective and that the project complies with conditions set by the authorities. The United Nations has published the requirements for post-project analysis in an EIA.88

In the European Union, after the development consent is granted, the EIA Directive leaves it for the member states to ensure that the mitigation measures are implemented by the developer and to determine the procedures regarding the monitoring of significant adverse effects on the environment.89 It, however, mandates that the type of parameters to be monitored and the duration of the monitoring must be proportionate to the nature, location, and size of the project and the significance of its effects on the environment.90

In the United States, the agencies are authorized to provide for monitoring, ensuring that their decisions are carried out. They should, however, do so only in “important cases”.91 They are responsible for implementing the mitigation measures and other conditions that were identified and agreed upon during the EIS process. The lead agency is further obliged to: (a) include appropriate conditions in grants, permits, or other approvals; (b) condition funding of actions on mitigation; (c) upon request, inform cooperating or participating agencies on progress in carrying out mitigation measures, especially those proposed by them and adopted in the decision; and (d) upon request, publish the results of relevant monitoring.92

On the other hand, Pakistan has an effective legal system for rigorous oversight, monitoring, and compliance of conditions imposed during an EIA process. As elaborated in the last chapter, there are at least the following five (5) mechanisms in Pakistan:

Firstly, before commencing project construction, the proponent must acknowledge acceptance of the conditions imposed in an IEE or EIA approval by executing an undertaking. Thereafter, they must submit a report on competition of construction.93

Secondly, before commencing project operations, the proponent must submit a request and obtain the Operational Confirmation from the respective EPA confirming that the conditions of the approval and the requirements in the IEE or EIA report are complied with.

Thirdly, IEE and EIA approvals are granted for a period of three (3) years and are subject to renewal. This allows EPAs to review environmental compliance periodically.

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89 EIA Directive, Article 8a(4).
90 Id. Article 8a(4).
91 NEPA Regulations, sec. 1505.3.
92 Id. sec. 1505.3.
93 However, Balochistan does not have this requirement.
Fourthly, EPAs are entitled to enter and inspect the project site, installed machinery, and other equipment for verification of any matter relating to conditions of an IEE or EIA approval. They may exercise these powers throughout the life of the project.

Lastly, EPAs are empowered to issue show cause notice if any approval conditions are not complied with. Thereafter, they may either cancel the approval or require the proponent to take such measures to comply with conditions within specific period, failing which the approval stands cancelled.

This comparative analysis suggests that each jurisdiction has its own distinctive strengths and weaknesses with regards to the post-EIA monitoring procedures. Pakistan presents a more structured and well-rounded approach to post-EIA monitoring, delineated into above five distinct yet interconnected mechanisms. It offers a comprehensive legal framework, actively involving EPAs with the stringent requirements for a time-limited approvals. Furthermore, Pakistan's approach includes provisions for cancellation of approvals and site inspections, empowering the EPAs to enforce compliance actively. This not only encourages project proponents to adhere to the set conditions but also offers a systematic avenue for addressing non-compliance.

In contrast, in the European Union, the EIA Directive provides a somewhat flexible framework allowing member states the autonomy to devise their own strategies for monitoring and implementation of mitigation measures. This decentralization can be viewed both as a strength and a weakness: it allows for tailor-made approaches suited to individual state's specific environmental contexts but might also engender inconsistencies and a lack of uniform standards. Moreover, while the directive mandates monitoring parameters and durations that align with project specifications, it fails to establish a centralized system for overseeing and enforcing these criteria, potentially limiting its effectiveness.

On the other hand, the United States adopts a distinctive approach in its post-EIA monitoring practices, providing federal agencies with discretion concerning the necessity and extent of monitoring. Unlike the mandatory requirements found in other jurisdictions, the United States does not impose a blanket obligation for monitoring in all instances after EIS. Instead, agencies are "authorized" to monitor and are only encouraged to do so in "important" cases. On the one hand, providing discretion allows agencies to allocate resources efficiently, prioritizing projects with potentially significant environmental impacts. This flexibility could lead to a more targeted and effective monitoring system, wherein agencies can focus their efforts on cases where the risks and consequences of non-compliance are highest. However, on the other hand, the absence of mandatory monitoring for all projects creates room for inconsistency, potential oversight, and a lack of uniformity in the application of monitoring practices. The vagueness of the term "important cases" further complicates matters, as it could lead to varied interpretations, potentially resulting in significant environmental impacts going unmonitored. Thus, while the United States approach values flexibility and agency autonomy, it might benefit from clearer guidelines and criteria to determine the necessity of monitoring, ensuring a more consistent and comprehensive oversight mechanism.

In light of the above analysis, it appears that Pakistan's approach, with its multi-faceted and structured framework, offers a more comprehensive and robust mechanism for post-EIA monitoring. It amalgamates stringent compliance procedures with avenues for enforcement, fostering both adherence to environmental standards and accountability. Thus, adopting a similar approach, which leverages stringent compliance measures coupled with robust
enforcement mechanisms, might prove beneficial for other regions aiming for effective post-EIA monitoring and compliance.

10. Judicial Review

The European Union, the United States, and Pakistan reveal different methodologies concerning powers of the court or judicial review in an EIA process, each encompassing its strengths and weaknesses.

To begin with, the European Union notably lacks explicit provisions concerning judicial review in the context of EIA. This glaring absence might suggest a potential weakness, as it leaves room for inconsistent approaches and may potentially hinder effective oversight and accountability in environmental matters. However, it must be noted that individual member states have their distinct judicial frameworks which address EIA-related concerns.

Alternatively, in the United States, it has been clarified in the NEPA Regulations that harm from the failure to comply with NEPA can be remedied by compliance with NEPA's procedural requirements. It is CEQ’s intention that the regulations create no presumption that violation of NEPA is a basis for injunctive relief or for a finding of irreparable harm. The regulations do not create a cause of action or right of action for violation of NEPA, which contains no such cause of action or right of action. It is CEQ's intention that any actions to review, enjoin, stay, vacate, or otherwise alter an agency decision on the basis of an alleged NEPA violation be raised as soon as practicable after “final agency action” to avoid or minimize any costs to agencies, applicants, or any affected third parties. It is also the CEQ’s intention that minor and non-substantive errors that have no effect on agency decision making is considered harmless and is not invalidate an agency action.

Accordingly, the NEPA Regulations distinctly articulate that deviations from NEPA can be rectified by adhering to its procedural prerequisites, rather than fostering a ground for a legal action. The allegations of NEPA violations are only raised after final agency action to prevent unnecessary costs and delays. This approach emphasizes procedural compliance and aims to minimize frivolous litigation, constituting its strength. Nevertheless, this could potentially be seen as a weakened protective measure, as it appears to restrict the avenues for seeking redress in cases of genuine environmental harm, thus possibly undermining the essence of environmental protection.

In contrast, since there are inherent issues with the Pakistani EIA system, people tend to approach courts in cases of environmental violations. In case of violation of any provision of the environmental statute, including the provision to obtain the environmental approvals, the law takes its own course, and the proper proceedings may be initiated by any aggrieved person before the Environmental Magistrate or the Environmental Tribunal. Therefore, environmental approvals, as well as objections regarding them, can be challenged before any of the Environmental Tribunals or the Environmental Magistrates, and any order passed by them is then amenable in appeal before a Bench of the High Court. There are, however, no reported cases or judgments of the Environmental Magistrates and any study on the same is hit by such limitation. Similarly, the Balochistan and KPK Tribunals do not have any reported judgments relevant to this topic. On the other hand, the Punjab and Sindh Environmental

94 NEPA Regulations, sec. 1500.3(d).
95 Salma Iqbal Chundrigar vs. Federation of Pakistan, 2009 CLD 682 [Karachi DB].
Tribunals have taken different views for enforcing the provisions regarding the approvals. The superior courts in Pakistan, including the Supreme Court and the High Courts, have also contributed with their landmark jurisprudence in this regard and have issued several directions for enforcement of the environmental approval provisions. In most cases, the superior courts have refused to stop construction of projects commenced without obtaining environmental approvals after recognizing the public purpose behind the projects.

The Punjab Tribunal has taken more stringent stances in cases of violations of these provisions. In a case of Rice Mill converted to Poultry Feed Factory creating havoc and bad smell, the Punjab Tribunal has held that the project has to go through the nature's first man-made check post of IEE or EIA. It further held that this is mandatory and cannot be avoided especially when there are allegations of damage to the environment. Therefore, it was held that the agency was empowered to take cognizance of the matter and issue an environmental protection order in this regard.97 Similarly, the Punjab Tribunal has also held in another case that EPA has power to seal a project if it has not obtained environmental approval and is failing to control excessive black smoke and fly ash along with effective arrangement for disposal of slag and other waste.98

In a case of factory having operation of heavy electrical hummer, the Punjab Tribunal has imposed a fine of Rs. 100,000 to the proponent of the project for his failure to obtain the environmental approval despite the fact that allegations of loud noise, vibration and tremors, emission of offensive odour, pungent fumes, and other nuisance were not established.99 Lastly, while dealing with a complaint against construction of a plant causing pollution, the Punjab Tribunal noticed that the proponent had submitted EIA report of the project. The Tribunal held that it was deemed to have been approved after four (4) months of its submission to the extent that it did not contravene the provisions of the environmental statute and the Regulations. The Tribunal, however, imposed a fine of Rs. 100,000 on the proponent for violation of the mandatory “operational” permission for the project.100

In a case concerning a project of the government, the project was evaluated by a government consultant and the Secretary of Environment was invited in meetings of the executive committee for the project. However, the Punjab Tribunal held that specific provisions of enacted law cannot be bypassed or deferred by adopting some other unwarranted methods or procedures – no matter such procedures might be more comprehensive and complete than the one required by some enacted provisions of law. The Tribunal did not merely limit its powers to the project in hand, i.e., part of transport system of Lahore City, but also directed the government to access the whole transport system and its improvements for IEE and EIA based on 20 years of city planning. However, it did not impose any penalty on the respondents and only issued a warning because the Tribunal was more interested in promotion of sustainable development of environment rather than the determining accusation in the complaint. It held that even the contractors of the government cannot absolve themselves from liability of executing an unlawful project.101

On the other hand, there are scant reported cases of the Sindh Tribunal that impose fines on the proponents for their failure to obtain these environmental approvals. The Sindh Tribunal has taken a lenient view for dealing with violations of these provisions. For example, while dealing with a case of construction of multi-story building, the Sindh Tribunal dismissed the case

97 United Feeds (Pvt.) Ltd. vs. Provincial Environmental Protection Agency, 2018 CLD 1454 [Punjab Tribunal].
98 Haji Muhammad Ismail vs. Director General EPA, 2019 CLD 80 [Punjab Tribunal].
99 Raheel Majeed vs. DG EPA, 2011 CLD 1232 [Punjab Tribunal].
100 Lafarge Pakistan Cement Company Ltd. vs. DG EPA, 2011 CLD 1295 [Punjab Tribunal].
101 Sumaira Awan vs. Government of Pakistan, 2008 CLD 1185 [Punjab Tribunal].
against the respondents after merely recording their statement to file EIA approval of the project within two (2) months. The Tribunal based its decision on an earlier case of the Sindh High Court deciding that the relevant environmental approval was unnecessary for construction of residential complex. Similarly, in a complaint against construction of the Signal Free Corridor in Karachi comprising series of bridges, flyovers, and crossings without conducting EIA, the Sindh Tribunal refused to stop construction of the project and allowed the same at the risk and cost of the proponent because the project was initiated in interest of general public. The Sindh Tribunal also directed the proponent to submit EIA report to the Sindh EPA within one (1) month and has held that failure to do so will disentitle the proponent from continuing the construction work.

The superior courts in Pakistan have also dealt with cases concerning these approvals and has mixed views depending upon circumstances of each case. In a case involving a complex network of flyovers, underpasses, and interchanges, the proponent had obtained IEE approval of the project claiming it to be merely an underpass. Since the project had to be tested on more stringent standard of EIA and mandatory requirements relating to the public participation and consultation were not complied with, the Sindh High Court restrained and stopped all construction in relation to or touching upon the project but did not prevent the proponent to submit an EIA report. The High Court also directed EPA to consider the matter on its top priority after submission of the report and highlighted the function of EPA to apply the binding provisions for obtaining these approvals. It held that the failure or even refusal of EPA to exercise these powers must be strongly deprecated.

In another similar case challenging construction of flyover, the Sindh High Court took an alternate approach and refused to stop the construction work of the proposed flyover, being a project of public importance meant for welfare of people. The High Court held after looking at the nature and dimensions of the flyover that it was altogether a “construction” of a new road and not construction or rebuilding of the existing road, and therefore, liable to more stringent standard of EIA. The High Court directed the proponent to fulfil all the legal requirements of the applicable environmental statute and regulations, including submission of EIA, and in case of adverse findings in EIA, the proponent was made liable to make suitable compensation to affected persons.

In a case concerning re-classification of land use from residential to commercial, the Sindh High Court has held that EIA has to be filed with the Sindh EPA in all cases where any change in the land use was brought or construction, alteration, or expansion of an existing building took place. The High Court held that when an area is converted into commercial area, a large number of additional people and vehicles visit and passe through it, which may cause environmental pollution and may likely cause an adverse environmental impact to violate the basic right of its residents. Similarly, in a case of conversion of amenity plot into commercial plot, the Lahore High Court has held that no construction can be undertaken without an EIA approval from the concerned EPA under the applicable statute.

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102 Naeem Ahmed Mughal vs. Jabir Hussain Dada, 2010 CLD 738 [Sindh Tribunal].
104 Shehri-CBE vs. Sindh Environmental Protection Agency, 2010 CLD 859 [Sindh Tribunal].
105 Pakistan Defence Officers Housing Authority vs. Federation of Pakistan, 2014 CLD 1279 [Karachi].
106 Salma Iqbal Chundrigar vs. Federation of Pakistan, 2009 CLD 682 [Karachi DB].
107 Nighat Jamal vs. Province of Sindh, 2010 YLR 2624 [Karachi DB].
108 Amer Bakht Azam vs. Cooperative Model Town Society, 2007 CLC 374 [Lahore].
In another case, the project was a combined cycle power plant of 94 MW and a desalination plant, for which the proponent had only obtained IEE approval from the Sindh EPA. The Sindh High Court held after considering the "attributes" of a desalination plant, that the project was a combined plant and had functions of treatment plant within EIA approval. It remanded the matter to the Sindh EPA for evaluation of the project on such basis and held that the project may impair or damage the environment unless appropriate mitigating measures are employed, adequate monitoring is implemented, and effective corrective measures are suggested after thorough assessment and evaluation of the project. It also laid down a very essential principle to maintain balance between industrialization and ecology. It noticed that the environmental statutes have envisaged that development and environmental protection must progress together. The Court, however, allowed the proponent to continue the construction and erection of the project at its own risk and cost.\textsuperscript{109}

In Pakistan, the judicial handling of EIA issues is noticeably intricate and varied, particularly across different provinces. In general, aggrieved parties can initiate proceedings before the Environmental Magistrates, Tribunals, and the High Courts. A strength in the Pakistani system is the existence of Environmental Tribunals, Magistrates, and Green Benches of the High Courts that specialize in environmental issues, potentially fostering a nuanced approach to complex environmental matters. However, there appears to be a lack of uniformity in judgments and enforcement, particularly when comparing the decisions of the Punjab and Sindh Tribunals, with Punjab adopting a more stringent stance towards violations and Sindh taking a more lenient approach, particularly in cases perceived to be in the public interest. Moreover, the lack of reported judgments from several jurisdictions indicates a possible transparency and accessibility issue, which could impede the development of a cohesive body of jurisprudence and hinder public trust in the system.

Further, the involvement of superior courts in Pakistan signifies a deep-seated engagement with environmental jurisprudence, recognizing the significance of IEE and EIA while also considering the public utility of certain projects. These courts seem to strive for a balance between development and environmental protection, often emphasizing the necessity of EIA reports and adherence to environmental statutes. Yet, their decisions sometimes allow potentially damaging projects to continue at the proponent's risk, possibly leaving room for irreversible environmental damage.

Upon analysis, it seems the approach adopted in the United States might be perceived as more efficient due to its structured and clear-cut procedural guidelines that strive to prevent undue delays and costs. However, in terms of comprehensive environmental protection, Pakistan’s detailed and multi-faceted judicial system, albeit with its noted limitations, seems to offer a more robust framework, where environmental concerns are deeply entangled with judicial review at various levels. This allows for an additional nuanced and detailed oversight of the examination of potential environmental impacts. Thus, adopting an approach that integrates the procedural clarity and efficiency observed in the United States, with the depth and nuanced understanding of environmental issues reflected in Pakistan’s judicial framework, might lead to an efficient and comprehensive approach to EIA judicial reviews. This amalgamation could potentially be a model that the European Union might consider incorporating, to foster enhanced accountability and environmental protection within its jurisdictions.

\textsuperscript{109} Shehri C.B.E. vs. Government of Pakistan, 2007 CLD 783 [Karachi DB].
11. Conclusion

It is evident from the above comparative analysis of procedural components of EIA that each jurisdiction boasts its own distinctive methodology and emphasis. These procedural components, spanning from the allocation of responsibility for EIA report to the scope of judicial review, form the backbone of the EIA process. While both the European Union and the United States present a mature and methodical framework with their own strengths and weaknesses, the Pakistani system can benefit from both incorporation and adaptation of the best practices from its counterparts. While this system is still evolving in its approach to EIA, it demonstrates commendable strengths in the monitoring and judicial review facets of the EIA process.

However, viewing EIA solely through the lens of procedure undermines its profound significance. Beyond these procedures lies the substantive essence of EIA, which holds equal, if not more, significance. While procedural elements undoubtedly are foundational to an EIA, there is a complimentary and undeniable significance of the substantive core that adds depth to these procedures and breathes life and meaning into its architectural skeleton. For comprehensive understanding of EIA, it is essential to analyze its substantive components. Accordingly, the next chapter provides a comparison of substantive components of EIA that contribute to holistic environmental protection.
Chapter XII: Comparative Analysis of EIA Substantive Components

The previous chapter presented a comprehensive comparison of procedural components of EIA across the European Union, the United States, and Pakistan. Accordingly, this chapter is dedicated to the substantive components of EIA that collectively contribute to the holistic and effective assessments and ensure the quality of environment. It aims to offer a detailed comparison and the intricacies that define and distinguish the substantive practices across each jurisdiction.

EIA is rooted in four (4) substantive components, including the identification and evaluation of environmental factors, the assessment of potential impacts, the mitigation of significant effects, and the exploration of reasonable project alternatives. Collectively, these components provide a comprehensive depth to EIA process, ensuring that environmental considerations are thoroughly integrated into every project with significant environmental effects. These elements, though universal in their presence across jurisdictions, exhibit unique characteristics, strengths, and weaknesses inherent to the contexts of the European Union, the United States, and Pakistan. This chapter reveals the depth and breadth of their significance, and the roles they play in amplifying the efficacy of procedural counterparts.

However, before discussing the substantive components, it is essential to provide a brief overview of the foundational requirements for these components across the European Union, the United States, and Pakistan.

In the European Union, the EIA Directive contains a list of the minimum information to be included in an EIA report. This list encompasses, among others: (a) description of the likely significant effects of the project on the environment; (b) description of the features of the project and/or measures envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment; and (c) description of the relevant and reasonable alternatives studied by the developer and its specific characteristics along with the main reasons for the option chosen.\(^1\) Annex IV of the EIA Directive further provides guidelines on the information to be included in the EIA report. These requirements are discussed throughout in this chapter.

Similarly, in the United States, NEPA requires to include in an EIS, amongst others, (a) the environmental impact of the proposed action, (b) any adverse environmental effects which cannot be avoided, and (c) alternatives to the proposed action.\(^2\)

On the other hand, Pakistan lacks sufficient clarity on specific requirements for these substantive components. The criteria for substantive components are merely embodied within the definition of the EIA itself. In Pakistan, an EIA is defined as “an environmental study comprising collection of data, prediction of qualitative and quantitative impacts, comparison of alternatives, evaluation of preventive, mitigatory and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations and such other components”.\(^3\)

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1. EIA Directive, Article 5(1).
2. NEPA, sec. 102(2)(C) [42 USC § 4332].
3. Section 2(xi) of the Punjab and Federal Acts. The Sindh, KPK, and Balochistan Acts also provide an identical definition of EIA.
This chapter unravels the complexities and nuances of these foundational frameworks and provides a comprehensive and comparative analysis of the substantive components of EIA within these diverse jurisdictional contexts. This shows that these components add substantive depth to the EIA procedure and provide a framework for enforcing the substantive environmental rights.

A. Environmental Factors

One of the core substantive components of EIA is the definition and consideration of the term “environment” or the “factors” that are likely to be impacted or affected by a project. This clarification is not merely a matter of terminology but plays a vital role in shaping the entire analysis throughout an EIA. For instance, this elucidation is essential for determining the scope of the analysis, identification and mitigation of significant impacts, and contemplating project alternatives in an EIA. Notably, the European Union, the United States, and Pakistan adopt different approaches to define the “environment” or “factors” in context of an EIA.

The European Union adopts a detailed and structured approach in the EIA Directive. This directive identifies a range of potential “factors” that can be affected by a project. These factors include: (a) population and human health; (b) biodiversity, with particular attention to species and habitats; (c) land, soil, water, air, and climate; (d) material assets, cultural heritage and the landscape; and (e) the interaction between all these factors. In addition, Annex IV of the EIA Directive provides further description and examples of factors likely to be significantly affected by the project. These factors include population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydro-morphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, architectural and archaeological aspects, and landscape. The effects on these factors must be identified, described, and assessed in every EIA in the light of each individual case in an appropriate manner.

Much like the European Union, Pakistan presents a multifaceted definition of “environment”, showing slight variations across its different laws. The Pakistani laws predominantly encompass a number of elements to define environment, including (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationships between any of the above factors. However, three (3) Pakistani provinces have extended this definition to include additional factors. Notably, Sindh province integrates the concept of “natural resources” in its definition. In parallel, KPK and Balochistan provinces include “installations” and “cultural conditions” in their definitions.

In contrast, the United States focuses on the “human environment” that is likely to be affected by the federal actions. The NEPA Regulations defines it to mean “comprehensively the natural and physical environment and the relationship of present and future generations of Americans with that environment.” Accordingly, an EIS in the United States is required to succinctly

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4 EIA Directive, Article 3(1).
5 Id. Clause 4 of Annex IV.
6 Section 2(x) of the Federal and Punjab Act; Section 2(xii) of the Sindh Act, Section 2(r) of the KPK Act, and Section 2(p) of the Balochistan Act.
7 NEPA Regulations, sec. 1508.1(m).
describe the environment of the area(s) to be affected or created by the alternatives under consideration, including the reasonably foreseeable environmental trends and planned actions. However, such a description must be necessary to understand the effects of the alternatives, and the data and analyses in an EIS must be commensurate with the importance of the impacts. Furthermore, the agencies are also required to concentrate effort and attention on important issues and to avoid useless bulk in EISs.\textsuperscript{8}

The United States defines the human environment in broader terms without listing any of its components. Such an approach might overlook detailed analysis on specific environmental aspects, potentially failing to capture various environmental components. However, it could be efficient because of its emphasis on concise yet substantive analysis, in contrast to the European Union that requires to identify, describe, and assess effects on every listed factor during EIAs.

Upon scrutinizing the approaches adopted by the European Union, the United States, and Pakistan, it is apparent that the European Union embodies the most comprehensive and efficient approach. It expressly requires considering environmental factors such as flora, fauna, biodiversity, climate, and landscape, as well as other factors such as population, human health, and cultural heritage.

Although Pakistani approach offers a listed perspective similar to the European Union, it lacks a number of important environmental elements from its definition, including population, human health, biodiversity, habitats, climate, cultural heritage, landscape, and architectural and archaeological aspects. However, arguably, some of these elements can be interpreted to be included in terminologies used in the definition. Furthermore, this approach may lead to inconsistencies in EIAs conducted in various regions owing to the variations in definitions of environment across different legislative frameworks within the country.

\textbf{B. Impact Assessments}

In an EIA, a central task is the systematic identification and evaluation of the potential “effects” or “impacts” that a proposed project may have on various above-discussed environmental factors. This is one of the core substantive components of EIA that serves several fundamental purposes. It is essential in establishing the scope of the EIA, devising effective strategies to mitigate these adverse impacts, and facilitating selection of reasonable project alternatives. Accordingly, this component contributes to the preservation and enhancement of environmental quality while fulfilling developmental goals.

EIAs are characterized by their multifaceted assessments, encompassing a broad spectrum of evaluations each honed to specific aspects of the environment and society. This section offers a nuanced examination of five (5) frequently found assessment types within an EIA, including the biological impact assessment, social impacts assessment, risk assessment and analysis, cumulative effects assessment, and climate change assessment. These multifarious assessments encapsulated within an EIA are testament to its comprehensive nature, ensuring that the myriad of ways in which a project can impact the environment and other factors are thoroughly identified, examined, and addressed. This diversity in assessment types underscores the EIA’s role as a holistic evaluative tool, instrumental in balancing developmental aspirations with environmental and societal wellbeing.

\textsuperscript{8} Id. sec. 1502.15.
However, it is crucial to clarify that focus of this section is purely legal, examining the existence and importance of these diverse assessments within an EIA across the European Union, the United States, and Pakistan. It does not delve into the methodologies or scientific principles underlying each type of these assessment. Furthermore, there is rich scholarly material delving into the intricate details of conducting each assessment, along with the scientific theories and their methodologies. This literature is highlighted throughout this chapter. This evolving literature offers an in-depth insight and addresses scientific questions concerning these assessments. This section, however, narrows its focus to the legal frameworks and mandates that govern the integration and execution of these assessments in EIAs across the specified regions.

Before discussing these assessments in detail, it is essential to briefly highlight the legal frameworks governing impact assessments in these jurisdictions, especially concerning identification and evaluation of the potential “effects” or “impacts”. The European Union, the United States, and Pakistan employ different criteria to identify and assess these effects within the EIA framework.

In the European Union, the EIA Directive requires to identify, describe, and assess the “direct and indirect significant effects” of a project on above discussed environmental and other factors. These effects must also include the “expected effects” from the vulnerability of the project to risks of major relevant accidents and disasters. Furthermore, Annex IV requires to include “a description of the likely significant effects” of the project on the environment in an EIA report resulting from, inter alia:

“(a) the construction and existence of the project, including, where relevant, demolition works;
(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;
(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);
(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;
(g) the technologies and the substances used.”

Annex IV also authorizes member states to “cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects” of the project.

It is noticeable that the European Union offers a detailed framework for impact assessments that integrates multiple dimensions of impacts and facilitates a coordinated approach at both the union and member state level. It necessitates that an EIA contains a description of the likely significant effects of the project on the environment resulting from variety of listed aspects

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9 EIA Directive, Article 3(1).
10 Id. Article 3(2).
11 Id. Clause 5 of Annex IV.
such as construction, existence, use of natural resources, emission of pollutants, risks to human health, cumulative effects with other projects, impact on climate, and the technologies and substances used. These effects cover various dimensions including direct, indirect, secondary, cumulative, transboundary, short-term, medium-term, long-term, permanent, and temporary impacts, as well as both positive and negative effects. Member states are authorized to evaluate all these facets of effects within the EIAs.

On the other hand, in the United States, NEPA requires to include in every action “significantly affecting the quality of human environment” a detailed EIS by the responsible official on, amongst others, “the environmental impact of the proposed action” and “any adverse environmental effects which cannot be avoided should the proposal be implemented”. The NEPA Regulations define “effects” and “impacts” to have same meaning: “changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and include the following:

“(1) Direct effects, which are caused by the action and occur at the same time and place. (2) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. (3) Cumulative effects, which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. (4) Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial.”

It is clarified in the NEPA Regulations that the “environmental consequences” section in an EIS forms the scientific and analytic basis for the comparisons of alternatives. It consolidates, without any duplication to alternatives, the discussions of those elements that are within the scope of EIS and as is necessary to support the comparisons. The discussion must include: (1) the environmental impacts of the proposed action and reasonable alternatives to the proposed action and the significance of those impacts; (2) any adverse environmental effects that cannot be avoided should the proposal be implemented; (3) the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity; (4) any irreversible or irretrievable commitments of resources that would be involved; (5) possible conflicts between the proposed action and the objectives of federal, regional, state, tribal, and local land use plans, policies and controls for the area concerned; (6) energy requirements and conservation potential of various alternatives and mitigation measures; (7) natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures; (8) urban quality, historic and cultural resources, and the design of the built

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12 NEPA, sec. 102 [42 USC § 4332].
13 NEPA Regulations, sec. 1508.1 (g).
environment, including the reuse and conservation potential of various alternatives and mitigation measures; (9) means to mitigate adverse environmental impacts; and (10) where applicable, economic and technical considerations, including the economic benefits of the proposed action.\textsuperscript{14}

Furthermore, in the United States, the economic or social effects by themselves do not require preparation of an EIS. However, when the agency determines that economic or social and natural or physical environmental effects are interrelated, EIS must discuss and give appropriate consideration to these effects on the human environment.\textsuperscript{15}

It is evident that the United States has an equally elaborative framework for impact assessments as that of the European Union. NEPA requires to evaluate environmental impacts of the proposed action and unavoidable adverse effects within EISs. The NEPA Regulations categorizes these effects to include direct effects (occurring simultaneously with the action), indirect effects (occurring later or at a distance but are foreseeable), and cumulative effects (resulting from the combination of the action’s effects with those of other actions over time). Furthermore, the scope of these effects is extensive, covering a diverse array of areas such as ecological, aesthetic, historic, cultural, economic, social, and health effects. In addition, the NEPA Regulations are also revised to incorporate climate change considerations into EIA framework of the United States.\textsuperscript{16} These considerations are not only mandated by the UNFCCC (1992) but are increasingly prioritized in contemporary environmental governance. In line with this, the United States presents significant strengths in its detailed framework, encouraging an informed and data-driven decision-making process.

In contrast, the Pakistani laws provide different definitions for “adverse environmental effect”. The Federal, Punjab, and Sindh Act define it to include “impairment of, or damage to, the environment and includes (a) impairment of, or damage to, human health and safety or to biodiversity or property; (b) pollution; and (c) any [specified] adverse environmental effect.”\textsuperscript{17} Balochistan has a slight variation in its definition, and replaces specified adverse environmental effects with those on land, air and water.\textsuperscript{18} KPK, however, defines it to include “pollution or impairment of, or damage to, the environment, and includes, (i) impairment of, or damage to, human health and safety or to property or biodiversity; (ii) pollution to physical, biological, social, economic environment or to geological, hydrological resources or various land forms; (iii) damage to public comfort, aesthetic conditions, ecological balance and meteorological conditions; (iv) damage to aquifers, vegetal canopy, cultural heritage or archeological sites; and (v) any other [specified] adverse environmental effect ...”\textsuperscript{19}

Therefore, Pakistan’s approach to defining “adverse environmental effects” seems fragmented, with varied definitions across federal and provincial levels. The prevailing definition is relatively restrictive, primarily encompassing damages to human health, pollution, biodiversity, and property, without explicitly mandating the evaluation of direct, indirect, or cumulative effects of a project. Only one province, Balochistan, addresses aspects of social and

\textsuperscript{14} Id. sec. 1502.16(a).
\textsuperscript{15} Id. sec. 1502.16(b).
\textsuperscript{17} Section 2(i) of the Federal, Punjab, and Sindh Acts.
\textsuperscript{18} Section 2(a) of the Balochistan Act.
\textsuperscript{19} Section 2(b) of the KPK Act.
economic environments. These gaps and discrepancies in the definition may give rise to challenges in consistent implementation and enforcement across its various territories.

By examining these different approaches to impact assessments in EIAs, it becomes evident that each region adopts a unique methodology, articulated with varying levels of detail. This underscores the necessity for a careful and nuanced understanding of these frameworks in the evaluation and planning of projects with potential environmental impacts. With this foundation laid, it is now appropriate to provide comparison of different assessments within the European Union, the United States, and Pakistan:

1. Biological Impact Assessment

The Biological Impact Assessment (“BIA”) focuses on evaluating the potential impacts of developmental projects on biodiversity, including ecosystems, species, and habitats. Many scholars have identified the significance of this assessment in their scholarly work.20

This assessment was mandated by the Biodiversity Convention (1992), which obligated its state parties to introduce appropriate procedures requiring EIAs for projects that are likely to have significant adverse effects on “biological diversity” for avoiding or minimizing such effects.21 All three jurisdictions – the European Union, the United States, and Pakistan – incorporate this assessment within their legal frameworks ensuring that development projects are aligned with ecological sustainability.

In the European Union, this form of assessment is intricate, offering an exhaustive exploration of the effects on the biological environment. Annex IV requires to consider the effects resulting from “the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources”. This mandate underscores a holistic assessment that is not only centered on immediate impacts but also accounts for the long-term sustainable availability of these resources. This approach fosters a balance between developmental imperatives and ecological preservation, ensuring that economic progress does not undercut ecological integrity.

Although the United States has not ratified the Biodiversity Convention (1992), it also incorporates this assessment within its legal framework. While the term “biodiversity” is not explicitly used in this framework, the NEPA Regulation define the effects to include “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems).”


In addition, the Pakistani laws define “adverse environmental effect” to explicitly include impairment of, or damage to, the environment and biodiversity.

This analysis underscores inherent diversities in BIA frameworks across different jurisdictions. The EU’s detailed and forward-looking approach, the U.S.’s comprehensive yet broader methodology, and Pakistan’s generalized regulatory language each offer unique insights and challenges. The key lies in continuously refining these frameworks to elevate their precision, applicability, and efficacy in safeguarding biodiversity amidst the evolving dynamics of developmental aspirations and environmental conservation. Each jurisdiction, while distinct, contributes essential perspectives that collectively enrich the global discourse on harmonizing development and biodiversity preservation through EIAs.

2. Social and Health Impact Assessments

The Social Impacts Assessment (SIA) evaluates the effects of projects on human communities examining a range of factors, including health, well-being, lifestyle, equality, economic, income, employment, social, and cultural cohesion. The European Union, the United States, and Pakistan demonstrate distinct approaches and emphases within their regulatory frameworks on SIA.

At the outset, it is pivotal to distinguish between SIA and SEA. While SEA is tailored to evaluate plans and programmes, SIA is project-centric within an EIA, concentrating on the social repercussions of specific developmental projects. Furthermore, in some academic literature, there is an evolving discourse that seeks to further segment social assessments. A notable instance is the demarcation of Health Impact Assessment (HIA) as a distinct category, despite its incorporation within the broader SIA. Many scholars now recognize the importance of HIAs in their literature. HIAs are specialized evaluations concentrating on the potential repercussions of projects on human health, offering a focused lens to scrutinize health-related outcomes intricately.

The European Union incorporates an explicit focus on social impacts within its EIA process. The EIA Directive identifies a range of potential “factors” that can be affected by a project, including population, human health, material assets, cultural heritage, and the landscape. Furthermore, Annex IV requires to include social effects of the project on the environment in an EIA report resulting from, inter alia, the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, the disposal and recovery of waste, the risks to human health, and cultural heritage.

On the other hand, in the United States, the NEPA Regulations define “effects” and “impacts” to have same meaning, including effects on “aesthetic, historic, cultural, economic, social, or

23 EIA Directive, Article 3(1).
24 Id. Clause 5 of Annex IV.
health, whether direct, indirect, or cumulative”.25 It is further clarified that the economic or social effects by themselves do not require preparation of an EIS in the United States. However, when the agency determines that economic or social and natural or physical environmental effects are interrelated, an EIS must discuss and give appropriate consideration to these effects on the human environment.26

Similarly, the Pakistani laws define “adverse environmental effect” to include impairment of, or damage to, human health, safety, and property.27 In this definition, KPK further includes damage to public comfort, aesthetic conditions, ecological balance, meteorological conditions, cultural heritage, and archeological sites.28

In essence, this analysis unveils distinct regulatory nuances across the European Union, the United States, and Pakistan. The EU's explicit and comprehensive methodology, the U.S.'s integrative yet conditional approach, and Pakistan’s narrow and regionally differentiated framework, each reflect unique policy orientations towards SIA. These distinctions underscore the inherent complexity and diversity in assessing social impacts, necessitating ongoing refinement and harmonization to ensure that SIAs are comprehensive, responsive, and adaptive to the evolving social and cultural landscapes in the context of development projects.

3. Risk Assessment and Analysis

The Risk Assessment and Analysis within an EIA focuses on identifying and estimating the potential hazards and risks associated with a project, aiming for robust risk mitigation. These risks are diverse, including natural disasters such as earthquakes, floods, hurricanes, tsunamis, and wildfires, as well as man-made incidents such as chemical spills, nuclear radiation, and industrial accidents.

The EU employs a meticulous and comprehensive approach, where major accidents and disaster-related risks are systematically evaluated. The EIA Directive requires that effects must also include the “expected effects” from the vulnerability of the project to risks of major relevant accidents and disasters.29 Further, its Annex IV requires to consider the effects resulting from “the risks to human health, cultural heritage or the environment (for example due to accidents or disasters).” This approach underscores a preventive paradigm, seeking to anticipate and mitigate risks through a detailed and systematic evaluation, thereby fostering enhanced safety as a preventive measure as well as a substantive component of EIA.

The United States adopts a different trajectory. It does not explicitly integrate risk assessment within its legal framework. However, it is implicit within the broad spectrum of significant environmental impacts. This implicit incorporation ensures that risk assessments, though not explicitly outlined, are integral to the evaluative process in the United States.

In contrast, Pakistan reveals a conspicuous gap in this area. The absence of explicit provisions for risk assessment in its regulatory framework renders it relatively ineffective against major disasters. This omission could potentially attenuate the country’s capacity to anticipate,
identify, and mitigate project-associated risks effectively within EIA prescribed guidelines, amplifying vulnerabilities to environmental, health, and climate adversities.

This analysis underscores the variable integration of risk assessment within different regulatory contexts, each presenting distinct challenges and opportunities. The EU’s explicit and comprehensive strategy, the U.S.’s implicit but inclusive approach, and Pakistan’s apparent regulatory gap, collectively underscore the necessity for a harmonized, global approach for the risk assessment and analysis. Enhancing the specificity, applicability, and enforcement of risk assessments within EIAs is pivotal for fostering development that is not only economically viable but also risk free.

4. Cumulative Impacts Assessment

The Cumulative Impacts Assessment (CIA) is an integral aspect of EIA that evaluates the collective impacts of a project over time and space. It employs a comprehensive approach that considers the combined effects of various environmental changes and activities to offer a holistic view of potential environmental degradation. Its application and integration into the regulatory frameworks vary among the European Union, the United States, and Pakistan.

In the European Union, this assessment is firmly embodied within the legal framework governed by the EIA Directive that mandates a detailed evaluation of several effects, including cumulative effects. In particular, Annex IV of the EIA Directive requires examination of “the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources”.

In the United States, a similarly robust approach to this assessment is also evident. The NEPA Regulations define effects and impacts to have the same meaning, including “cumulative effects, which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.”

In contrast, Pakistan exhibits a gap in its regulatory framework regarding this assessment. It currently lacks specific mandates that require the consideration of cumulative effects within its EIA processes. This absence could potentially exacerbate vulnerabilities to complex environmental challenges and could potentially impact its ecological resilience and adaptive capacity.

This analysis of these diverse regulatory contexts illuminates the varying degrees of CIA integration within EIA frameworks. The implications of these disparities are significant, influencing the effectiveness of environmental governance and the realization of sustainable development objectives. Enhancing the global integration of CIA emerges as a pivotal pathway to strengthening environmental governance.

5. Climate Change Assessment

The Climate Change Assessment specifically evaluates a project’s contributions to climate change. This assessment was mandated in the UNFCCC (1992) that required the states to “take
climate change considerations into account in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments” to minimize adverse effects on the economy, the public health, and the environmental quality. In addition, many scholars recognize importance of this assessment in their scholarly work.

However, despite its significance, Pakistan lacks a formal incorporation of this assessment within their EIA systems. Further, the United States has recently revised the NEPA Regulations to include this assessment in its EISs. In contrast, the European Union stands out for its adherence to integrate climate change evaluation within its EIA framework.

In the European Union, there is a pronounced emphasis on systemically addressing the climate change impacts of developmental projects. The EU’s approach is codified in the EIA Directive, with Annex IV articulating explicit requirements for assessing a project’s impacts on climate. Annex IV explicitly requires taking into consideration “the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change”. This explicit requirement underscores the EU's commitment to integrating climate change considerations at the core of its environmental assessment and planning processes, aiming to align developmental initiatives with climate resilience and low carbon pathways.

In contrast, in Pakistan, the absence of a uniform approach to climate change assessment is evident, and it is yet to systematically integrate it into their EIA frameworks. The lack of explicit requirements for climate change assessments within their environmental evaluation frameworks underscores a critical gap. This signifies an opportunity to advance policy and legislative frameworks to ensure that climate considerations are intrinsic to the planning and approval of developmental projects. However, in the United States, the NEPA Regulations are revised to include climate change considerations in EISs.

This analysis highlights a clear differentiation in the approaches adopted by the European Union, the United States, and Pakistan in evaluating projects’ contributions to climate change. The EU’s structured and explicit methodology presents an exemplar that highlights the potential gaps and opportunities for enhancement in the United States and Pakistan. Strengthening the integration of climate change assessments within the environmental evaluation frameworks is also required under UNFCCC (1992) to ensure that developmental projects are climate resilient and sustainable, especially in the wake of increasing climate change and variability.

30 UNFCCC (1992), art. 4(1)(f).
C. Mitigation

Mitigation is one of the core substantive components of EIA. It is used to prevent, avoid, reduce, or offset the adverse environmental effects of a project. It is also approached with varying degrees within the European Union, the United States, and Pakistan.

It is surprising that the EIA Directive does not include the term “mitigation”. However, it imposes several obligations that are embodied within the concept. It requires to include in an EIA report “a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment”.

On the other hand, the United States adopts a more explicit approach and offers a well-defined categorization of mitigation measures ranging from avoiding impacts to compensating for adverse effects. The NEPA Regulations defines “mitigation” as “measures that avoid, minimize, or compensate for effects caused by a proposed action or alternatives as described in an environmental document or record of decision and that have a nexus to those effects”. Furthermore, mitigation includes: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or (e) compensating for the impact by replacing or providing substitute resources or environments.

In Pakistan, the approach towards mitigation in EIA appears to be the most ambiguous. While the obligation for mitigation is acknowledged in definitions of EIA, the absence of statutory provisions expounding the nature or extent of necessary mitigative measures creates a glaring gap in the regulatory framework. This lack of specificity may result in inadequate or inconsistently applied mitigation efforts, undermining the potential for EIA to function as a tool for protection of environment in the country. The vagueness of the policy can potentially result in a wide variance in the quality and effectiveness of mitigation efforts for different projects.

This analysis suggests that the United States appears to lead a well-defined and detailed framework that outlines potential mitigation strategies in a clear and structured manner. The explicit categorization of mitigation measures facilitates an actionable guide for project developers to design and implement effective mitigation strategies. On the other hand, the European Union, while not explicitly using the term “mitigation,” enforces rigorous, obligatory measures to mitigate environmental impacts. Both regions offer insights that could bolster the effectiveness of rigorous, uniform, and effective mitigation within the EIA process in improving environmental quality. However, Pakistan’s approach seems in dire need of refinement to introduce clearly defined and enforceable mitigation regulations within its EIA framework, thereby fostering a more robust approach to environmental protection.

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32 EIA Directive, Article 5(1)(c).
33 NEPA Regulations, sec. 1508.1(s).
34 Id. sec. 1508.1(s).
35 Section 2(xi) of Federal and Punjab Acts; Section 2(xv) of the Sindh Act; and Section 2(s) of KPK Act; and Section 2(q) of Balochistan Act.
D. Reasonable Alternatives

The consideration of reasonable alternatives is another substantive component of an EIA. A comparative analysis of the approaches adopted by the European Union, the United States, and Pakistan reveals varied levels of depth and specificity, each with its inherent strengths and weaknesses.

In the European Union, the EIA Directive requires to include “a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment”.\(^{36}\) Furthermore, Annex IV specifies these reasonable alternatives to be in terms of project design, technology, location, size and scale, and requires to include a comparison of their environmental effects.\(^{37}\)

In the United States, the NEPA Regulations require that the alternatives section should present the environmental impacts of the proposed action and the alternatives in comparative form based on the information and analysis on the “affected environment” and the “environmental consequences” sections. In this section, the agencies must: (a) evaluate reasonable alternatives to the proposed action, and briefly discuss reasons for elimination of other alternatives from detailed study; (b) discuss each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits; (c) include the no action alternative; (d) identify the agency’s preferred alternative or alternatives, if one or more exists, in the draft EIS and identify such alternative in the final EIS; (e) include appropriate mitigation measures not already included in the proposed action or alternatives; and (f) limit their consideration to a reasonable number of alternatives.\(^{38}\) Furthermore, the NEPA Regulations define “reasonable alternatives” as “a reasonable range of alternatives that are technically and economically feasible, and meet the purpose and need for the proposed action”.\(^{39}\)

In Pakistan, the approach towards reasonable alternatives in EIA appears to be as ambiguous as mitigation. While the obligation for “comparison of alternatives” is acknowledged in definitions of EIA in the Pakistani laws,\(^{40}\) the legal text lacks explicit clarity on the criteria defining these alternatives, leaving a gray area on whether they need to be reasonable or feasible. Accordingly, there is an evident lack of detail and guidance on how these alternatives should be identified, evaluated, or compared, resulting in potential inconsistencies in the application and effectiveness of EIAs across various projects. This vagueness underscores a need for enhanced regulatory clarity to ensure that alternatives are not only systematically assessed but are also aligned with environmental, social, and economic sustainability benchmarks.

In essence, while the European Union's approach is characterized by its detailed requirements ensuring a thorough examination of the “relevant” and “reasonable” alternatives, the United States framework is marked by its structured and comprehensive criteria ensuring each “technically and economically feasible” alternative's environmental impacts are distinctly outlined and compared. Upon comparison, the approaches adopted by the European Union and

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\(^{36}\) EIA Directive, Article 5(1)(d).
\(^{37}\) Id. Clause 2, Annex IV.
\(^{38}\) NEPA Regulations, sec. 1502.14.
\(^{39}\) Id. sec. 1508.1(z).
\(^{40}\) Section 2(xi) of Federal and Punjab Acts; Section 2(xv) of Sindh Act; and Section 2(s) of KPK Act; and Section 2(q) of Balochistan Act.
the United States appear to be equally comprehensive and efficient, offering a well-defined structure that promotes a thorough and comparative analysis of reasonable alternatives with emphasis on indication of the reasons behind the chosen option.

Conversely, Pakistan is confronted with an absence of clarity and rigor in its approach to evaluating reasonable alternatives, warranting enhanced legal and regulatory frameworks to elevate the precision, consistency, and effectiveness of its EIAs. Drawing insights from established frameworks of the European Union and the United States, Pakistan can significantly guide its approach towards a more detailed and structured analysis of reasonable alternatives within its EIA process. Similarly, the synthesis of strengths from the European Union and the United States can potentially enrich the global methodology applied to the evaluation of reasonable alternatives within the EIA process, promoting a more holistic, rigorous, and effective approach to environmental conservation and management.

**E. Conclusion**

In evaluating the efficacy and comprehensiveness of these approaches, the EU’s strategy appears the most robust, offering a detailed framework that integrates multiple dimensions of substantive components, and facilitates a coordinated approach at both the union and member state level. It fosters an anticipatory stance towards potential risks, including those stemming from climate change, which is increasingly pivotal in contemporary environmental governance. The US’s approach under NEPA also presents strengths in its detailed analytical and scientific basis, encouraging an informed, data-driven decision-making process. Meanwhile, Pakistan’s territorial approach lacks sufficient clarity in these elements and allows for a very narrow focus on some of the substantive components. It could benefit from harmonization to avoid potential discrepancies in application and enforcement of EIA.

This chapter highlights that incorporation of the four (4) substantive components within EIA process – the identification and evaluation of environmental factors, the assessment of potential impacts, the mitigation of significant effects, and the exploration of reasonable project alternatives – underscore its comprehensive and multifaceted nature to protect the quality of environmental components. There is an undeniable significance of the substantive core that adds depth to these procedures and breathes life and meaning into its architectural skeleton. Each of these components plays a crucial role in augmenting the depth and breadth of EIA, ensuring it transcends a mere procedural checklist to become a dynamic tool for sustainable development:

1. The rigorous identification and evaluation of environmental factors serve as the bedrock of EIA, ensuring a detailed contextual understanding that is essential for an informed analysis. This foundational step ensures that subsequent assessments are grounded in a thorough understanding of the baseline environmental conditions and potential vulnerabilities.

2. Assessment of potential impacts is another pivotal component. By systematically evaluating the possible environmental consequences associated with a proposed project, EIAs are equipped with essential insights. This facilitates informed decisions that are cognizant of the ecological, social, and economic implications of development initiatives.
(3) Mitigation of significant effects, the third substantive component, underscores the proactive essence of EIA. By identifying, evaluating, and proposing mitigation measures for anticipated impacts, the EIA process fosters an anticipatory approach to environmental management. This component ensures that strategies are in place to minimize adverse effects, enhancing the project’s alignment with ecological sustainability principles.

(4) Finally, the exploration of reasonable project alternatives amplifies the value of EIA by ensuring that proposed developments are not only assessed in isolation but are also compared against reasonable alternatives. This comparative analysis fosters a broader perspective, ensuring that the selected development pathway optimally balances environmental preservation, social equity, and economic viability.

Accordingly, these substantive components collectively enhance the EIA process, transforming it into a holistic assessment tool that is anchored in empirical evidence, anticipatory management, and comparative analysis. Each component enriches the EIA’s capability to facilitate development that is not only economically viable but is also ecologically sustainable and socially equitable. Their integration ensures that EIA is a dynamic process, capable of navigating the complex terrains of conflicting interests, multifaceted impacts, and uncertain future scenarios.

Therefore, with its both procedural and substantive components, EIA emerges as a systematic, unifying, holistic, and comprehensive tool and mechanism that ensures quality of the environmental components; protects and enforces the substantive and procedural environmental rights; integrates the environmental principles within a single concept; and protects, upholds, respects, enforces, and attains the comprehensive right to environment.
Chapter XIII: Significance of the Environmental Impact Assessment

This thesis explores an essential legal question: how can a single mechanism ensure a spectrum of the environmental obligations, rights, and principles, and provide remedy for the enforcement and attainment of the comprehensive right to environment? In response, the thesis identifies EIA as a holistic and unifying tool that ensures quality of the environmental components; protects and enforces the substantive and procedural environmental rights; and integrates the environmental principles within a single concept; and provides a framework to protect, uphold, respect, enforce, and attain the comprehensive right to environment. In addition, it shows that the universal recognition of the right to environment provides essential foundation for making EIA stronger and more effective. In essence, both the right to environment and EIA have potential to effectively address most – if not all – the complex and interconnected environmental challenges, ranging from protecting human health, conserving nature and biodiversity, reducing pollution, mitigating climate change, promoting sustainable development, and strengthening social and environmental justice.

This chapter is one of the first few scholarly works to extensively examine how EIA can facilitate a preemptive, systematic, and administrative enforcement and attainment of the right to environment, especially in light of recent recognition of this right as a human right by the United Nations and New York State.

A. Holistic and Comprehensive Tool

EIA emerges as a systematic, unifying, holistic, and comprehensive mechanism that ensures quality of five (5) environmental components, including nature and biodiversity, atmosphere, water, land, and sustainable development; protects and enforces eleven (11) environmental rights, including eight (8) substantive and three (3) procedural environmental rights; and integrates ten (10) environmental principles found universally across international, regional, and national frameworks within a single concept. These environmental components, rights, and principles are elaborated in detail below:

1. Procedural Excellence

From a procedural viewpoint, EIA is a systematic process delineated into structured sequence of steps that harmonize developmental and social interests with environmental conservation. These procedural components encompass the selection of a project for an EIA, designated responsibility to prepare the EIA report, specifying the contents within the EIA report, issuing public notices, fostering public participation, engaging in consultation with concerned authorities, conducting transboundary consultation, determining the final decision on EIA, ascertaining the time involved in EIA, emphasizing on monitoring and compliance after EIA, and evaluating the extent of judicial review in EIA. Notably, these steps explicitly cover three (3) procedural environmental rights, including the right to information, participation, and judicial review in environmental matters. Chapters XI and XII have already explained the strengths and weaknesses in EIA procedures across the European Union, the United States, and Pakistan.
2. Substantive Depth

On the substantive side, EIA has four (4) substantive components, including the identification and evaluation of environmental factors, the assessment of potential impacts, the mitigation of significant effects, and the contemplation of reasonable project alternatives. Collectively, these substantive components provide a comprehensive depth to EIA process, ensuring that environmental considerations are thoroughly integrated into every project with significant environmental effects. These components ensure the quality of environmental components and amplify the efficacy of their procedural counterparts, ensuring that EIA transcends a mere procedural checklist to become a dynamic tool for a holistic environmental protection:

(1) In an EIA, the rigorous identification and evaluation of environmental factors such as ecological, health, and socio-economic ensure a detailed contextual understanding that is essential for an informed analysis. This foundational step ensures that subsequent assessments are grounded in a thorough understanding of the baseline environmental conditions and potential vulnerabilities.

(2) Furthermore, assessment of potential impacts such as biological, social, health, risk, cumulative, and climate assessments is another pivotal component of EIA. By systematically evaluating and assessing these diverse environmental consequences associated with a proposed project, an EIA facilitates informed decision-making that is cognizant of the ecological, social, and economic implications of development initiatives.

(3) Thereafter, mitigation of significant effects underscores the proactive essence of EIA. By identifying, evaluating, and enforcing mitigation measures for anticipated impacts, an EIA fosters an anticipatory and resolutory approach to environmental management. This component ensures that strategies are in place to minimize adverse effects, enhancing the project’s alignment with ecological sustainability principles.

(4) Lastly, the exploration of reasonable project alternatives amplifies the value of EIA by ensuring that proposed developments are not only assessed in isolation but are also compared against reasonable alternatives. This comparative analysis fosters a broader perspective, ensuring that the selected development pathway optimally balances environmental preservation, social equity, and economic viability.

There is already considerable literature discussing aims of EIA to ensure sustainable development by promoting the integration of environmental considerations into decision-making processes, balancing environmental impacts with socio-economic impacts, and facilitating the identification of mitigation and adaptation measures.¹ For instance, in 2021,

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Torstein John Arneson Hundloe published a book on incorporating sustainability principles in EIA. The author provided a detailed treatment of the ecological, economic, and social impacts in the context of EIA and made clear the necessary link between EIA and the sustainability principles of protecting biodiversity, risk aversion, and inter and intra-generational equity. In addition, many scholars have also discussed essential role of EIA in ensuring sustainable development within specific countries and regions.

Accordingly, the substantive components of EIA collectively transforms it into a holistic and comprehensive assessment tool to ensure the quality of five (5) environmental components, including nature and biodiversity, atmosphere, water, land, and sustainable development, and for the protection of eight (8) corresponding substantive environmental rights, including the rights of nature, the right to natural resources, the right to clean air, the rights to water and sanitation, the right to sustainable development, the right to adequate conditions of life or standards of living, the right to enjoyment of the highest attainable standards of health, and the right to food and adequate nutrition.

3. Integration of Environmental Principles

There are ten (10) recurring, common, and foundational environmental principles integrated throughout international, regional, and national environmental laws. These principles include the precautionary approach, the integration of environmental considerations, the involvement of stakeholders, environmental equity, environmental justice, transboundary cooperation, the polluter pays principle, common but differentiated responsibilities, the use of science and

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technology, and education and awareness in environmental matters. EIA incorporates and ensures each of these environmental principles.

(1) Precautionary Approach

The precautionary approach advocates for proactive measures to prevent and minimize environmental harm in advance, even in the absence of complete scientific certainty. It underscores the need to take precautionary actions to prevent irreversible damage to the environment. EIA enforces this approach by ensuring that potential environmental impacts are assessed and mitigated before a project proceeds.

(2) Integration of Environmental Considerations

This principle underscores the integration of environmental considerations into every decision-making related to economic, developmental, and social matters at their planning stage. It necessitates to use, manage, conserve, and restore nature and biodiversity and prevent and reduce environmental impacts of every action. The procedural and substantive components of EIA collectively integrate environmental considerations from the early planning stage of a project, determining the viability and modifications needed for its implementation.

(3) Involvement of Stakeholders

The involvement of stakeholders in environmental matters is a crucial component of effective environmental governance. Stakeholders are individuals, groups, organizations, and communities that have a vested interest or are affected by environmental decisions, policies, and actions. Their involvement in environmental initiatives fosters collaboration, transparency, and inclusivity. This principle guarantees the acceptance and successful implementation of initiatives; harnesses local knowledge, expertise, needs, and perspectives; facilitates conflict resolution; and leads to comprehensive and informed outcomes. It upholds the procedural environmental rights and the corresponding guarantees available in international, regional, and national environmental laws. In EIA, public participation and consultations specifically address stakeholders’ views and concerns.

(4) Inter-Generational Equity

The principle of inter-generational equity emphasizes the preservation of the environment and its resources for future generations. It calls for considering the long-term consequences of present actions and ensuring the responsible and sustainable use of nature and its resources. EIA incorporates this principle by considering the long-term consequences of proposed projects throughout the assessment and ensuring the responsible and sustainable use of nature and its resources for the benefit of future generations.

(5) Environmental Justice

This principle seeks to address the equitable distribution of environmental benefits and burdens, focusing on addressing disproportionate environmental impacts on marginalized communities. It emphasizes the importance of fair treatment and meaningful involvement of all individuals in environmental decision-making processes without any discrimination. The public participation in an EIA does not differentiate among any social, ethnic, or economic
groups. The holistic and comprehensive nature of EIA ensures that no specific group is disproportionately affected by environmental harms or risks.

There are several scholars who elaborate that EIA ensure environmental justice. In 2019, the Federal Interagency Working Group on Environmental Justice and NEPA Committee published a community guide to environmental justice and NEPA methods. They elaborated that how NEPA advances environmental justice. Similarly, Sheila R. Foster published an article on meeting the environmental justice challenges. The author shed light on addressing environmental justice through environmental laws, the environmental justice critique of comparative risk assessment, and "meaningful" community involvement and influence in the questions of risk.

(6) Transboundary Cooperation

This principle requires countries to cooperate for addressing environmental issues that transcend their national boundaries and affect their neighboring countries. The example of European Union has shown that an effective EIA must incorporate cooperation and participation of affected and concerned nations for projects affecting more than one country.

Several scholars have also elaborated the significance of transboundary cooperation in EIAs in their scholarly work. Accordingly, EIA has the potential to facilitate cooperation and collaboration between neighboring countries like India and Pakistan, particularly in addressing their common transboundary environmental issues.

(7) Polluter Pays Principle

The polluter pays principle requires that those responsible for pollution bear the costs and responsibilities associated with preventing, mitigating, and remedying environmental damage. This principle holds polluters accountable for the negative consequences of their actions on the

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environment, health, and property. EIA integrates this principle by ensuring that the project developers account for and mitigate environmental pollution and damage from the planning stage of a project.

8) Common but Differentiated Responsibilities

While all nations have a common responsibility for protection of the environment, this principle emphasizes that countries with significant historical emissions and greater capacity to address environmental issues bear a greater responsibility in addressing global environmental challenges. EIA serves as a pivotal mechanism in promoting and ensuring this principle. It can be tailored to take into account each country's unique capacities, developmental stage, and historical contributions to environmental issues. EIA can be tailored for any country to apply rigorous scrutiny, compelling them to adopt advanced and innovative solutions for environmental conservation. Conversely, for nations with limited capacities, EIA fosters a more accommodative and supportive approach, focusing on achievable targets and providing avenues for capacity building and international support.

9) Use of Science and Technology

This principle recognizes the importance of utilizing and sharing scientific knowledge and technological advancements to develop sustainable solutions and strategies for environmental protection. It mandates the promotion of green technologies, sustainable agriculture practices, renewable energy solutions, and eco-friendly practices. EIA incorporates this principle by utilizing scientific methods and technologies to assess, predict, and mitigate environmental impacts.

10) Education and Awareness in Environmental Matters

This principle promotes environmental education and awareness to inform individuals, communities, and organizations about the importance of the environment and responsible environmental practices. EIA ensures the dissemination of information and findings to enhance public understanding and participation on environmental issues surrounding them.

Accordingly, EIA emerges as a systematic, unifying, holistic, and comprehensive mechanism that ensures quality of five (5) environmental components, including nature and biodiversity, atmosphere, water, land, and sustainable development; protects and enforces eleven (11) environmental rights, including eight (8) substantive and three (3) procedural environmental rights; and integrates ten (10) environmental principles found universally across international, regional, and national frameworks within a single concept.

B. Attaining the Right to Environment through EIA

Chapter VII outlined five (5) core components of the right to environment, namely substantive, procedural, universal, intertemporal, and assessment. Firstly, the substantive component ensures the quality of the environment and its five (5) environmental components and comprises of the corresponding eight (8) substantive environmental rights. Secondly, the procedural component focuses on establishing procedures by which certain environmental decisions are to be made and encompasses three (3) procedural environmental rights and corresponding guarantees. Thirdly, the universal component extends the protection of the environment to everyone without any discrimination of whatsoever nature to safeguard
environmental justice. Fourthly, the intertemporal component further extends applicability of the right to environment by offering protection to the future generations and ensuring intergenerational equity. Lastly, the assessment component requires states to adopt a systemic mechanism of EIA for protection of the right to environment. Accordingly, this shows that obligation to conduct EIA is one of the core components of an EIA.

In addition, the extensive analysis in Chapter VII indicates that several analogies can be drawn between EIA and the right to environment. Like the unifying, holistic, and comprehensive nature of EIA discussed in above section, the right to environment serves as a unifying, integrated, and inclusive approach to all the environmental obligations, rights, and principles embodied in environmental laws across the globe. On the one side, the recognition of this right builds upon, brings together, and consolidates the existing eleven (11) environmental rights into a single and cohesive right or framework. On the other side, the recognition of this right requires states to fulfil their environmental obligations on all the five (5) environmental components and ensure application of the ten (10) environmental principles within their territory. Accordingly, the environmental rights, obligations, and principles collectively form the contents of this right, which are all embodied with a holistic and comprehensive EIA tool.

It has been established in Chapter VII that the relationship between defining and enforcing the right to environment is tightly intertwined because the contents of the right to environment encompass a set of environmental rights and obligations that must be upheld by the states to enforce this right. Since EIA incorporates all the contents of the right to environment, this right can be attained by fulfilling the obligation to conduct EIA effectively. This shows that when properly implemented, EIA is a powerful vehicle for ensuring, upholding, respecting, protecting, enforcing, and attaining the right to environment.

It is important to emphasize that Justice Brian J Preston (Chief Judge of the Land and Environment Court of New South Wales) suggests that governments need to be proactive in making systemic and structural change in order to prevent the right to environment being infringed and to ensure the duties to protect this right. He further highlights that making the right to environment operational and effective as well as achieving a clean, healthy, and sustainable environment requires proactive systemic and structural change rather than reacting to individual violations of human rights through costly and ineffective litigation. Accordingly, as shown in above analysis, EIA embodies the kind of proactive model advocated by Justice Preston, makes the right to environment operational and effective, and is one of a significant tool in achieving a clean, healthy, and sustainable environment.

It is also essential to reiterate from Chapter VI that the right to environment is widely and explicitly recognized and protected in international, regional, national, and sub-national instruments. Its origin can be traced back to 1971, predating the 1972 Stockholm Declaration, when the state of California acknowledged this right through a statewide referendum at the sub-national level. Since then, the recognition of this right has gained widespread acceptance at regional, national, and sub-national levels. Presently, eighty-seven (87) countries explicitly protect the right to environment within their constitutions; six (6) countries consistently recognize an implied right to environment through national jurisprudence; five (5) countries embody environmental protection within other constitutional provisions; and at least twenty (20) more countries recognize the right to environment in their national legislations.

9 Id.
Accordingly, more than 60% countries worldwide (118 out of 194) recognize this right in their national constitutions, legislations, or jurisprudence. Furthermore, this right is also recognized at the sub-national level in Australia, Canada, Russia, and the United States. However, the right to environment is recently given universal recognition after the UN Resolution (2022).

On the other hand, Chapter VIII revealed that while a substantial 183 out of 197 countries have now embraced EIA laws, the international and regional environmental laws lack an advanced framework on EIA. At the international level, only the Rio Declaration (1992) contains a blanket clause for states to conduct EIAs for activities with potential significant adverse environmental effects. In contrast, the five (5) of such instruments are more specific in their approach to EIAs. For instance, the Espoo Convention (1991) focuses on EIAs for projects with transboundary impacts; the Convention on Biological Diversity (1992) emphasizes EIAs for projects with significant adverse effects on biological diversity; the UNFCCC (1992) necessitates integrating climate change considerations into EIAs; and both the Watercourses Convention (1997) and the Aarhus Convention (1998) restrict their focus to public participation in the EIA process.

At the regional level, regrettably, the European Union remains the only regional framework to have demonstrated a significant progress in incorporating EIAs into its regional environmental laws. Beyond the European Union, only the American region incorporates certain requirements concerning EIA in its Escazu Agreement (2018). However, this agreement lacks a detailed framework on EIA and does not mandate an obligation to conduct EIA. This scenario indicates a considerable gap in requiring EIA across regional environmental laws.

Importantly, over a quarter-century has elapsed since the Aarhus Convention (1998) referencing EIA in an international environmental instrument, and an even more considerable 32 years since the Espoo Convention (1991) centered on transboundary EIA. Given this temporal gap and the evolution of environmental challenges, there is a pressing need to institute a new convention, characterized by extensive ratification, to address the evolved challenges of EIA and to foster a cohesive and updated approach for all its aspects. The United Nations has recently adopted the UN Resolution (2022) for the universal recognition of the right to environment, which is as pivotal juncture in revolutionizing the international environmental laws as the initial Stockholm Convention (1972). A parallel development is urgently needed in the field of EIA to fully recognize the significance of EIA. As EIA gains recognition worldwide, it is imperative for the United Nations and other regional authorities to adopt comprehensive global instruments that recognize the crucial role of EIA in safeguarding the environment. Such instruments would provide a uniform standard for EIA implementation, ensuring that environmental assessments are conducted in a thorough and consistent manner, regardless of the location or type of activity being assessed.

Finally, it is essential to highlight that the recent universal recognition of the right to environment does present a profound paradigm shift in the context of EIA. This recognition challenges the conventional approach of EIA where the focus has largely been on balancing, minimizing, and mitigating the environmental impacts rather than outright protection and preservation of the environment as a fundamental right.

The traditional EIAs focus on identifying, predicting, evaluating, minimizing, and mitigating the adverse environmental impacts of proposed projects. However, after recognition of the right to environment, EIAs must prioritize the absolute preservation of the environment and outrightly deny the projects that significantly harm the environment. Similarly, the traditional
EIAs focus on balancing environmental impacts with economic and social gains. However, enforcing the right to environment necessitates the prioritization of environmental preservation over economic and social interests. The right to environment insinuates an intrinsic and non-negotiable entitlement that is to be respected and upheld, potentially supersed ing the balancing act inherent in conventional EIAs.

Moreover, one of the substantive components of EIA is the exploration of reasonable project alternatives, which ensures that proposed projects are not only assessed in isolation but are also compared against their reasonable alternatives. This fundamental component requires selection of “reasonable alternative” that optimally balances environmental preservation with economic and social impacts. One significant shift would be in the evaluation and selection of project alternatives.

This criterion within an EIA must be fundamentally transformed after universal recognition of the right to environment. Since the states have now fundamental obligation to uphold and protect the right to environment, the states are now obliged to prioritize, choose, and implement an alternative of a project with least environmental effects. This elevated standard underscores a commitment to absolute environmental preservation through rigorous EIA process. The universal recognition of the right to environment has thus enriched the substantive criteria of EIA, underscoring an absolute commitment to ecological preservation. The recalibrated EIA would serve as a crucible where development initiatives are rigorously tested against the unwavering standards of environmental integrity. Such a transformation would certainly enhance environmental preservation and promote innovations and collaborations for protection of the right to environment by the states and governing authorities through EIAs.

This change in EIA is destined to render certain projects nonviable, owing to the stringent environmental obligations in place. For instance, New York has prohibited hydro-fracking activities because of its detrimental environmental ramifications. This indicates a seismic shift in environmental policymaking, where the environmental implications of projects are given paramount consideration, even at the expense of economic and social considerations. Furthermore, it is foreseeable that a spectrum of traditionally accepted projects, including coal power plants, could potentially be phased out or rigorously modified because of their indefensible environmental impacts. In essence, the universal acknowledgment of the right to environment signals a new age where the environmental preservation occupies the center stage in the evaluation and approval of developmental projects.

In essence, accepting the right to the environment as a fundamental human right changes the very foundation of EIA. It implies a transition from a mitigative and adaptive approach to one of stringent preservation and protection. This transition would necessitate a reevaluation of not just the EIA process but also broader legal, economic, and social frameworks that govern environmental protection and developmental projects globally. It brings about debates from striking the right balance between environmental preservation, economic development, and social progress within an EIA to an outright protection of the environment even at the expense of socio-economic factors.

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10 see, for example, https://www.dec.ny.gov/energy/75370.html
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ATTAINING THE RIGHT TO ENVIRONMENT
THROUGH ENVIRONMENTAL IMPACT ASSESSMENT

A dissertation submitted to the faculty in fulfilment of the requirements for the degree of
Doctorate in Judicial Sciences (SJD) in Environmental Law
at the Elisabeth Haub School of Law at Pace University

By Umair Saleem

Under the supervision of Prof. Nicholas A. Robinson
University Professor on the Environment and Gilbert and Sarah Kerlin Distinguished Professor of Environmental Law Emeritus

18 October 2023

(Book 2 of 2)
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<th>Sr. No.</th>
<th>Country Name</th>
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<th>Rights-Based Provisions</th>
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<td></td>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<tr>
<td>1</td>
<td>Afghanistan</td>
<td>2004</td>
<td>Preamble: Attain a prosperous life and sound living environment for all inhabitants of this land;</td>
<td>Art. 15: The state shall be obligated to adopt necessary measures to protect and improve forests as well as the living environment.</td>
</tr>
<tr>
<td>2</td>
<td>Albania</td>
<td>1998; rev. 2016</td>
<td>Art. 56: Everyone has the right to be informed about the status of the environment and its protection.</td>
<td>Art. 59(1)(d): The state … aims to supplement private initiative and responsibility with … a healthy and ecologically adequate environment for the present and future generations;</td>
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<td>3</td>
<td>Algeria</td>
<td>2020</td>
<td>Art. 67: Citizens shall have the right to a healthy environment within a framework of sustainable growth.</td>
<td>Art. 20: The State shall … Guarantee a safe environment … Improve biodiversity and … awareness of environmental risks … Make rational use of water, fossil fuels, and other natural resources … Protect the environment’s land, sea, and air dimensions and … suppress pollutants.</td>
</tr>
<tr>
<td>4</td>
<td>Andorra</td>
<td>1993</td>
<td>Preamble: Willing to bring their collaboration and effort to … preserving the integrity of the Earth and guaranteeing an environment fit for life for the coming generations,</td>
<td>Art. 67: The State shall work towards preserving the environment. …</td>
</tr>
<tr>
<td>5</td>
<td>Angola</td>
<td>2010</td>
<td>Art. 39(1): Everyone has the right to live in a healthy and unpolluted environment and the duty to defend and preserve it. Art. 74: Every citizen … shall have the right to take legal action … of annulling acts which are harmful to public health, the public, historic</td>
<td>Art. 21(m): The fundamental tasks of the Angolan state shall be: … To promote harmonious and sustainable development … protecting the environment, natural resources …;</td>
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<td>Art. 39(1): Everyone has … the duty to defend and preserve [right to environment].</td>
<td>Art. 39(2): The state shall … protect the environment and species of flora and fauna ..., maintain the ecological balance, ensure the correct location of economic activities and the rational development and use of all natural resources, within the context of sustainable development, respect for the rights of future generations and the preservation of species.</td>
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<td>and cultural heritage, the environment, quality of life, … and any other collective interests.</td>
<td>Art. 39(3): Acts that endanger or damage conservation of the environment shall be punishable by law. Art. 91(2): The objective of planning shall be to promote the sustainable and harmonious development of the country, ensuring … preservation of the environment and quality of life for all citizens.</td>
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<td>6</td>
<td>Argentina</td>
<td>1853; reins. 1983; rev. 1994</td>
<td>Art. 41: All inhabitants enjoy the right to a healthful, balanced environment fit for human development, so that productive activities satisfy current needs without compromising those of future generations … Art. 41: All inhabitants … have the duty to preserve the environment. … Art. 41: … Environmental damage shall generate as a priority the obligation to repair it under the terms that the law shall establish. The authorities shall provide for the protection of this right [to environment], for the rational use of natural resources, for the preservation of the natural and cultural patrimony and of biological diversity, and for information and education on the environment. The entry into the National territory of dangerous or potentially dangerous wastes and of radioactive materials is prohibited.</td>
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<td>7</td>
<td>Armenia</td>
<td>1995; rev. 2015</td>
<td>--</td>
<td>Art. 12(2): Everyone shall take care of the preservation of the environment. Art. 12(1): The state shall promote the preservation, improvement, and regeneration of the environment, and the reasonable utilization of natural resources, governed by the principle of sustainable development and taking into account the responsibility towards future generations.</td>
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<td>8</td>
<td>Austria</td>
<td>1920; reins. 1945; rev. 2009</td>
<td>--</td>
<td>Art. 10(1): The Federation has powers … in … 9. … environmental compatibility evaluation for projects relating to these matters where material effects on the environment are to be anticipated; 10. mining; forestry … water rights; control and conservation of waters … construction and maintenance of waterways; … 12. … measures to counter factors hazardous to the environment through the transgression of immission limits; clear air maintenance … Art. 11(1): In the following matters legislation is the business of the Federation, execution that of the Laender: 7. Environmental impact assessment for projects relating to these matters where material effects on the environment are to be anticipated …</td>
</tr>
<tr>
<td>9</td>
<td>Azerbaijan</td>
<td>1995; rev. 2016</td>
<td>Art. 39(I): Everyone has the right to live in a healthy environment. Art. 39(II): Everyone has the right to collect information on the environmental situation and to get compensation for damage rendered to the health and property due to the violation of ecological rights. Art. 39(III): No one may cause threat or damage to the environment and natural resources beyond the limits set by law. Art. 78: Protection of the environment is the duty of everyone.</td>
<td>Art. 39(IV): The state guarantees the preservation of ecological balance and protection of the species of wild plants and animals …</td>
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<td>Duties of Citizens</td>
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<td>10</td>
<td>Bahrain</td>
<td>2002; 2017</td>
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<td>Art. 9(h): The State shall take the necessary measures for the protection of the environment and the conversation of wildlife.</td>
</tr>
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<td>11</td>
<td>Bangladesh</td>
<td>1972; 2014</td>
<td>--</td>
<td>Art. 18A: The State shall endeavour to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetlands, forests and wild life for the present and future citizens.</td>
</tr>
<tr>
<td>12</td>
<td>Belarus</td>
<td>1994; 2004</td>
<td>Art. 34: Citizens of the Republic of Belarus shall be guaranteed the right to receive, store and disseminate complete, reliable and timely information of the activities of state bodies and public associations, … on the state of the environment. Art. 45: … The right of citizens of the Republic of Belarus to health care shall also be secured by … measures to improve the environment … Art. 46: Everyone shall be entitled to a conducive environment and to compensation for loss or damage caused by the violation of this right. Art. 44: The exercise of the right of property shall not be … harmful to the environment or historical and cultural treasures …. Art. 55: It shall be the duty of everyone to protect the environment.</td>
<td>Art. 46: The State shall supervise the rational utilization of natural resources to protect and improve living conditions, and to preserve and restore the environment.</td>
</tr>
<tr>
<td>13</td>
<td>Belgium</td>
<td>1831; 2014</td>
<td>Art. 23(4): Everyone has the right to lead a life in keeping with human dignity … [including] the right to the protection of a healthy environment.</td>
<td>Art. 7bis: In the exercise of their respective competences, the Federal State, the Communities and the Regions pursue the objectives of sustainable development in its social, economic and environmental aspects, taking into account the solidarity between the generations.</td>
</tr>
<tr>
<td>14</td>
<td>Belize</td>
<td>1981; 2011</td>
<td>Art. 17(2): … any interest in or right over property [may be restricted] …</td>
<td>Preamble (e): WHEREAS the people of Belize … require policies of state which protect and safeguard the unity, freedom, sovereignty and territorial integrity of Belize; … which protect the environment;</td>
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<td>Duties of Citizens</td>
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<td>k. by reason of its being in a dangerous state or injurious to the health of human beings, animals or plants; …</td>
<td>Art. 27: Every person has the duty to defend [right to environment].</td>
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<td>m. for so long only as may be necessary for … work of soil conservation or the conservation of other natural resources; or … agricultural development or improvement which the owner … has … refused or failed to carry out.</td>
<td>Art. 27: Every person … has the duty to defend [right to environment].</td>
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<tr>
<td>15</td>
<td>Benin</td>
<td>1990</td>
<td>Art. 27: Every person has the right to a healthy, satisfying and lasting environment …</td>
<td>Art. 5(1): Every Bhutanese is a trustee of the Kingdom's natural resources and environment for the benefit of the present and future generations and it is the fundamental duty of every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation including noise, visual and physical pollution through the adoption and support of environment friendly practices and policies.</td>
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<td>Art. 8.2: A Bhutanese citizen shall have the duty to preserve, protect and respect the environment, culture and heritage of the nation.</td>
<td>Art. 5(3) The Government shall ensure that, in order to conserve the country's natural resources and to prevent degradation of the ecosystem, a minimum of sixty percent of Bhutan's total land shall be maintained under forest cover for all time.</td>
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<td>Art. 5(5): Parliament may, by law, declare any part of the country to be a National Park, Wildlife Reserve, Nature Reserve, Protected Forest, Biosphere Reserve, Critical Watershed and such other categories meriting protection.</td>
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<td>16</td>
<td>Bhutan</td>
<td>2008</td>
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<td>17</td>
<td>Bolivia</td>
<td>2009</td>
<td>Art. 30(II)(10): … the nations and rural native indigenous peoples</td>
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<td>18</td>
<td>Bosnia and Herzegovina</td>
<td>1995;</td>
<td>enjoy the following rights: … To live in a healthy environment, with appropriate management and exploitation of the ecosystems. Art. 33: Everyone has the right to a healthy, protected, and balanced environment. The exercise of this right must be granted to individuals and collectives of present and future generations, as well as to other living things, so they may develop in a normal and permanent way. Art. 34: Any person, in his own right or on behalf of a collective, is authorized to take legal action in defense of environmental rights, without prejudice to the obligation of public institutions to act on their own in the face of attacks on the environment.</td>
<td>resources, and to stimulate their industrialization through the development and strengthening of the productive base in its different dimensions and levels, as well as to preserve the environment for the welfare of present and future generations.¹</td>
</tr>
<tr>
<td>19</td>
<td>Brazil</td>
<td>1988; rev. 2017</td>
<td>Art. 225. Everyone has the right to an ecologically balanced environment, which is an asset of common use and essential to a healthy quality of life, and both government and community shall have the duty to defend and preserve it for present and future generations. Art. 225 Para. 2: Those who exploit mineral resources shall be required to restore the degraded environment ...</td>
<td>Art. 225 Para. 1: To ensure the effectiveness of this right [to environment], the government has the responsibility to: I – preserve and restore the essential ecological processes and provide for the ecological treatment of species and ecosystems; II – preserve the diversity and integrity of the genetic patrimony of the country … IV – demand … a prior environment impact study, which shall be made public, for the installation of works and activities which may potentially cause significant degradation of the environment;</td>
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¹ There are few more provisions in this category.
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<td><strong>Obligations of the State</strong></td>
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<td>20</td>
<td>Bulgaria</td>
<td>1991; rev.</td>
<td>Art. 55. Everyone shall have the right to a healthy and favorable environment corresponding to established standards and norms.</td>
<td>V – control the production, sale and use of techniques, methods or substances which represent a risk to life, the quality of life and the environment; VI – promote environmental education in all school levels and public awareness of the need to preserve the environment; VII – protect the fauna and the flora, with prohibition, in the manner prescribed by law, of all practices which represent a risk to their ecological function, cause the extinction of species or subject animals to cruelty.</td>
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<td>2015</td>
<td>Art. 55. [Everyone] shall protect the environment.</td>
<td>Art. 15: The Republic of Bulgaria shall ensure the protection and reproduction of the environment, the conservation of living Nature in all its variety, and the sensible utilization of the country's natural and other resources.</td>
</tr>
<tr>
<td>21</td>
<td>Burkina Faso</td>
<td>1991; rev.</td>
<td>Art. 29. The right to a healthy environment is recognized.</td>
<td>Preamble: CONSCIOUS of the absolute necessity to protect the environment;</td>
</tr>
<tr>
<td></td>
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<td>2015</td>
<td>Art. 30. Every citizen has the right to initiate an action or participate in a collective action … against … infringing the environment or the cultural or historic patrimony.</td>
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</tr>
<tr>
<td>22</td>
<td>Burundi</td>
<td>2005; rev.</td>
<td>Art. 19: The rights and duties proclaimed and guaranteed by the international texts concerning human rights regularly ratified constitute an integral part of the Constitution.</td>
<td>Art. 35: The State assures the good administration and rational exploitation of the country's natural resources, all in preserving the environment and the conservation of these resources for future generations.</td>
</tr>
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<td></td>
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<td>2018</td>
<td>[Implied]</td>
<td>Art. 164(4): The following is the domain of the law: … The protection of the environment and the conservation of natural resources;</td>
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<td>Art. 280: Agreements authorizing toxic waste storage and the storage of other materials detrimental to the environment are prohibited.</td>
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<td>23</td>
<td>Cabo Verde (or Cape Verde)</td>
<td>1980; rev. 1992</td>
<td>Art. 70(1): Everyone shall have the right to a healthy, ecologically balanced environment, and the duty to defend and conserve it.</td>
<td>Art. 7(j): The following are the fundamental duties of the State: … To protect the land, nature, natural resources, and environment, as well as the historical-cultural and artistic national heritage;</td>
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<td>Art. 82(f): All individuals shall have the duty: … To defend and conserve the environment.</td>
<td>Art. 70(2): The State and Municipalities, with the cooperation of associations which defend the environment, shall adopt policies to defend and preserve the environment, and will assure the rational utilization of all natural resources.</td>
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<td>Art. 70(3): The State shall stimulate and support the creation of associations to defend the environment and protect natural resources.</td>
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<td>24</td>
<td>Cambodia</td>
<td>1993;</td>
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<td>Art. 59: The State shall protect the environment and the balance of natural resources ...</td>
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<td>2008</td>
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<td>25</td>
<td>Cameroon</td>
<td>1972;</td>
<td>Preamble 21: Every person shall have a right to a healthy environment.</td>
<td>Preamble 21: The State shall ensure the protection and improvement of the environment ...</td>
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<td>2008</td>
<td>Preamble 21: The protection of the environment shall be the duty of every citizen.</td>
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<td>26</td>
<td>Central African Republic</td>
<td>2016</td>
<td>Art. 11(1): The Republic guarantees to every citizen the right to a healthy environment ...</td>
<td>Preamble: Conscious that only the persistent work as well as the rational, rigorous ...</td>
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<td>within the conditions established by the law.</td>
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<td>27</td>
<td>Chad</td>
<td>2018</td>
<td>Art. 51: Every person has the right to a healthy environment.</td>
<td>Art. 52: The State and the Autonomous Collectivities must ensure environmental protection.</td>
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<td>… The transit, importation, storage, burying, or dumping of foreign toxic wastes or pollutants on the national territory is prohibited.</td>
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<td>Art. 57: The protection of the environment is a duty for all.</td>
<td>Art. 57: … The State and the Autonomous Collectivities ensure the defense and protection of the environment. Any damage caused to the environment must be made the object of a just reparation.</td>
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<td>28</td>
<td>Chile</td>
<td>1980;</td>
<td>Art. 19(8): The Constitution guarantees all persons the right to live in an environment free of contamination. ...</td>
<td>Art. 19(8): … It is the duty of the State to ensure that this right [to environment] is not jeopardized and to promote the preservation of nature...</td>
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<td>2021</td>
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<td>29</td>
<td>China</td>
<td>1982;</td>
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<td>Art. 26: The state shall protect and improve living environments and the ecological environment, and prevent and control pollution and other public hazards. The state shall organize and encourage afforestation and protect forests.</td>
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<tr>
<td>30</td>
<td>Colombia</td>
<td>1991;</td>
<td>Art. 79: Every individual has the right to enjoy a healthy environment. An Act shall guarantee the community’s participation in the decisions that may affect it.</td>
<td>Art. 49: Public health and environmental protection are public services for which the State is responsible. … It is the responsibility of the State to organize, direct, and regulate the provision of … environment protection …</td>
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<td>31</td>
<td>Comoros</td>
<td>2018</td>
<td>Art. 43: All citizens have the right to a healthy and ecologically stable environment ...</td>
<td>Art. 43: All citizens have ... a duty to protect and conserve [right to environment].</td>
</tr>
<tr>
<td>32</td>
<td>Congo, Democratic Republic of the</td>
<td>2005; rev. 2011</td>
<td>Art. 53: All persons have the right to a healthy environment and [one] propitious for their integral development.</td>
<td>Art. 53: All persons ... have the duty to defend [right to environment].</td>
</tr>
<tr>
<td>33</td>
<td>Congo, Republic of the</td>
<td>2015</td>
<td>Art. 41: Every citizen has the right to a healthy, satisfying and durable environment ...</td>
<td>Art. 41: Every citizen ... has the duty of defending [right to environment].</td>
</tr>
<tr>
<td>34</td>
<td>Costa Rica</td>
<td>1949; rev. 2020</td>
<td>Art. 50: ... All persons have the right to a healthy and ecologically balanced environment. For that, they are legitimated to denounce the acts that infringe this right and to claim reparation for the damage caused. ... Every person has ... right of access to potable water, as an essential material for life. ... the supply of potable water for consumption by persons and the populations will have priority.</td>
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<td>Sr. No.</td>
<td>Country Name (or)</td>
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<td>Rights-Based Provisions</td>
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<td>35</td>
<td>Côte d’Ivoire (or Ivory Coast)</td>
<td>2016</td>
<td>Art. 27. It is recognized that everyone throughout the national territory has the right to a healthy environment.</td>
<td>Art. 40: The protection of the environment and the promotion of the quality of life are a duty for the community and for each natural or legal person. …</td>
</tr>
<tr>
<td>36</td>
<td>Croatia, Republic of</td>
<td>1991; rev. 2013</td>
<td>Art. 50: … The exercise of entrepreneurial freedom and property rights may exceptionally be restricted by law for the purposes of protecting the … nature, the environment and public health. &lt;br&gt;Art. 69: Everyone shall have the right to a healthy life. …</td>
<td>Art. 69: … Everyone shall be bound, within their powers and activities, to pay special attention to the protection of public health, nature and environment.</td>
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<tr>
<td>37</td>
<td>Cuba</td>
<td>2019</td>
<td>Art. 75: All persons have the right to enjoy a natural environment that is healthy and stable. …</td>
<td>Art. 90: The exercise of the rights and liberties provided for in this Constitution implies responsibilities. They are duties of Cuban citizens … and … are: i. To comply with the requirements established for the protection of environmental health and hygiene; j. To protect the natural resources, flora, and fauna, and to safeguard the preservation of a clean environment …</td>
</tr>
<tr>
<td>38</td>
<td>Czech Republic (or Czechia)</td>
<td>1993; rev. 2013</td>
<td>Art. 35(1): Everyone has the right to a favorable environment.</td>
<td>Art. 35(3): No one may, in exercising her rights, endanger or cause damage to the environment.</td>
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<td>Sr. No.</td>
<td>Country Name</td>
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<td>39</td>
<td>Democratic People's Republic of Korea (North Korea)</td>
<td>1972; rev. 1998</td>
<td>Art. 35(2): Everyone has the right to timely and complete information about the state of the environment and natural resources.</td>
<td>Obligations of the State: Art. 57: The State shall adopt measures to protect the environment in preference to production, preserve and promote the natural environment and prevent environmental pollution so as to provide the people with a hygienic environment and working conditions.</td>
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<td>natural resources, the wealth of natural species, or cultural monuments beyond the extent designated by law.</td>
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<td>40</td>
<td>Dominican Republic</td>
<td>2015</td>
<td>Art. 67(1): All people have the right, both individually and collectively, to the use and sustainable enjoyment of natural resources, to live in an environment that is healthy, ecologically balanced, and adequate for the development and preservation of the different forms of life, scenery and nature.</td>
<td>Art. 17: Mining deposits of hydrocarbons and, in general, nonrenewable natural resources may only be explored and exploited by private citizens, under sustainable environmental guidelines ...</td>
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<td>Art. 75. Fundamental duties … to protect the natural resources of the country, guaranteeing the conservation of a clean and healthy environment.</td>
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<td>41</td>
<td>Ecuador</td>
<td>2008, rev. 2021</td>
<td>Art. 14: The right of the population to live in a healthy and ecologically balanced environment that guarantees sustainability and the good way of living (sumak kawsay), is recognized. … Art. 71: Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes. All persons, communities, peoples and nations can call upon public authorities to enforce the rights of nature. … Art. 72: Nature has the right to be restored. …</td>
<td>Art. 14: … Environmental conservation, the protection of ecosystems, biodiversity and the integrity of the country’s genetic assets, the prevention of environmental damage, and the recovery of degraded natural spaces are declared matters of public interest. Art. 15: The State shall promote, in the public and private sectors, the use of environmentally clean technologies and nonpolluting and low-impact alternative sources of energy. Energy sovereignty shall not be achieved to the detriment of food sovereignty nor shall it affect the right to water. The development, production, ownership, marketing, import, transport, storage and use of chemical, biological and nuclear weapons, highly toxic persistent organic pollutants, internationally prohibited agrochemicals, and experimental biological technologies and agents and genetically modified organisms that are harmful to human health or that jeopardize food sovereignty or ecosystems, as well as the introduction of nuclear residues and toxic waste into the country’s territory, are forbidden. Art. 71: … The State shall give incentives to … protect nature and to promote respect for all the elements comprising an ecosystem.</td>
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<td>42</td>
<td>Egypt</td>
<td>2014, rev. 2019</td>
<td>Art. 44: … Every citizen has the right to enjoy the Nile River. … Art. 46: Every individual has the right to live in a healthy, sound and balanced environment. Its protection is a national duty. …</td>
<td>Art. 44: The state commits to protecting the Nile River, maintaining Egypt’s historic rights thereto, rationalizing and maximizing its benefits, not wasting its water or polluting it. The state commits to protecting its groundwater, to adopting methods appropriate to achieve water safety, and to supporting scientific research in this field. … The state guarantees to remove encroachments thereon. The foregoing is regulated by law.</td>
</tr>
<tr>
<td>43</td>
<td>El Salvador</td>
<td>1983; rev. 2014</td>
<td>Art. 34. Every child has the right to live in familial and environmental conditions that permit his integral development, for which he shall have the protection of the State.</td>
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<td>44</td>
<td>Eritrea</td>
<td>1997</td>
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<td>45</td>
<td>Estonia</td>
<td>1992; rev. 2015</td>
<td>Art. 34: … The right to freedom of movement may be restricted in the cases … to protect the natural environment …</td>
<td>Duties of Citizens Art. 53: Everyone has a duty to preserve the human and natural environment and to compensate for damage caused to the environment by him or her … Obligations of the State creating the right conditions to secure the participation of the people in safeguarding the environment.</td>
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<td>46</td>
<td>Eswatini</td>
<td>2005</td>
<td>Art. 215. There shall be no private right of property in any water found naturally in Swaziland.</td>
<td>Art. 63(i). Duty of Citizen: protect and safeguard the environment. Art. 216: Every person shall promote the protection of the environment for the present and future generations. … Art. 60(11): The State shall endeavour to preserve and protect places of historical interest and artefacts and the environment. Art. 210. … land, minerals and water are national resources. In the interests of the present and future generations, the State shall protect and make rational use of its land, mineral and water resources as well as its fauna and flora, and shall take appropriate measures to conserve and improve the environment. Art. 216: … Urbanisation or industrialisation shall be undertaken with due respect for the environment. The Government shall ensure a holistic and comprehensive approach to environmental preservation and shall put in place an appropriate environmental regulatory framework.</td>
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<td>47</td>
<td>Ethiopia</td>
<td>1994</td>
<td>Art. 44(1): All persons have the right to a clean and healthy environment. Art. 43: The Peoples of Ethiopia … have the right to improved living standards and to sustainable development. Nationals have the right to participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community. … Art. 44(2): All persons who have been displaced or whose livelihoods have been adversely affected as a result of State</td>
<td>Art. 92(4): Government and citizens shall have the duty to protect the environment. Art. 43: … All international agreements and relations concluded, established or conducted by the State shall protect and ensure Ethiopia's right to sustainable development. Art. 92: Environmental Objectives 1. Government shall endeavour to ensure that all Ethiopians live in a clean and healthy environment. 2. The design and implementation of programmes and projects of development shall not damage or destroy the environment. …</td>
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<td>48</td>
<td>Fiji</td>
<td>2013</td>
<td>Art. 40(1): Every person has the right to a clean and healthy environment, which includes the right to have the natural world protected for the benefit of present and future generations through legislative and other measures.</td>
<td>Preamble: DECLARE our commitment to justice, national sovereignty and security, social and economic wellbeing, and safeguarding our environment.</td>
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<td>Art. 92(3) People have the right to full consultation and to the expression of views in the planning and implementation of environmental policies and projects that affect them directly.</td>
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<tr>
<td>49</td>
<td>Finland</td>
<td>1999; rev. 2011</td>
<td>Sec. 20. The public authorities shall endeavour to guarantee for everyone the right to a healthy environment and for everyone the possibility to influence the decisions that concern their own living environment.</td>
<td>Sec. 20: Nature and its biodiversity, the environment and the national heritage are the responsibility of everyone.</td>
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<td>50</td>
<td>France</td>
<td>1958; rev. 2008</td>
<td>Charter for the Environment of 2004:2 Art. 1: Each person has the right to live in a balanced environment which shows due respect for health. Art. 7: Each person has the right … to have access to any information</td>
<td>Art. 2: Each person has a duty to participate in preserving and enhancing the environment. Art. 3: Each person shall … foresee and avoid the occurrence of any damage which he or she may cause to the environment or, failing that, limit the consequences of such damage.</td>
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<tbody>
<tr>
<td>51</td>
<td>Gabon</td>
<td>1991; rev. 2011</td>
<td>Art. I(8): The Gabonese Republic recognizes and guarantees the inalienable and imprescriptible human rights, which are necessarily tied to the public powers: ... The State, according to its means, guarantees to all, notably to children, mothers, the handicapped, aged workers and the elderly the protection of ... a preserved natural environment, rest and leisure ...</td>
<td>Art. 4: Each person shall be required ... to contribute to the making good of any damage he or she may have caused to the environment.</td>
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<td>52</td>
<td>Gambia, Republic of the</td>
<td>2020</td>
<td>Art. 61: Every person has the right to a clean and healthy environment, which includes the right to have— a. the environment protected for the benefit of present and future generations through legislative and other measures ... and b. obligations relating to the environment fulfilled ...</td>
<td>Preamble: We the people ... affirm that this Constitution is the embodiment of our will and resolve for ... sustainable environment and equitable distribution and use of resources ...</td>
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</table>

Art. 13(k) ... every citizen shall ... protect and conserve the environment of The Gambia.

Art. 254(3): Every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources.

Art. 254(1): Land, environment and natural resources in The Gambia shall be held, used and managed in a manner that is equitable, efficient, productive and sustainable, and in accordance with the following principles—

c. sustainable exploitation, utilisation, productive management and conservation of the environment, land and natural resources, and the equitable sharing of the accruing benefits;

d. protection, conservation, preservation and sustainable use of land, environment and natural resources for the benefit of present and future generations;

e. protection of genetic resources and biological diversity;

f. establishment of systems of environmental impact assessment, environmental audit and monitoring of the environment;

g. recognition of the adverse effects of climate change on the sustainable use of land, environment and natural resources and the need to build resilience and increase adaptation to these effects; …

i. sound conservation and protection of ecologically sensitive areas;

j. public participation in the management, protection and conservation of land, environment, and natural resources; …

Art. 255(1): The Government shall encourage and support the development of agriculture, and shall take positive measures to enhance the growth and [...]
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<td>development of farming with the aim of achieving food self-sufficiency for The Gambia. …</td>
<td>Art. 5(5): The State shall take care of environmental protection and the rational use of natural resources.</td>
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<td>Art. 29(1): Everyone has the right to live in a healthy environment and enjoy the natural environment and public space. … Everyone has the right to care for the protection of the environment …</td>
<td>Art. 29(2): Environmental protection and the rational use of natural resources shall be ensured by law, taking into account the interests of current and future generations.</td>
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<td>Art. 29(1): … Everyone has the right to receive full information about the state of the environment in a timely manner. … The right to participate in the adoption of decisions related to the environment shall be ensured by law.</td>
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<td>54</td>
<td>Ghana</td>
<td>1992; rev. 1996</td>
<td>Art. 41(k): … it shall be the duty of every citizen … to protect and safeguard the environment.</td>
<td>Art. 36(9): The State shall take appropriate measures needed to protect and safeguard the national environment for posterity; and shall seek co-operation with other states and bodies for purposes of protecting the wider international environment for mankind.</td>
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<tr>
<td>55</td>
<td>Greece</td>
<td>1975; rev. 2008</td>
<td>Art. 24(1): The protection of the natural and cultural environment constitutes … a right of every person.</td>
<td>Art. 24(1): The protection of the natural and cultural environment constitutes a duty of the State and a right of every person. The State is bound to adopt special preventive or repressive measures for the preservation of the environment in the context of the principle of sustainable development. Matters pertaining to the protection of forests and forest expanses in general shall be regulated by law. The compilation of a forest registry constitutes an obligation of the State. Alteration of the use of forests and forest expanses is prohibited, except where agricultural development or other uses imposed for the public interest prevail for the benefit of the national economy. … Interpretative clause By forest or forest ecosystem is meant the organic whole of wild plants with woody trunk on the necessary area of ground which, together with the flora and fauna co-existing there, constitute, by means of their mutual interdependence and interaction, a particular biocoenosis (forest biocoenosis) and a particular natural environment (forest-derived). A forest expanse exists when the wild woody vegetation, either high or shrubbery, is sparse.</td>
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<td>56</td>
<td>Guatemala</td>
<td>1985; rev. 1993</td>
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<td>Art. 97: … the inhabitants of the national territory are obligated to promote … the social, economic, and technological development that prevents the pollution … of the environment and maintains the ecological balance. …</td>
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<tr>
<td>57</td>
<td>Guinea</td>
<td>2010</td>
<td>Art. 16: Every person has the right to a healthy and lasting environment … Art. 21: [The People of Guinea] have [the] right to the preservation of their patrimony, of their culture and of their environment.</td>
<td>Art. 16: Every person has … the duty to defend [right to environment] …</td>
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<td>58</td>
<td>Guinea Bissau</td>
<td>1984; rev. 1996</td>
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<td>59</td>
<td>Guyana</td>
<td>1980; rev. 2016</td>
<td>Art. 149J(1): Everyone has the right to an environment that is not harmful to his or her health or well-being. Art. 149J(3): It shall not be an infringement of a person's rights under paragraph (1) if, by reason only of an allergic condition or other peculiarity, the environment is harmful to that person's health or well-being.</td>
<td>Preamble: Acknowledge … young people … aspire to live in a safe society which … ensures a healthy environment …; Demonstrate our commitment to protect our natural environment and endowment; Art. 25: Every citizen has a duty to participate in activities designed to improve the environment and protect the health of the nation.</td>
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<td>60</td>
<td>Haiti</td>
<td>1987; rev. 2012</td>
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<td>Art. 52-1(h): Civic duties are the citizen’s … obligations … to the State and the country. These obligations are … to respect and protect the environment;</td>
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<td><strong>Duties of Citizens</strong></td>
<td><strong>Obligations of the State</strong></td>
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<td>Art. 253-1: As long as the forest coverage remains below 10% of the national territory, measures of exception must be taken with a view of working to the restoration of the ecological equilibrium.</td>
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<td>Art. 254: The State shall organize the enhancement of natural sites to ensure their protection and make them accessible to all.</td>
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<td>Art. 255: To protect forest reserves and expand the plant coverage, the State encourages the development of local sources of energy: solar, wind and others.</td>
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<td>Art. 256: … State has the obligation to … establish and maintain botanical and zoological gardens ....</td>
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<td>Art. 256-1: The State may, if the necessity for it is demonstrated, declare a zone of ecological utility.</td>
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<td>Art. 257: The law specifies the conditions for protecting flora and fauna, and punishes violations thereof.</td>
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<td>Art. 258: No one may introduce into the country wastes or residues of any kind from foreign sources.</td>
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<td>Art. 145: The right to the protection of one's health is hereby recognized. … Consequently, access to water and sanitation are declared to be a human right. Their enjoyment and use shall be equitable with preference to human consumption. Therefore, the preservation of sources of water is guaranteed such that they shall not put life and public health at risk.</td>
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<td>Art. 145: … It is everyone's duty to participate in the promotion and preservation of individual and community health. …</td>
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<td>Art. 145: … The State shall maintain a satisfactory environment for the protection of everyone's health. …</td>
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<td>61</td>
<td>Honduras</td>
<td>1982; rev. 2013</td>
<td>Art. XXI(1): Hungary shall recognise and give effect to the right of everyone to a healthy environment.</td>
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<td>Art. XXI(2): Anyone who causes damage to the environment shall be obliged to restore it or to bear the costs of restoration …</td>
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<td>Art. XX(2): Hungary shall promote … access to healthy food and drinking water … as well as by ensuring the protection of the environment.</td>
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<td>Art. XXI(3): The introduction of pollutant waste into the territory of Hungary for the purpose of disposal shall be prohibited.</td>
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<td>63</td>
<td>India</td>
<td>1949; rev. 2015</td>
<td>Art. 51A(g): It shall be the duty of every citizen of India … to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures;</td>
<td>Art. 48A: The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country.</td>
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<td>64</td>
<td>Indonesia</td>
<td>1945; rev. 2002</td>
<td>Art. 28F: Every person shall have the right to communicate and to obtain information for the purpose of the development of his/her self and social environment, and shall have the right to seek, obtain, possess, store, process and convey information by employing all available types of channels. Art. 28H(1): Every person shall have the right to live in physical and spiritual prosperity, to have a home and to enjoy a good and healthy environment ...</td>
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<td>65</td>
<td>Iran (Islamic Republic of)</td>
<td>1979; rev. 1989</td>
<td>Art. 50: The preservation of the environment, in which the present as well as the future generations have a right to flourishing social existence, is regarded as a public duty in the Islamic Republic.</td>
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<td>66</td>
<td>Iraq</td>
<td>2005</td>
<td>Art. 33(First): Every individual has the right to live in safe environmental conditions.</td>
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<td>67</td>
<td>Italy</td>
<td>1947; rev. 2012</td>
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<td>68</td>
<td>Jamaica</td>
<td>1962; rev. 2015</td>
<td>Art. 13(3)(l): [Citizens have] the right to enjoy a healthy and productive environment free from the threat of injury or damage from environmental abuse and</td>
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<td>degradation of the ecological heritage.</td>
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<td>Art. 15(3): … any law [may not affect property rights] so far as it-</td>
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<td>a. makes such provisions as are reasonably required for the protection of the environment; or</td>
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<td>b. provides, for the orderly marketing or production or growth or extraction of any agricultural product or mineral ….</td>
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<td>69</td>
<td>Kazakhstan</td>
<td>1995; rev. 2017</td>
<td>---</td>
<td>Art. 31:</td>
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<td>1. The state shall set an objective to protect the environment favorable for the life and health of the person.</td>
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<td>2. Officials shall be held accountable for the concealment of facts and circumstances endangering the life and health of the people in accordance with law.</td>
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<td>Art. 61(3)(9): Parliament shall have the right to issue laws that regulate the most important public relations, establish fundamental principles and standards dealing with … environmental protection;</td>
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<tr>
<td>70</td>
<td>Kenya</td>
<td>2010</td>
<td>Art. 42: Every person has the right to a clean and healthy environment, which includes the right –</td>
<td>Art. 60(1): Land in Kenya shall be held, used and managed in a manner that is equitable, efficient, productive and sustainable …</td>
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<td>a. to have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69; and</td>
<td>Art. 69(1): The State shall-</td>
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<td>b. to have obligations relating to the environment fulfilled under Article 70 (allowing any person to apply to a court for redress of damage to the environment).</td>
<td>a. ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits;</td>
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<td>RESPECTFUL of the environment, which is our heritage, and determined to sustain it for the benefit of future generations:</td>
<td>b. work to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya; …</td>
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<td>Art. 69(2): Every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources.</td>
<td>d. encourage public participation in the management, protection and conservation of the environment;</td>
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<td>e. protect genetic resources and biological diversity;</td>
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<td>f. establish systems of environmental impact assessment, environmental audit and monitoring of the environment;</td>
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<td>g. eliminate processes and activities that are likely to endanger the environment; and</td>
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<td>h. utilise the environment and natural resources for the benefit of the people of Kenya.</td>
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<tr>
<td>71</td>
<td>Kiribati</td>
<td>1979; rev. 2013</td>
<td>Art. 70(1): If a person alleges that a right to a clean and healthy environment … has been, is being or is likely to be, denied, violated, infringed or threatened, the person may apply to a court for redress in addition to any other legal remedies that are available in respect to the same matter. Art. 70(3) … an applicant does not have to demonstrate that any person has incurred loss or suffered injury.</td>
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<tr>
<td>72</td>
<td>Kyrgyzstan (or Kyrgyz Republic)</td>
<td>2010; rev. 2016</td>
<td>Art. 48(1): Everyone shall have the right to environment favorable for life and health. Art. 48(2): Everyone shall have the right to compensation of damage to health or property resulting from actions in the area of nature management.</td>
<td>Art. 48(3): Everyone should care for the environment.</td>
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<tr>
<td>73</td>
<td>Lao People’s Democratic Republic (or Laos)</td>
<td>1991; rev. 2015</td>
<td>--</td>
<td>Art. 19: All organizations and citizens must protect and preserve the bio-diversity and use natural resources in line with the direction of ensuring sustainability</td>
</tr>
<tr>
<td>74</td>
<td>Latvia</td>
<td>1922; reinst. 1991</td>
<td>Art. 115: The state shall protect the right of everyone to live in a benevolent environment …</td>
<td>Preamble: … Each individual takes care of oneself, one’s relatives and the common good of society by</td>
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<td>Sr. No.</td>
<td>Country Name</td>
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<td>Rights-Based Provisions</td>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<td>acting responsibly toward other people, future generations, the environment and nature.</td>
<td>Art. 27(1)(b): Lesotho shall adopt policies designed to improve environmental and industrial hygiene; Art. 36: Lesotho shall adopt policies designed to protect and enhance the natural and cultural environment of Lesotho for the benefit of both present and future generations and shall endeavour to assure to all citizens a sound and safe environment adequate for their health and well-being.</td>
</tr>
<tr>
<td>75</td>
<td>Lesotho</td>
<td>1993; rev. 2018</td>
<td>---</td>
<td>Art. 53: … The State and each person must protect the environment from harmful influences. Art. 54: The State shall take care of the protection of the natural environment, wildlife and plants, individual objects of nature and areas of particular value and shall supervise a sustainable use of natural resources, their restoration and increase. The destruction of land and the underground, the pollution of water and air, radioactive impact on the environment as well as depletion of wildlife and plants shall be prohibited by law.</td>
</tr>
<tr>
<td>76</td>
<td>Lithuania</td>
<td>1992; rev. 2006</td>
<td>---</td>
<td>Art. 11bis: The State guarantees the protection of the human and cultural environment, and works for the establishment of a durable equilibrium between the conservation of nature, in particular its capacity for renewal, and the satisfaction of the needs of present and future generations.</td>
</tr>
<tr>
<td>77</td>
<td>Luxemburg</td>
<td>1868; rev. 2009</td>
<td>---</td>
<td>Preamble: Persuaded of the exceptional importance of the wealth of the fauna, of the flora and of the mining resources of high specificities with which nature has provided Madagascar, and that it is important to preserve it for the future generations, Art. 37: The State guarantees the freedom of enterprise within the limit of the respect for the general interest, the public order, morality and the environment …</td>
</tr>
<tr>
<td>78</td>
<td>Madagascar</td>
<td>2010</td>
<td>---</td>
<td>Art. 149: The Communes participate in the economic, social, cultural and environmental development of their territorial resort. …</td>
</tr>
<tr>
<td>79</td>
<td>Malawi</td>
<td>1994; rev. 2017</td>
<td>---</td>
<td>Sec. 13(d): The State shall actively promote the welfare and development of the people of Malawi by progressively adopting and implementing policies and legislation aimed at achieving the following goals ... to manage the environment responsibly in order to - i. prevent the degradation of the environment; ii. provide a healthy living and working environment for the people of Malawi; iii. accord full recognition to the rights of future generations by means of environmental protection and the sustainable development of natural resources; and</td>
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<td>80</td>
<td>Maldives</td>
<td>2008</td>
<td>Art. 23(d): Every citizen [has] the following rights pursuant to this Constitution, and the State undertakes to achieve the progressive realisation of these rights by reasonable measures within its ability and resources: ... a healthy and ecologically balanced environment.</td>
<td>Art. 67(h): ... it is the responsibility of every citizen ... to preserve and protect the natural environment, biodiversity, resources and beauty of the country and to abstain from all forms of pollution and ecological degradation;</td>
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<td>Art. 22: The State has a fundamental duty to protect and preserve the natural environment, biodiversity, resources and beauty of the country for the benefit of present and future generations. The State shall undertake and promote desirable economic and social goals through ecologically balanced sustainable development and shall take measures necessary to foster conservation, prevent pollution, the extinction of any species and ecological degradation from any such goals.</td>
</tr>
<tr>
<td>81</td>
<td>Mali</td>
<td>1992</td>
<td>Art. 15: Every person shall have the right to a healthy environment. ...</td>
<td>Preamble: undertake to assure the improvement of the quality of life, the protection of the environment and the cultural patrimony,</td>
</tr>
<tr>
<td>82</td>
<td>Mauritania</td>
<td>1991; rev. 2012</td>
<td>Art. 19: The citizens enjoy the same rights and the same duties vis-a-vis the Nation. They participate equally in the construction [edification] of the Fatherland and have right, under the same conditions, to sustainable development and to an environment balanced and respectful of health.</td>
<td>Art. 15: ... The protection, defense and promotion of the environment shall be obligations for all and for the State.</td>
</tr>
<tr>
<td>83</td>
<td>Mexico</td>
<td>1917; rev. 2015</td>
<td>Art. 4: Any person has the right to a healthy environment for his/her own development and well-being. ...</td>
<td>Art. 4: ... The State will guarantee the respect to such right [to environment]. Environmental damage and deterioration will generate a liability for whoever provokes them in terms of the provisions by the law.</td>
</tr>
<tr>
<td>84</td>
<td>Moldova, Republic of</td>
<td>1994; rev. 2016</td>
<td>Art. 37(1): Every human being shall have the right to live in an ecologically safe and healthy environment, to consume healthy food products and to use harmless household appliances. Art. 37(2): The State shall guarantee to anyone the right of free access and dissemination of the truthful information related to ...</td>
<td>Art. 59: The protection of environment and the preservation of historical and cultural monuments shall represent a duty ascribed to each citizen.</td>
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<td>Art. 37(3): Concealment or forgery of the information regarding the factors detrimental to human health shall be prohibited by law.</td>
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<td>Art. 37(4): Natural and legal entities shall be held liable for the damages caused to a person's health and property due to ecological trespasses.</td>
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<td>Art. 126(2)(f): The State must ensure: ... the restoration and protection of the environment, as well as the maintenance of ecological balance;</td>
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<td>the environment state, living and working conditions, and the quality of food products and household appliances. …</td>
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<td>Art. 46(5): The right to hold private property shall coerce to the observance of duties as regarding the environment protection ....</td>
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<tr>
<td>85</td>
<td>Mongolia</td>
<td>1992; rev. 2001</td>
<td>Art. 16(2): The citizens of Mongolia shall be guaranteed to exercise ... the right to a healthy and safe environment, and to be protected against environmental pollution and ecological imbalance.</td>
<td>Art 17(2): It is a sacred duty for every citizen … to protect the nature and environment.</td>
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<td>Art. 6</td>
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<td>1. The land, its subsoil, forests, water, fauna, flora, and other natural assets in Mongolia shall be subject to the people's authority and under the protection of the State.</td>
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<td>2. The land, except that in private ownership of the citizens of Mongolia, as well as the land subsoil, forests, water resources, and fauna shall be the property of the State.</td>
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<td>4. The State shall have the right to … confiscate … land if it is used in a manner adverse to the population's health, the interests of environmental protection and national security.</td>
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<td>Art. 38(2)(4): The Government (Cabinet) shall … [u]ndertake measures for protection of the environment, the sustainable use and restoration of natural resources;</td>
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<td>86</td>
<td>Montenegro</td>
<td>2007; rev. 2013</td>
<td>Art. 23: Everyone shall have the right to a sound environment. … Art. 23: … Everyone shall have the right to receive timely and full information about the status of the environment, to influence the decision-making regarding the issues of importance for the environment, and to legal protection of these rights.</td>
<td>Art. 23: … Everyone, the state in particular, shall be bound to preserve and improve the environment.</td>
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<td>Preamble: The conviction that the state is responsible for the preservation of nature, sound environment, sustainable development, balanced development of all its regions and the establishment of social justice;</td>
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<td>Sr. No.</td>
<td>Country Name</td>
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<td>Rights-Based Provisions</td>
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<td>environment, natural resources, cultural heritage … of Montenegro.</td>
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<tr>
<td>87</td>
<td>Morocco</td>
<td>2011</td>
<td>Art. 19: The man and the woman enjoy, in equality, the rights and freedoms of civil, political, economic, social, cultural and environmental character … in the international conventions and pacts duly ratified by Morocco … [implied] Art. 31: The State … collectivities work for the mobilization of all the means available … to facilitate the equal access of the citizens [feminine] and citizens [masculine] to conditions that permit their enjoyment of the right … to the access to water and to a healthy environment; to lasting [durable] development.</td>
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<tr>
<td></td>
<td>Mozambique</td>
<td>2004; rev. 2007</td>
<td>Art. 81(1): All citizens shall have the right to popular action … for defending the interests in question. Art. 81(2)(b): The right of popular action shall consist of … right to advocate the prevention, termination or judicial prosecution of offences against the public health … environmental conservation and cultural heritage; … Art. 90(1): All citizens shall have the right [to] live in a balanced environment and shall have the duty to defend it. Art. 45(f): Every individual shall have the duty to … protect and conserve the environment;</td>
<td>Art. 90(2): The State and the local authorities, with collaboration from associations for environmental protection, shall adopt policies to protect the environment and shall promote the rational use of all natural resources. Art. 117: The State shall promote efforts to guarantee the ecological balance and the conservation and preservation of the environment, with a view to improving the quality of life of its citizens. With a view to guaranteeing the right to the environment within the framework of sustainable development, the State shall adopt policies aimed at: preventing and controlling pollution and erosion; integrating environmental objectives with sectoral policies; promoting the integration of environmental values into educational policies and programmes; guaranteeing the rational utilisation of natural resources and the safeguarding of their capacity to regenerate, ecological stability and the rights of future generations; …</td>
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<tr>
<td>Sr. No.</td>
<td>Country Name</td>
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<td>Policy-Based Provisions</td>
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<tr>
<td>89</td>
<td>Myanmar</td>
<td>2008</td>
<td>Art. 390(b): Every citizen has the duty to assist the Union in carrying out ... environmental conservation;</td>
<td>Art. 45: The Union shall protect and conserve natural environment.</td>
</tr>
<tr>
<td>90</td>
<td>Nepal</td>
<td>2015; rev. 2016</td>
<td>Art. 30(1): Each person shall have the right to live in a healthy and clean environment.</td>
<td>Art. 51(e)(4): The State shall [make] ... proper utilization of land ... on the basis of productivity of land, its nature, and also by maintaining environmental balance.</td>
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<td>Art. 30(2): The victim of environmental pollution and degradation shall have the right to be compensated by the pollutant as provided for by law.</td>
<td>Art. 51(f): 1. Formulating strategies and programs for sustainable socio-economic development ... for balanced and inclusive regional development and to implement them in a coordinated manner. 2. Prioritizing under-developed regions while going for balanced, environment-friendly, qualitative and sustainable physical infrastructure development. 3. Increasing the participation of local people in development process.</td>
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<td>Art. 30(3): Provided that this Article shall not be deemed to obstruct the making of required legal provisions to strike a balance between environment and development for the use of national development works.</td>
<td>Art. 51(g)(1): The State shall pursue a policy of conserving the natural resources ... by imbibing the norms of inter-generation judicious use of it and for the national interest. It shall also be about its sustainable use in an environmental friendly way. ...</td>
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<td>Art. 25(4) The [right to property] shall not obstruct the state in carrying out land reforms, management and regulation by law in order to increase ... environment protection and managed housing and urban development.</td>
<td>Art. 51(g)(2): The State shall pursue a policy of prioritizing national investment in water resources based on people’s participation and making a multi-utility development of water resources.</td>
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<td>Art. 51(g)(3): The State shall pursue a policy of developing and producing renewable energy ...</td>
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<td>Art. 51(g)(5): The State shall pursue a policy of making a sustainable use of biodiversity through the conservation and management of forests, fauna and flora, and by minimizing the negative impacts of industrialization and physical development by promoting public awareness on environmental cleanliness and protection.</td>
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<td>Art. 51(g)(6): The State shall pursue a policy of keeping necessary landmass as forest area in order to strike an environmental balance.</td>
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<td>Art. 51(g)(7): The State shall pursue a policy of adopting appropriate ways of minimizing or stopping negative effects on environment if it is there, or if...</td>
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<td>Sr. No.</td>
<td>Country Name</td>
<td>Year</td>
<td>Rights-Based Provisions</td>
<td>Duties of Citizens</td>
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<tr>
<td>91</td>
<td>Netherlands</td>
<td>1814; rev. 2008</td>
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<td>Art. 51(g)(8): The State shall formulate policies and enact laws on the basis of the principle of sustainable environment development based on pre-warning and pre-informed agreements regarding environmental protection.</td>
</tr>
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<td>92</td>
<td>Nicaragua</td>
<td>1987; rev. 2014</td>
<td>Art. 60: Nicaraguans have the right to live in a healthy environment, as well as the obligation to maintain and preserve it. …</td>
<td>Art. 59: Citizens are obligated to respect determined sanitary measures.</td>
</tr>
<tr>
<td>93</td>
<td>Niger</td>
<td>2010; rev. 2017</td>
<td>Art. 35: Any person has the right to a healthy environment. …</td>
<td>Art. 35: … Each one is required to contribute to the safeguarding and to the improvement of the environment in which he lives. …</td>
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<td>obligation to respect the legislation in force in environmental matters. They are required to protect human health and to contribute to the safeguarding [of it] as well as to the improvement of the environment.</td>
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<tr>
<td>94</td>
<td>Nigeria</td>
<td>1999; rev. 2011</td>
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</tr>
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<td>95</td>
<td>North Macedonia, Republic of</td>
<td>1991; rev. 2019</td>
<td>Art. 43: Everyone has the right to a healthy environment to live in. … The Republic provides conditions for the exercise of the right of citizens to a healthy environment. Art. 55: … The freedom of the market and entrepreneurship may be restricted by law only for reasons of the defence of the Republic, protection of the natural and living environment or public health.</td>
<td>Art. 43: … Everyone is obliged to promote and protect the environment. …</td>
</tr>
<tr>
<td>96</td>
<td>Norway</td>
<td>1814; rev. 2014</td>
<td>Art. 112: Every person has a right to an environment that is conducive to health and to natural surroundings whose productivity and diversity are preserved. Natural resources should be made use of on the basis of comprehensive long-term considerations whereby this right will be safeguarded for future generations as well.</td>
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<td>Country Name</td>
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<td>In order to safeguard their right in accordance with the foregoing paragraph, citizens are entitled to be informed of the state of the natural environment and of the effects of any encroachments on nature that are planned or commenced. …</td>
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<td>2011</td>
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<tr>
<td>98</td>
<td>Palau</td>
<td>1981; rev.</td>
<td>--</td>
<td>Art. VI: The national government shall take positive action to attain … conservation of a beautiful, healthful and resourceful natural environment ...</td>
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<td>1982</td>
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<tr>
<td>99</td>
<td>Palestine*</td>
<td>2003; rev.</td>
<td>Art. 33: The enjoyment of a balanced and clean environment is a human right. …</td>
<td>Art. 33: … The preservation and protection of the Palestinian environment from pollution for the sake of present and future generations is a national duty.</td>
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<td>2005</td>
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<td>100</td>
<td>Panama</td>
<td>1972; rev.</td>
<td>--</td>
<td>Art. 119: The State, and all the inhabitants of the national territory, have the obligation of promoting economic and social development that prevents environmental contamination, maintains ecological balance, and avoids the destruction of ecosystems.</td>
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<tr>
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<td>2004</td>
<td>Art. 118: The State has the fundamental obligation to guarantee that its population lives in a healthy environment, free of contamination (pollution), and where air, water, and foodstuffs satisfy the requirements for proper development of human life.</td>
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<td>Art. 120: The State shall regulate, supervise, and apply, at the proper time, the measures necessary to guarantee rational use of, and benefit from, land, river and sea life, as well as forests, lands and waters, to avoid their misuse, and to ensure their preservation, renewal, and permanence.</td>
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<td>Art. 121: Benefits gained from non-renewable natural resources shall be regulated by law, to avoid social, economic and environmental abuses that could result.</td>
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<tr>
<td>101</td>
<td>Papua New Guinea</td>
<td>1975; rev.</td>
<td>Art. 53(5)(f): … any interest in or right over any property [may be restricted] that is reasonably necessary for the preservation of …</td>
<td>Art. 4. We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all and be replenished for the benefit of future generations. WE ACCORDINGLY CALL FOR-</td>
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<td></td>
<td></td>
<td>2016</td>
<td>Art. 5(d): Basic Social Obligations … to protect Papua New Guinea and to safeguard the national wealth, resources and environment in the interests not only of the</td>
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<tr>
<td>102</td>
<td>Paraguay</td>
<td>1992; rev. 2011</td>
<td>Art. 7: Everyone has the right to live in a healthy and ecologically balanced [equilibrado] environment. Art. 38 … Any person has the right, individually or collectively, to demand from public authorities measures to defend the environment, the integrity of the habitat, the public health, the national cultural heritage [acervo], … that … are related to the quality of life and to the collective patrimony.</td>
<td>present generation but also of future generations; …</td>
</tr>
<tr>
<td>103</td>
<td>Peru</td>
<td>1993; rev. 2021</td>
<td>Art. 2(22): Every person has the right ... to a balanced and appropriate environment for the development of his life.</td>
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<tr>
<td>104</td>
<td>Philippines</td>
<td>1987</td>
<td>Art. II. Sec. 16: The state shall protect and advance the right of the people to a balanced and healthful ecology ...</td>
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<td>105</td>
<td>Poland</td>
<td>Art. 31(3): Any limitation upon the exercise of constitutional freedoms</td>
<td>Art. 86: Everyone shall care for the quality of the environment and</td>
<td>Art. 5: The Republic of Poland shall … ensure the protection of the natural environment pursuant to the principles of sustainable development.</td>
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Art. 64(2)(b): The right to health protection shall be fulfilled … By creating economic, social, cultural and environmental conditions …; and by developing both the people's health and hygiene education and healthy living practises.  
Art. 52(3)(a): Everyone shall be granted the right of actio popularis, to include the right to apply for the appropriate compensation for an aggrieved party or parties, in such cases and under such terms as the law may determine, either personally or via associations that purport to defend the interests in question. The said right shall particularly be exercised in order to: (a) Promote the prevention, cessation or judicial prosecution of ... | shall be held responsible for causing its degradation ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Art. 68(4): Public authorities shall combat epidemic illnesses and prevent the negative health consequences of degradation of the environment.  
Art. 74:  
1. Public authorities shall pursue policies ensuring the ecological security of current and future generations.  
2. Protection of the environment shall be the duty of public authorities.  
4. Public authorities shall support the activities of citizens to protect and improve the quality of the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Art. 9: The fundamental tasks of the state shall be …  
d. To promote the people's well-being and quality of life … as well as the effective implementation of economic, social, cultural and environmental rights by means of the transformation and modernisation of economic and social structures;  
e. To protect and enhance the Portuguese people's cultural heritage, defend nature and the environment, preserve natural resources and ensure proper town and country planning;  
Art. 66(2): In order to ensure enjoyment of the right to the environment within an overall framework of sustainable development, acting via appropriate bodies and with the involvement and participation of citizens, the state shall be charged with:  
a. Preventing and controlling pollution and its effects and the harmful forms of erosion;  
b. Conducting and promoting town and country planning with a view to a correct location of activities, balanced social and economic development and the enhancement of the landscape;  
c. Creating and developing natural and recreational reserves and parks and classifying and protecting landscapes and places, in such a way as to guarantee the conservation of nature and the preservation of cultural values and assets that are of historic or artistic interest;  
d. Promoting the rational use of natural resources, while safeguarding their ability to renew themselves and maintain ecological stability, with respect for the principle of inter-generational solidarity;  
e. Acting in cooperation with local authorities, promoting the environmental quality of rural settlements and urban life, particularly on the architectural level and as regards the protection of historic zones; |
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<tr>
<th>Sr. No.</th>
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<th>Rights-Based Provisions</th>
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<td></td>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<tr>
<td><strong>107</strong></td>
<td>Qatar</td>
<td>2003</td>
<td>--</td>
<td>Art. 29: Natural wealth and resources are owned by the State, which preserves and exploits them well according to the provisions of the law.</td>
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<td>Art. 33: The State endeavors to protect the environment and its natural balance, to achieve comprehensive and sustainable development for all generations.</td>
</tr>
<tr>
<td><strong>108</strong></td>
<td>Republic of Korea (or South Korea)</td>
<td>1948; rev. 1987</td>
<td>Art. 35(1): All citizens shall have the right to a healthy and pleasant environment. …</td>
<td>Art. 35(1): … all citizens shall endeavor to protect the environment. Art. 35(2): The substance of the environmental right shall be determined by law.</td>
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<td>Art. 35(3): Natural and legal persons have a duty to protect and improve the environment.</td>
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<tr>
<td><strong>109</strong></td>
<td>Romania</td>
<td>1991; rev. 2003</td>
<td>Art. 35(1): The State recognizes the right of every person to a healthy, well-preserved and balanced environment. Art. 44.7: The right to own property implies an obligation to comply with duties related to environmental protection…</td>
<td>Art. 35(2): The State shall provide the legislative framework for the exercise of such right [to environment]. Art. 135(2): The state is expected to ensure: d. the exploitation of natural resources in accordance with the national interest; e. the restoration and protection of the environment, as well as the preservation of ecological balance; f. the creation of the necessary conditions for improving the quality of life;</td>
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<td>Art. 58: Everyone shall have a duty to preserve nature and the environment and to treat natural resources with care.</td>
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<tr>
<td><strong>110</strong></td>
<td>Russian Federation (or Russia)</td>
<td>1993; rev. 2014</td>
<td>Art. 42: Everyone shall have the right to a favourable environment, reliable information on the state of the environment and compensation for damage caused to his (her) health and property by violations of environmental laws.</td>
<td>Art. 36(2): Possession, utilisation and disposal of land and other natural resources shall be exercised by the owners freely provided that this is not detrimental to the environment and does not violate the rights and lawful interests of other people.</td>
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<td>Art. 53: Everyone has the duty to protect, safeguard and promote the environment. …</td>
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<tr>
<td><strong>111</strong></td>
<td>Rwanda</td>
<td>2003; rev. 2015</td>
<td>Art. 22: Everyone has the right to live in a clean and healthy environment.</td>
<td>Art. 53: … The State ensures the protection of the environment. A law determines modalities for protecting, conserving and promoting the environment.</td>
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</table>

Art. 90: The objective of economic and social development plans shall be to promote … the preservation of the ecological balance, the defence of the environment and the quality of life of the Portuguese people.
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<tr>
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<tbody>
<tr>
<td>112</td>
<td>San Marino</td>
<td>1974; rev. 2008</td>
<td>--</td>
<td>Art. 169: … It is prohibited to make international agreements permitting the transit or dumping, on national territory, of toxic waste and other hazardous materials likely to cause serious damage to public health and the environment.</td>
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<td>Art. 10: … The Republic shall protect its historical and artistic heritage, as well as its natural environment.</td>
</tr>
<tr>
<td>113</td>
<td>Sao Tome and Principe</td>
<td>1975; rev. 2003</td>
<td>Art. 49(1): All have the right to housing and to an environment of human life …</td>
<td>Art. 49(1): All have … the duty to defend [right to environment].</td>
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<td>Art. 10(d): Prime objectives of the State are … Preserve the harmonious balance of nature and of the environment.</td>
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<td>Art. 49(2): It is incumbent upon the State to plan and execute a housing policy inserted in the plans for zoning of the territory.</td>
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<td>Art. 50(2): … it is incumbent upon the State to promote the Public Health which has as objectives the physical and mental well-being of the populations and their balanced fitting into the socio-ecological environment in which they live.</td>
</tr>
<tr>
<td>114</td>
<td>Saudi Arabia</td>
<td>1992; rev. 2013</td>
<td>--</td>
<td>Art. 32: The State shall seek to conserve, protect and develop the environment and prevent pollution.</td>
</tr>
<tr>
<td>115</td>
<td>Senegal</td>
<td>2001; rev. 2016</td>
<td>Art. 25-2: Each has the right to a healthy environment. … Art. 8: The Republic of Senegal guarantees to all citizens the fundamental individual freedoms, the economic and social rights as well as the collective rights. These freedoms and rights are notably … the right to a healthy [sain] environment.</td>
<td>Art. 25-2: … The defense, the preservation and the amelioration of the environment [is] incumbent on the public powers. The public powers have the obligation to preserve, to restore the essential ecological processes, to promote the responsible management of species and of ecosystems, to preserve the diversity and the integrity of the genetic patrimony, to require environmental evaluation of the plans, projects or programs, to promote environmental education and to assure the protection of the populations in the drafting [elaboration] and the implementation of projects and programs of which the social and environmental impacts are significant.</td>
</tr>
<tr>
<td>116</td>
<td>Serbia</td>
<td>2006</td>
<td>Art. 74: Everyone shall have the right to healthy environment and the right to timely and full information about the state of environment. Everyone, especially the Republic of Serbia and autonomous</td>
<td>Art. 74: … Everyone shall be obliged to preserve and improve the environment.</td>
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<td>Art. 88: The Law may restrict the models of utilization and management [of agricultural land, forest land and municipal building land on private assets] … to eliminate the danger of causing damage to environment or prevent violation of rights and legally based interests of other persons.</td>
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<td>Art. 97(9): The Republic of Serbia shall organize and provide for … sustainable development; system of protection and improvement of</td>
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<td>117</td>
<td>Seychelles</td>
<td>1993; rev. 2017</td>
<td>Art. 38: The State recognises the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment … Preamble: SOLEMNLY DECLARING our unswaying commitment … to … help preserve a safe, healthy and functioning environment for ourselves and for posterity; Art. 40(f): It shall be the duty of every citizen of Seychelles … to protect, preserve and improve the environment; …</td>
<td>Art. 38: … with a view to ensuring the effective realization of this right [to environment] the State undertakes- a. to take measures to promote the protection, preservation and improvement of the environment b. to ensure a sustainable socio-economic development of Seychelles by a judicious use and management of the resources of Seychelles; c. to promote public awareness of the need to protect, preserve and improve the environment.</td>
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<td>118</td>
<td>Sierra Leone</td>
<td>1991; rev. 2008</td>
<td>--</td>
<td>Art. 17(3a): Any person who is arrested or detained … shall be brought before a court of law … within ten days from the date of arrest in … environmental offences;</td>
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<tr>
<td>119</td>
<td>Slovak Republic (or Slovakia)</td>
<td>1992; rev. 2017</td>
<td>Art. 44(1): Everyone has the right to a favorable environment. Art. 45: Everyone has the right to timely and complete information about the state of the environment and about the causes and consequences of its condition. Art. 20(3): … The exercising of the ownership right [to property] may not harm human health, nature, cultural monuments and the environment beyond limits laid down by law. Art. 23(3): Freedoms [of movement and right of abode] …</td>
<td>Art. 44(2): Everyone is obliged to protect and enhance the environment and the cultural heritage. Art. 44(3): No one may endanger, or damage the environment, natural resources, and the cultural heritage beyond the extent laid down by law. Art. 44(4). The state looks after a cautious use of natural resources, protection of agricultural and forest land, ecological balance, and effective environmental care, and provides for the protection of specified species of wild plants and animals. Art. 44(5): Agricultural and forest land are non-renewable natural resources and enjoy special protection by the state and society.</td>
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</table>

provinces, shall be accountable for the protection of environment. …

Art. 83: … Entrepreneurship may be restricted by the Law, for the purpose of protection of people's health, environment and natural goods …

environment; protection and improvement of flora and fauna; … and other hazardous substances;
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<td></td>
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<td>may be restricted by law … in the interest of environmental protection.</td>
<td>Art. 67: The manner in which property is acquired and enjoyed shall be established by law so as to ensure its economic, social and environmental function.</td>
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<td>Art. 72: Everyone has the right in accordance with the law to a healthy living environment. …</td>
<td>Art. 72: … The state shall promote a healthy living environment. To this end, the conditions and manner in which economic and other activities are pursued shall be established by law. The law shall establish under which conditions and to what extent a person who has damaged the living environment is obliged to provide compensation.</td>
</tr>
<tr>
<td>120</td>
<td>Slovenia</td>
<td>1991; rev. 2013</td>
<td>Art. 25(1): Every person has the right to an environment that is not harmful to their health and well-being, and to be protected from pollution and harmful materials. Art. 25(2): Every person has the right to have a share of the natural resources of the country, whilst being protected from excessive and damaging exploitation of these natural resources.</td>
<td>Art. 45(2): All people in the Federal Republic of Somalia have a duty to safeguard and enhance the environment and participate in the development, execution, management, conservation and protection of the natural resources and environment.</td>
</tr>
<tr>
<td>121</td>
<td>Somalia</td>
<td>2012</td>
<td>Art. 24: Everyone has the right - a. to an environment that is not harmful to their health or well-being; and b. to have the environment protected, for the benefit of present</td>
<td>Art. 45: 1. The Federal Government shall give priority to the protection, conservation, and preservation of the environment against anything that may cause harm to natural biodiversity and the ecosystem. 3. The Federal Government and the governments of the Federal Member States affected by environmental damage shall: a. Take urgent measures to clean up hazardous waste dumped on the land or in the waters of the Federal Republic of Somalia; b. Enact legislation and adopt urgent necessary measures to prevent the future dumping of waste in breach of international law and the sovereignty of the Federal Republic of Somalia; c. Take necessary measures to obtain compensation from those responsible for any dumping of waste, whether they are in the Federal Republic of Somalia or elsewhere; d. Take necessary measures to reverse desertification, deforestation and environmental degradation, and to conserve the environment and prevent activities that damage the natural resources and the environment of the nation. 4. In consultation with the Federal Member States, the Federal Government shall adopt general environmental policies for the Federal Republic of Somalia.</td>
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<tr>
<td>122</td>
<td>South Africa</td>
<td>1996; rev. 2012</td>
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<td>123</td>
<td>South Sudan</td>
<td>2011; rev.</td>
<td>Art. 41: 1. Every person or community shall have the right to a clean and healthy environment. 3. Every person shall have the right to have the environment protected for the benefit of present and future generations, through appropriate legislative action and other measures that: a. prevent pollution and ecological degradation; b. promote conservation; and c. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</td>
<td>Art. 41(2): Every person shall have the obligation to protect the environment for the benefit of present and future generations. Art. 46(2)(g): Every citizen shall in particular … protect the environment and conserve natural resources;</td>
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<td></td>
<td></td>
<td>2013</td>
<td></td>
<td>Art. 41(4): All levels of government shall develop energy policies that will ensure that the basic needs of the people are met while protecting and preserving the environment.</td>
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<tr>
<td>124</td>
<td>Spain</td>
<td>1978; rev.</td>
<td>Art. 45(1): Everyone has the right to enjoy an environment suitable for the development of the person …</td>
<td>Art. 45(1): Everyone has … the duty to preserve [right to environment].</td>
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<td></td>
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<td>2011</td>
<td>Art. 45(2): The public authorities shall watch over a rational use of all natural resources with a view to protecting and improving the quality of life and preserving and restoring the environment, by relying on an indispensable collective solidarity. Art. 45(3): For those who break the provisions contained in the foregoing paragraph, criminal or, where applicable, administrative sanctions shall be imposed, under the terms established by the law, and they shall be obliged to repair the damage caused.</td>
<td>Art. 45(2): The public authorities shall watch over a rational use of all natural resources with a view to protecting and improving the quality of life and preserving and restoring the environment, by relying on an indispensable collective solidarity. Art. 45(3): For those who break the provisions contained in the foregoing paragraph, criminal or, where applicable, administrative sanctions shall be imposed, under the terms established by the law, and they shall be obliged to repair the damage caused.</td>
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<tr>
<td>125</td>
<td>Sri Lanka</td>
<td>1978; rev. 2015</td>
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<td>126</td>
<td>Sudan</td>
<td>2019</td>
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<td>127</td>
<td>Suriname</td>
<td>1987; rev. 1992</td>
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<tr>
<td>128</td>
<td>Sweden</td>
<td>1974; rev. 2012</td>
<td>Art. 15: [property rights may not be restricted] In the case of limitations on the use of land or buildings on grounds of protection of human health or the environment, or on grounds of safety, however, the rules laid down in law apply in the matter of entitlement to compensation.</td>
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<td>129</td>
<td>Switzerland</td>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<td>2.</td>
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<td>2. It shall ensure that such damage or nuisance is avoided. The costs of avoiding or eliminating such damage or nuisance are borne by those responsible for causing it….</td>
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<td>Art 76. Water</td>
<td>1. The Confederation shall within the scope of its powers ensure the economic use and the protection of water resources and provide protection against the harmful effects of water.</td>
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<td>2. It shall lay down principles on the conservation and exploitation of water resources, the use of water for the production of energy and for cooling purposes, as well as on other measures affecting the water-cycle.</td>
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<td>3. It shall legislate on water protection, on ensuring appropriate residual flow …</td>
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<td>Art 77. Forests</td>
<td>1. The Confederation shall ensure that the forests are able to fulfil their protective commercial and public amenity functions.</td>
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<td>2. It shall lay down principles on the protection of the forests.</td>
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<td>3. It shall encourage measures for the conservation of the forests.</td>
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<td>Art. 78(1): The protection of natural and cultural heritage is the responsibility of the Cantons.</td>
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<td>Art 79. Fishing and hunting</td>
<td>The Confederation shall lay down principles on finishing and hunting and in particular on preservation of the diversity of fish species, wild mammals and birds.</td>
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<td>Art 80(1): The Confederation shall legislate on the protection of animals.</td>
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<td>Art. 89: Energy Policy</td>
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<td>Art. 104: Agriculture</td>
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<td>Art. 120(1): Human beings and their environment shall be protected against the misuse of gene technology.</td>
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<tr>
<td>130</td>
<td>Syrian Arab Republic (Syria)</td>
<td>2017</td>
<td>Art. 14(1): Protection of the environment shall be the responsibility of the state and society and it shall be the duty of every citizen.</td>
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<td>Art. 12(2): The State shall support development of culture, education, healthcare, science, and art; protect the environment, and safeguard the people’s historical, material and spiritual legacy.</td>
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<td>131</td>
<td>Tajikistan</td>
<td>1994; rev. 2016</td>
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<td>132</td>
<td>Tanzania, United Republic of</td>
<td>1977; rev. 2005</td>
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<tr>
<td>133</td>
<td>Thailand</td>
<td>2017</td>
<td>Sec. 43(2): A person and community shall have the right to … manage, maintain and utilise natural resources, environment and biodiversity in a balanced and sustainable manner, in accordance with the procedures as provided by law. Sec. 58(2): A person and community shall have the rights to receive information, explanation and reasons from a State agency prior to the implementation or granting of permission under paragraph one.</td>
<td>Sec. 50(8): A person shall have … duties … to cooperate and support the conservation and protection of the environment, natural resources, biodiversity, and cultural heritage;</td>
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<tr>
<td>134</td>
<td>Timor-Leste</td>
<td>2002</td>
<td>Art. 61(1): All have the right to a humane, healthy, and ecologically balanced environment …</td>
<td>Art. 61(1): All have … the duty to protect [right to environment] and improve it for the benefit of the future generations.</td>
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<tr>
<td>135</td>
<td>Togo</td>
<td>1992; rev. 2007</td>
<td>Art. 41: Every person has the right to a healthy environment. …</td>
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<td>136</td>
<td>Tunisia</td>
<td>2014</td>
<td>Art. 45: The state guarantees the right to a healthy and balanced environment and the right to participate in the protection of the climate. …</td>
<td>Preamble: Being aware of the necessity of contributing to the preservation of a healthy environment that guarantees the sustainability of our natural resources and bequeathing a secure life to future generations …</td>
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<td>137</td>
<td>Türkiye (or Turkey)</td>
<td>1982; rev. 2017</td>
<td>Art. 56: Everyone has the right to live in a healthy and balanced environment. …</td>
<td>Art. 56: … It is the duty of the State and citizens to improve the natural environment, to protect the environmental health and to prevent environmental pollution.</td>
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<td>138</td>
<td>Turkmenistan</td>
<td>2008; rev. 2016</td>
<td>Art. 53: Everyone shall have the right to enabling environment for life and health, credible information on its state, [and] compensation of damage caused to health and property as a result of violation of environmental law or natural disasters.</td>
<td>Art. 53: … Everyone shall be obliged to protect nature, take good care of the environment and natural wealth.</td>
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<td>139</td>
<td>Tuvalu</td>
<td>1986; rev. 2008</td>
<td>Art. 26(3)(c)(viii): [right/freedom of movement may be restricted] … to the extent that the law makes provision … for the imposition of restrictions on … conservation of the environment …</td>
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<td>140</td>
<td>Uganda</td>
<td>1995; rev. 2017</td>
<td>Art. 39: Every Ugandan has a right to a clean and healthy environment.</td>
<td>Art. 17(1) (j): It is the duty of every citizen of Uganda … to create and protect a clean and healthy environment.</td>
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<td>141</td>
<td>Ukraine</td>
<td>1996; rev. 2016</td>
<td>Art. 50: Everyone has the right to an environment that is safe for life and health, and to compensation for damages inflicted through the violation of this right. Everyone is guaranteed the right of free access to information about the environmental situation … and also the right to disseminate such information. No one shall make such information secret.</td>
<td>(a) create and develop parks, reserves and recreation areas and ensure the conservation of natural resources; (b) promote the rational use of natural resources so as to safeguard and protect the bio-diversity of Uganda. Art. 245: Parliament shall, by law, provide for measures intended- (a) to protect and preserve the environment from abuse, pollution and degradation; (b) to manage the environment for sustainable development; and (c) to promote environmental awareness.</td>
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<td>142</td>
<td>United Arab Emirates</td>
<td>1971; rev. 2004</td>
<td>Art. 23: … Society shall be responsible for the protection and proper exploitation of such natural resources and wealth for the benefit of the national economy.</td>
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<td>143</td>
<td>Uruguay</td>
<td>1966; reinst. 1985; rev. 2004</td>
<td>Art. 47: … The access to potable water and the access to sanitation, constitute fundamental human rights. …</td>
<td>Art. 47: The protection of the environment is of general interest. Persons must abstain from any act that causes grave depredation, destruction or contamination to the environment. … Art. 47: … The law shall regulate this provision and may provide sanctions for transgressors. Water is a natural resource essential for life. … 1. The national policy concerning water and sanitation shall be based on: a. the ordering of the territory, conservation and protection of the Environment and the restoration of nature. b. the sustainable management, in solidarity with the future generations, of the hydro resources and the preservation of the hydrological cycle which constitutes a matter of public interest. The users and the civil society, shall participate in all the instances of planning, management and control of hydro resources; establishing the hydrological basins [cuencas] as basic units. … d. the principle that the delivery [prestación] of the services of potable water and sanitation, must have preference for reasons of social order over the economic order. Any authorization, concession or permission that in any manner infringes the provisions above[,] will be considered of no effect.</td>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<td>144</td>
<td>Uzbekistan</td>
<td>1992; rev. 2011</td>
<td>Art. 50: All citizens shall protect the environment. Art. 54: … The use of any property must not be harmful to the ecological environment …</td>
<td>Art. 55: The land, its minerals, fauna and flora, as well as other natural resources shall constitute the national wealth, and shall be rationally used and protected by the state.</td>
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<td>145</td>
<td>Vanuatu</td>
<td>1980; rev. 2013</td>
<td>Art. 7(d): Every person has the following fundamental duties to himself and his descendants and to others … to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations;</td>
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| 146    | Venezuela, Bolivarian Republic of | 1999; rev. 2009 | Art. 127: It is the right and duty of each generation to protect and maintain the environment for its own benefit and that of the world of the future. Everyone has the right, individually and collectively, to enjoy a safe, healthful and ecologically balanced life and environment. … Art. 112: All persons may devote themselves freely to the economic activity of their choice, subject only to the limitations … established by law for reasons of human development, security, health, environmental protection or other reasons in the social interest. … Art. 127: It is … duty of each generation to protect and maintain the environment for its own benefit and that of the world of the future. … | Art. 15: The State is responsible for establishing an overall policy … preserving the … environment in accordance with cultural, economic and social development and integration. … Art. 107: Environmental education is obligatory in the various levels and modes of the education system, as well as in informal civil education. … Art. 127: … The State shall protect the environment, biological and genetic diversity, ecological processes, national parks and natural monuments, and other areas of particular ecological importance. The genome of a living being shall not be patentable, and the field shall be regulated by the law relating to the principles of bioethics. It is a fundamental duty of the State, with the active participation of society, to ensure that the populace develops in a pollution-free environment in which air, water, soil, coasts, climate, the ozone layer and living species receive special protection, in accordance with law. Art. 128: The State shall develop a zoning policy taking into account ecological, geographic, demographic, social, cultural, economic and political
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<th>Sr. No.</th>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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<td>realities, in accordance with the premises of sustainable development, including information, consultation and male/female participation by citizens. …</td>
<td>Art. 129: Any activities capable of generating damage to ecosystems must be preceded by environmental and socio-cultural impact studies. The State shall prevent toxic and hazardous waste from entering the country, as well as preventing the manufacture and use of nuclear, chemical and biological weapons. … In contracts … or in any permits granted which involve natural resources, the obligation to preserve the ecological balance, to permit access to, and the transfer of technology on mutually agreed terms and to restore the environment to its natural state if the latter is altered, shall be deemed included even if not expressed ...</td>
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<td>Art. 43: Everyone has the right to live in fresh environment ...</td>
<td>Art. 153: The Republic shall promote, and encourage Latin American and Caribbean integration, in the interest of advancing … environmental interests. …</td>
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<td>1992; rev. 2013</td>
<td>Art. 43: Everyone … has the duty to protect the environment.</td>
<td>Art. 326: National security is based on shared responsibility between the State and civil society to implement the principles of … promotion and conservation of the environment and affirmation of human rights, … based on a sustainable and productive development policy providing full coverage for the national community. The principle of shared responsibility applies to the economic, social, political, cultural, geographical, environmental and military spheres.</td>
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<td>147</td>
<td>Viet Nam</td>
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<td>Art. 50: The Socialist Republic of Vietnam constructs an independent and sovereign economy which … protects the environment; and exercises industrialization and modernization of the country.</td>
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<td>Art. 63: 1. The State has a policy to protect the environment; manages, and effectively and stably use natural resources; protects the nature and biodiversity; takes initiative in prevention and resistance against natural calamities and response to climate change. 2. The State encourages all acts of protection of the environment, development and use of new energy and recycled energy. 3. Organizations and individuals who cause environmental pollution, debilitate natural resources and weaken biodiversity shall be strictly dealt with and must be responsible for remedy and compensation for damage.</td>
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<td>148</td>
<td>Yemen</td>
<td>1991; rev. 2015</td>
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<td>Art. 35: … Each individual shall have a religious and national duty to protect the environment.</td>
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<td>149</td>
<td>Zambia</td>
<td>1991; rev. 2016</td>
<td>--</td>
<td>Art. 43(1): A citizen shall c. protect and conserve the environment and utilise natural resources in a sustainable manner; d. maintain a clean and healthy environment; Art. 256: A person has a duty to co-operate with State organs, State institutions and other persons to— a. maintain a clean, safe and healthy environment; b. ensure ecologically sustainable development and use of natural resources; c. respect, protect and safeguard the environment; and d. prevent or discontinue an act which is harmful to the environment.</td>
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<td>Duties of Citizens</td>
<td>Obligations of the State</td>
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</table>
| 150    | Zimbabwe     | 2013 | Art. 73(1): Every person has the right –
|        |              |      | a. to an environment that is not harmful to their health or well-being; and
|        |              |      | b. to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that--
|        |              |      | i. prevent pollution and ecological degradation;
|        |              |      | ii. promote conservation; and
|        |              |      | iii. secure ecologically sustainable development and use of natural resources while promoting economic and social development.
|        |              |      | Art. 72(2)(b): Where agricultural land, or any right or interest in such land, is required for a public purpose, including … land reorganisation, forestry, environmental conservation or the utilisation of wild life or other natural resources … the land, right or interest may be compulsorily acquired by the State ... |
|        |              |      | Art. 73(2): The State must take reasonable legislative and other measures, within the limits of the resources available to it, to achieve the progressive realisation of the rights set out in this section. |
|        |              |      | f. ensure that the environmental standards enforced in Zambia are of essential benefit to citizens; and
|        |              |      | g. establish and implement mechanisms that address climate change. |

Total Provisions: Included: 103
Not Included: 47
## APPENDIX B

in

CHAPTER IV

Policy-Based Environmental Provisions in the National Constitutions

(143 countries)

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<td>1</td>
<td>Afghanistan</td>
<td>prosperous life and sound living environment</td>
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<td>biodiversity; land</td>
<td>fossil fuels; natural resources</td>
<td>right to environment within framework of sustainable growth; economy within framework of sustainable development and environmental protection</td>
<td>for future generations</td>
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<td>water; sea</td>
<td>pollutants</td>
<td>air</td>
<td>effects of climate change</td>
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<td>Algeria</td>
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<td>biodiversity; land fossil fuels; natural resources</td>
<td>right to environment within framework of sustainable growth; economy within framework of sustainable development and environmental protection</td>
<td>for future generations</td>
<td>water; sea</td>
<td>pollutants</td>
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<td>Andorra</td>
<td>integrity of Earth; environment fit for life</td>
<td>flora and fauna; ecological balance; species natural resources</td>
<td>harmonious and sustainable development</td>
<td>for rights of future generations</td>
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<td>environment; quality of life; repair environmental damage;</td>
<td>natural and cultural patrimony; biological diversity</td>
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<td>of future generations</td>
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<td>of future generations</td>
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<td>for present and future citizens</td>
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<td>economic activities may not jeopardize the ecosystem nor imbalance relations between man and the environment</td>
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<td>for the benefit of present and</td>
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## APPENDIX C

### in

### CHAPTER IV

Rights-Based Environmental Provisions in the National Constitutions
(111 countries)

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<th>Sr. No.</th>
<th>Country Name</th>
<th>Right to Environment</th>
<th>Substantive Environmental Rights</th>
<th>Human Rights and Freedoms</th>
<th>Procedural Environmental Rights</th>
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<td>present as well as the future generations have a right to flourishing social existence, is regarded as a public duty ...</td>
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<td>Jamaica</td>
<td>Art. 13(3)(l): right to enjoy a healthy and productive environment free from the threat of injury or damage from environmental abuse and degradation of the ecological heritage.</td>
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<td>15(3). [property rights may be restricted] … for the protection of the environment; or … for the orderly marketing or production or growth or extraction of any agricultural product or mineral …</td>
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<td>Art. 42: right to a clean and healthy environment, which includes the right … to have the environment protected …; and … to have obligations relating to the environment fulfilled ...</td>
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<td>[Implied Right to Judicial Remedy] Art. 70(1): If a person alleges that a right to a clean and healthy environment … has been, is being or is likely to be, denied, violated, infringed or threatened, the person may apply to a court for redress in addition to any other legal remedies that are available in respect to the same matter.</td>
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<td>Art. 14(3): restrictions on [freedom of] movement or residence … [maybe] reasonably required in the interests of … environmental conservation …</td>
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<td>Art. 115: The state shall protect the right of everyone to live in a benevolent environment …</td>
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<td>[Implied] Art. 115: The state shall protect the right of … environment, by providing information about environmental conditions …</td>
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<td>Art. 6(4): right to … confiscate … land if it is used in a manner adverse to the population's health, interests of environmental protection and national security.</td>
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<td>Art. 23: … right … to influence the decision-making regarding the issues of importance for the environment, …</td>
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<td>Art. 31: The State … to facilitate … enjoyment of the right … to the access to water and … to lasting [durable] development.</td>
<td>Art. 23: … right … to influence the decision-making regarding the issues of importance for the environment, …</td>
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<td>[Implied] Art. 51(9)(3): Increasing the participation of local people in development process.</td>
<td>Art. 30(2): The victim of environmental pollution and degradation shall have the right to be compensated by the pollutant …</td>
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<td>Nicaragua</td>
<td>Art. 60: right to live in a healthy environment …</td>
<td>Art. 60: Rights of Nature: … The supreme and universal common good, … mother earth … must be loved, cared for, and regenerated. … to understand the earth as a living entity and subject of dignity. She belongs to the community of all which inhabit her and to the totality of the ecosystems. …</td>
<td>protection and managed housing and urban development.</td>
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<td>Niger</td>
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<td>Art. 112: right to an environment that is conducive to health and to natural surroundings whose productivity and diversity are preserved. …</td>
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<td>[Implied] Art. 112: … In order to safeguard their right …, citizens are entitled to be informed of the state of the natural environment and of</td>
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</table>
Palestine is not recognized by the United Nations. It, however, has the role of permanent observer and is treated as members without voting rights in the General Assembly.

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<td>Art. 38: right … to demand from public authorities measures to defend the environment, the integrity of the habitat, the public health, the national cultural heritage [acervo], … that … are related to the quality of</td>
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¹ Palestine is not recognized by the United Nations. It, however, has the role of permanent observer and is treated as members without voting rights in the General Assembly.
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<td>to a balanced and appropriate environment for the development of his life.</td>
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<td>Philippines</td>
<td>Art. II. Sec. 16: ...</td>
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<td>right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.</td>
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<td>Poland</td>
<td>Art. 31(3): Any limitation upon the exercise of constitutional freedoms and rights may be imposed only ... to protect the natural environment, health or public morals, or the freedoms and rights of other persons. ...</td>
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<td>Art. 74(3): ... right to be informed of the quality of the environment and its protection.</td>
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<td>Portugal</td>
<td>Art. 66(1): right to a healthy and ecologically balanced human living environment ...</td>
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<td>Art. 64(2)(b): The right to health protection shall be fulfilled ... By creating economic, social, cultural and environmental conditions ...; and by developing both the people's health and hygiene education and</td>
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<td>and Consultation</td>
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<td>Right to Judicial Remedy</td>
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<td>Art. 35(1): right to a healthy and pleasant environment.</td>
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<td>prosecution of offences against public health, consumer rights, the quality of life or the preservation of the environment and the cultural heritage; …</td>
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<td>Art. 44.7: The right to own property implies an obligation to comply with duties related to environmental protection ...</td>
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<td>Art. 42: right to ... reliable information on the state of the environment ...</td>
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<td>to a healthy [sain] environment.</td>
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<td>Art. 83: … Entrepreneurship may be restricted … for the purpose of protection of people's health, environment and natural goods ….</td>
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<td>Sec. 43(2): right to … manage, maintain and utilise natural resources … and biodiversity in a balanced and sustainable manner …</td>
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<td>108</td>
<td>Uzbekistan</td>
<td></td>
<td>Art. 54: … use of any property must not be harmful to the ecological environment …</td>
<td></td>
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</tr>
<tr>
<td>Sr. No.</td>
<td>Country Name</td>
<td>Right to Environment</td>
<td>Substantive Environmental Rights</td>
<td>Human Rights and Freedoms</td>
<td>Procedural Environmental Rights</td>
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<td></td>
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<td>Explicit</td>
<td>Implicit</td>
<td>Art. 112: All persons may devote themselves freely to the economic activity of their choice, subject only to the limitations … established by law for reasons of human development, security, health, environmental protection or other reasons in the social interest. …</td>
<td>Art. 128: The State shall develop a zoning policy … in accordance with … information, consultation and … participation by citizens. …</td>
</tr>
<tr>
<td>109</td>
<td>Venezuela, Bolivarian Republic of</td>
<td>Art. 127: right … of each generation to protect and maintain the environment for its own benefit and that of the world of the future. Everyone has the right, individually and collectively, to enjoy a safe, healthful and ecologically balanced life and environment. …</td>
<td>Implicit</td>
<td></td>
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<tr>
<td>110</td>
<td>Viet Nam</td>
<td>Art. 43: right to live in fresh environment …</td>
<td></td>
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<td>111</td>
<td>Zimbabwe</td>
<td>Art. 73(1): … right- a. to an environment that is not harmful to their health or well-being; and b. to have the environment protected for the benefit of present</td>
<td></td>
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<td>Sr. No.</td>
<td>Country Name</td>
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<td></td>
<td></td>
<td>Explicit</td>
<td>Implicit</td>
<td>utilisation of wild life or other natural resources … the land, right or interest may be compulsorily acquired by the State ...</td>
<td>Right to Information</td>
</tr>
<tr>
<td>and future generations ...</td>
<td>87</td>
<td>11</td>
<td>15</td>
<td>25</td>
<td>17</td>
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<tr>
<td>Total</td>
<td>Implied in Const.:</td>
<td>5</td>
<td>Express: 15</td>
<td>Implied: 2</td>
<td>Express: 5</td>
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<td></td>
<td>Implied by Courts:</td>
<td>6</td>
<td>Implied: 7</td>
<td></td>
<td>Implied: 9</td>
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<td>Countries with Procedural Envtl. Right(s) (Express and Implied):</td>
<td>39</td>
<td></td>
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<td></td>
<td>Countries with atleast one Express Procedural Envtl. Right:</td>
<td>24</td>
<td></td>
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<td>Category</td>
<td>Pakistan Environmental Protection Act, 1997</td>
<td>Punjab Environmental Protection Act, 1997</td>
<td>Sindh Environmental Protection Act, 2014</td>
<td>KPK Environmental Protection Act, 2014</td>
<td>Balochistan Environmental Protection Act, 2012</td>
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<tr>
<td>adverse environmental effect</td>
<td>Section 2(i) impairment of, or damage to, the environment and includes – (a) impairment of, or damage to, human health and safety or to biodiversity or property; (b) pollution; and (c) any adverse environmental effect as may be specified in the regulations;</td>
<td>Section 2(i) impairment of, or damage to, the environment and includes – (a) impairment of, or damage to, human health and safety or to biodiversity or property; (b) pollution; and (c) any adverse environmental effect as may be specified in the regulations;</td>
<td>Section 2(i) impairment of, or damage to, the environment and includes – (a) impairment of, or damage to, human health and safety or to biodiversity or property; (b) pollution; and (c) any adverse environmental effect as may be specified in the regulations;</td>
<td>Section 2(b) pollution or impairment of, or damage to, the environment, and includes, - (i) impairment of, or damage to, human health and safety or to property or biodiversity; (ii) pollution to physical, biological, social, economic environment or to geological, hydrological resources or various land forms; (iii) damage to public comfort, aesthetic conditions, ecological balance and meteorological conditions; (iv) damage to aquifers, vegetal canopy, cultural heritage or archeological sites; and (v) any other adverse environmental effect as may be specified in the rules;</td>
<td>Section 2(a) impairment of, or damage to, the environment and includes – (a) human health and property or biodiversity, coast, beaches and ecosystem; (b) pollution; and (c) any adverse environmental effect on Land, Air and Water;</td>
</tr>
<tr>
<td>air pollutant</td>
<td>Section 2(iii) any substance that causes pollution of air and includes soot, smoke, dust particles, odor, light, electro-magnetic, radiation, heat, fumes, combustion exhaust, exhaust gases, noxious gases, hazardous substance and radioactive substances;</td>
<td>Section 2(iii) any substance that causes pollution of air and includes soot, smoke, dust particles, odor, light, electro-magnetic, radiation, heat, fumes, combustion exhaust, exhaust gases, noxious gases, hazardous substance and radioactive substances;</td>
<td>Section 2(iv) any substance that causes pollution of air and includes soot, smoke, dust particles, odor, light, electro-magnetic, radiation, heat, fumes, combustion exhaust, exhaust gases, noxious gases, hazardous substances and radioactive substances;</td>
<td>Section 2(f) any substance that causes pollution of, air and includes soot, smoke, dust particles, odor, light, electro-magnetic radiation, heat, fumes, combustion exhaust, exhaust gases, noxious gases, hazardous substances and radioactive substances;</td>
<td>Section 2(c) any substance that causes pollution of air and includes soot, smoke, dust particles, odor, light, electro-magnetic, radiation, heat, fumes, combustion exhaust, exhaust gases, noxious gases, hazardous substance and radioactive substances;</td>
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<td>Category</td>
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<td>KPK Environmental Protection Act, 2014</td>
<td>Balochistan Environmental Protection Act, 2012</td>
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<tr>
<td>Best practicable environmental option</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Section 2(f) the best method for preventing or minimizing adverse effects on the environment, having regard to, among other things: (i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; (ii) the financial implications, and the effect on the environment, of that option when compared with other options; and (iii) the current stage of technical knowledge and the likelihood that the option can be successfully applied.</td>
</tr>
<tr>
<td>biosafety</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Section 2(vi) the mechanism developing through policy and procedure to ensure human health and the environmentally safe application of biotechnology;</td>
<td>Section 2(h) the mechanisms developed through policy and procedure to ensure human health and environmentally safe application of biotechnology;</td>
<td>Not provided</td>
</tr>
<tr>
<td>environment</td>
<td>Section 2(x) (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and</td>
<td>Section 2(x) (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and</td>
<td>Section 2(xii) (a) air, water, land and natural resources; (b) all layers of the atmosphere; (c) all organic and inorganic matters and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and</td>
<td>Section 2(r) (i) air, water and land; (ii) all layers of the atmosphere; (iii) all organic and inorganic matter and living organisms; (iv) the ecosystem or flora and fauna, and ecological relationships; (v) buildings, structure’s, roads, facilities, installations and works; (vi) all social or cultural and economic conditions and</td>
<td>Section 2(p) (i) air, water and land; (ii) all layers of the atmosphere; (iii) all organic and inorganic matter and living organisms; (iv) the ecosystem or flora and fauna, and ecological relationships; (v) buildings, structures, roads, facilities, installations and works; (vi) all social or cultural and economic conditions and</td>
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<td>Sindh Environmental Protection Act, 2014</td>
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<tr>
<td>environmental impact</td>
<td>(g) the inter-relationships between any of the factors in sub-clauses (a) to (f);</td>
<td>(g) the inter-relationships between any of the factors in sub-clauses (a) to (f);</td>
<td>(g) the inter-relationship between any of the factors in sub-clause (a) to (f) made under this Act;</td>
<td>activities affecting community life; and (vii) the inter-relationships between any of the factors specified in sub-clauses (i) to (vi);</td>
<td>activities affecting community life; and (vii) the inter-relationships between any of the factors specified in sub-clauses (i) to (vi);</td>
</tr>
<tr>
<td>assessment</td>
<td>Section 2(xi) an environmental study comprising collection of data, prediction of qualitative and quantitative impacts, comparison of alternatives, evaluation of preventive, mitigatory and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations and such other components as may be prescribed;</td>
<td>Section 2(xi) an environmental study comprising collection of data, prediction of qualitative and quantitative impacts, comparison of alternatives, evaluation of preventive, mitigatory and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations and such other components as may be prescribed;</td>
<td>Section 2(xv) an environmental study comprising collection of data, prediction of qualitative and quantitative impacts, comparison of alternatives, evaluation of preventive, mitigation and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations and such other components as may be prescribed;</td>
<td>Section 2(s) an environmental study comprising collection of data, prediction of qualitative and quantitative impacts of a proposed developmental activity, comparison of alternatives, evaluation of preventive, mitigatory and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations, measures and such other components as may be prescribed;</td>
<td>Section 2(q) an environmental study comprising collection of data, prediction of qualitative and quantitative impacts, comparison of alternatives, evaluation of preventive, mitigatory and compensatory measures, formulation of environmental management and training plans and monitoring arrangements, and framing of recommendations and such other components as may be prescribed;</td>
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<tr>
<td>Environmental Management Plan</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Section 2(xvi) a site specific plan developed to ensure that all necessary measures are identified and implemented in order to protect the environment and comply with the environmental legislation;</td>
<td>Not provided</td>
<td>Not provided</td>
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<tr>
<td>Environmental Review</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Section 2(xxix) a quantitative and qualitative assessment of documents submitted by proponent, comments from public and</td>
<td>Not provided</td>
<td>Not provided</td>
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<td>Category</td>
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<td><strong>industrial activity</strong></td>
<td>Section (xxii)</td>
<td>Section (xxii)</td>
<td>Section 2(xxviii)</td>
<td>Section 2(dd)</td>
<td>Section 2(dd)</td>
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<td>any operation or process for manufacturing,</td>
<td>any operation or process for manufacturing,</td>
<td>any operation or process for manufacturing,</td>
<td>any operation or process for manufacturing,</td>
<td>any operation or process for manufacturing,</td>
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<td>making, formulating, synthesising, altering,</td>
<td>making, formulating, synthesising, altering,</td>
<td>making, formulating, synthesising, altering,</td>
<td>making, formulating, synthesising, altering,</td>
<td>making, formulating, synthesising, altering,</td>
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<td>repairing, ornamenting, finishing, packing</td>
<td>repairing, ornamenting, finishing, packing</td>
<td>repairing, ornamenting, finishing, packing</td>
<td>repairing, ornamenting, finishing, packing</td>
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<td>or otherwise treating any article or substance</td>
<td>or otherwise treating any article or substance</td>
<td>or otherwise treating any article or substance</td>
<td>or otherwise treating any article or substance</td>
<td>or otherwise treating any article or substance</td>
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<td>with a view to its use, sale, transport, delivery or disposal, or for mining, for oil and gas exploration and development, or for pumping water or sewage, or for generating, transforming or transmitting power or for any other industrial or commercial purposes;</td>
<td>with a view to its use, sale, transport, delivery or disposal, or for mining, for oil and gas exploration and development, or for pumping water or sewage, or for generating, transforming or transmitting power or for any other industrial or commercial purposes;</td>
<td>with a view to its use, sale, transport, delivery or disposal, or for mining, for oil and gas exploration and development, or for pumping water or sewage, or for generating, transforming or transmitting power or for any other industrial or commercial purposes;</td>
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<td><strong>initial environmental examination</strong></td>
<td>Section 2(xxiv)</td>
<td>Section 2(xxiv)</td>
<td>Section 2(xxx)</td>
<td>Section 2(ff)</td>
<td>Section 2(ff)</td>
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<td></td>
<td>a preliminary environmental review of the reasonably foreseeable qualitative and quantitative impacts on the environment of a proposed project to determine whether it is likely to cause an adverse environmental effect for requiring preparation of an environmental impact assessment;</td>
<td>a preliminary environmental review of the reasonably foreseeable qualitative and quantitative impacts on the environment of a proposed project to determine whether it is likely to cause an adverse environmental effect for requiring preparation of an environmental impact assessment;</td>
<td>a preliminary environmental review of the reasonably foreseeable qualitative and quantitative impacts on the environment of a proposed project to determine whether it is likely to cause an adverse environmental effect for requiring preparation of an environmental impact assessment;</td>
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<td><strong>pollution</strong></td>
<td>Section 2(xxxiii)</td>
<td>Section 2(xxxiii)</td>
<td>Section 2(xl)</td>
<td>Section 2(pp)</td>
<td>Section 2(qq)</td>
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<td></td>
<td>the contamination of air, land or water by the discharge or emission of effluents or wastes or air pollutants or noise or</td>
<td>the contamination of air, land or water by the discharge or emission of effluents or wastes or air pollutants or noise or</td>
<td>the contamination of air, land or water by the discharge or emission of effluents or wastes or air pollutants or noise or</td>
<td>the contamination of air, land or water by the discharge or emission of effluents or wastes or air pollutants or noise or</td>
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<td>project</td>
<td>any activity, plan, scheme, proposal or undertaking involving any change in the environment and includes– (a) construction by use of buildings or other works; (b) construction or use of roads or other transport systems; (c) construction or operation of factories or other installations; (d) mineral prospecting, mining, quarrying, stone-crushing, drilling and the like; (e) any change of land use or water use; and (f) alteration, expansion, repair, decommissioning or abandonment of existing buildings or other works, roads or other transport systems, factories or other installations;</td>
<td>any activity, plan, scheme, proposal or undertaking involving any change in the environment and includes– (a) construction by use of buildings or other works; (b) construction or use of roads or other transport systems; (c) construction or operation of factories or other installations; (d) mineral prospecting, mining, quarrying, stone-crushing, drilling and the like; (e) any change of land use or water use; and (f) alteration, expansion, repair, decommissioning or abandonment of existing buildings or other works, roads or other transport systems, factories or other installations;</td>
<td>any activity, plan, scheme, proposal or undertaking involving any change in the environment and includes– (a) construction by use of buildings or other works; (b) construction or use of roads or other transport systems; (c) construction or operation of factories or other installations; (d) mineral prospecting, mining, quarrying, stone-crushing, drilling and the like; (e) any change of land use or water use; and (f) alteration, expansion, repair, decommissioning or abandonment of existing buildings or other works, roads or other transport systems, factories or other installations;</td>
<td>any activity, plan, scheme, proposal or undertaking involving any change in the environment and includes– (a) construction by use of buildings or other works; (b) construction or use of roads or other transport systems; (c) construction or operation of factories or other installations; (d) mineral prospecting, mining, quarrying, stone-crushing, drilling and the like; (e) any change of land use or water use; and (f) alteration, expansion, repair, decommissioning or abandonment of existing buildings or other works, roads or other transport systems, factories or other installations;</td>
<td>any activity, plan, scheme, proposal or undertaking involving any change in the environment and includes– (a) construction by use of buildings or other works; (b) construction or use of roads or other transport systems; (c) construction or operation of factories or other installations; (d) mineral prospecting, mining, quarrying, stone-crushing, drilling and the like; (e) any change of land use or water use; and (f) alteration, expansion, repair, decommissioning or abandonment of existing buildings or other works, roads or other transport systems, factories or other installations;</td>
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<td>protection of environment</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Section 2(tt) the qualitative and quantitative improvement of the different components of the environment and prevention of the deterioration of qualitative and quantitative standards;</td>
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<td>proponent</td>
<td>Section 2(xxxvi) the person who proposes or intends to undertake a project;</td>
<td>Section 2(xxxvi) the person who proposes or intends to undertake a project;</td>
<td>Section 2(xliii) the person who proposes or intends to undertake a project;</td>
<td>Section 2(tt) the person who proposes or intends to undertake a project;</td>
<td>Section 2(uu) the person who proposes or intends to undertake a project;</td>
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<td>standards</td>
<td>Section 2(xli) qualitative and quantitative standards for discharge of effluents and wastes and for emission of air pollutants and noise either for general applicability or for a particular area, or from a particular production process, or for a particular product, and includes the National Environmental Quality Standards, emission standards and other standards established under this Act and the rules and regulations made there under;</td>
<td>Section 2(xli) qualitative and quantitative standards for discharge of effluents and wastes and for emission of air pollutants and noise either for general applicability or for a particular area, or from a particular production process, or for a particular product, and includes the Punjab Environmental Quality Standards, emission standards and other standards established under this Act and the rules and regulations made there under;</td>
<td>Section 2(xlix) qualitative and quantitative standards for discharge of effluent and wastes and for emission of air pollutants and noise either for general applicability or for a particular area, or from a particular production process, or for a particular product, and includes the Sindh Environmental Quality Standards, emission standards and other standards established under this Act and the rules and regulations made there under;</td>
<td>Section 2(ddd) qualitative and quantitative standards for air, water, soil and discharge of effluent and wastes and for emission of air pollutants and noise either for general applicability or for a particular area, or from a particular production process, or for a particular product, and includes the Khyber Pakhtunkhwa Environmental Quality Standards, emission standards and other standards established under this Act and the rules and regulations made there under;</td>
<td>Section 2(zz) qualitative and quantitative standards for discharge of effluents and wastes and for emission of air pollutants and noise either for general applicability or for a particular area, or from a particular production process, or for a particular product, and includes the Environmental Quality Standards, emission standards and other standards established under this Act and the rules and regulations made there under;</td>
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<td>Category</td>
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<tr>
<td>strategic environmental assessment</td>
<td>Not provided</td>
<td>Section 2(l)</td>
<td>Section 2(eee)</td>
<td>Section 2(aaa)</td>
<td>A system of incorporating environmental considerations into policies, plans, programmes and strategies. It is sometimes referred to as strategic environmental impact assessment.</td>
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<td></td>
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<td>an analysis of a proposed policy, legislation, plan or programme to determine whether the principles of sustainable development have been integrated therein and to identify its likely environmental effects and such components as require an initial environmental examination or environmental impact assessment;</td>
<td>an analysis or series of analyses that are systematic, overall and participatory to ensure that the principle of sustainable development is the basis for and is integrated into the development of a policy, plan or programme;</td>
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# Comparison of IEE and EIA Provisions in the Pakistani Laws

<table>
<thead>
<tr>
<th>Category</th>
<th>Pakistan Environmental Protection Act, 1997</th>
<th>Punjab Environmental Protection Act, 1997</th>
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</thead>
</table>
| Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) | Section 12  
(1) No proponent of a project shall commence construction or operation unless he has filed with the Federal Agency an initial environmental examination or where the project is likely to cause an adverse environmental effect, an environmental impact assessment, and has obtained from the Federal Agency approval in respect thereof.  
(2) The Federal Agency shall –  
(a) review the initial environmental examination and accord its approval, or require submission of an environmental impact assessment by the proponent; or | Section 12  
(1) No proponent of a project shall commence construction or operation unless he has filed with the Provincial Agency an initial environmental examination or where the project is likely to cause an adverse environmental effect, an environmental impact assessment, and has obtained from the Provincial Agency approval in respect thereof.  
(2) The Provincial Agency shall–  
(a) review the initial environmental examination and accord its approval, or require submission of an environmental impact assessment by the proponent; or | Section 17  
(1) No proponent of a project shall commence construction or operation unless he has filed with the Agency an initial environmental examination or environmental impact assessment, and has obtained from the Agency approval in respect thereof.  
(2) The Agency shall –  
(a) review the initial environmental examination and accord its approval, subject to such terms and conditions as it may prescribe, or require submission of an environmental impact assessment by the proponent; or | Section 13  
(1) No proponent of a project shall commence construction and operation unless he has filed with the Agency an initial environmental examination or environmental impact assessment, and has obtained from the Agency, environmental approval in respect thereof.  
(2) The Agency shall- | Section 15  
(1) No proponent of a project of public and private sector shall commence construction or operation unless he has filed an Initial Environmental Examination with the Government Agency designated by Balochistan Environmental Protection Agency, as the case may be, or, where the project is likely to cause an adverse environmental effects an environmental impact assessment, and has obtained from the Government Agency approval in respect thereof.  
(2) The Government Agency shall subject to standards fixed by the Balochistan Environmental Protection Agency—  
(a) review the initial environmental examination and accord its approval, or require submission of an environmental impact assessment by the proponent; or |
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<tr>
<th>Category</th>
<th>Pakistan Environmental Protection Act, 1997</th>
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<tr>
<td>Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) (Continued)</td>
<td>(b) review the environmental impact assessment and accord its approval subject to such conditions as it may deem fit to impose, or require that the environmental impact assessment be re-submitted after such modifications as may be stipulated, or reject the project as being contrary to environmental objectives.</td>
<td>(b) review the environmental impact assessment and accord its approval subject to such conditions as it may deem fit to impose, or require that the environmental impact assessment be re-submitted after such modifications as may be stipulated, or reject the project as being contrary to environmental objectives.</td>
<td>(b) review the environmental impact assessment and accord its approval subject to such terms and conditions as it may deem fit to impose, or require that the environmental impact assessment be re-submitted after such modifications as may be stipulated or decline approval of the environmental impact assessment as being contrary to environmental objectives.</td>
<td>(b) review the environmental impact assessment and accord its approval subject to such conditions as it may deem fit to impose, require that the environmental impact assessment be re-submitted after such modifications as may be stipulated, or reject the project as being contrary to environmental objectives.</td>
<td>(b) review the environmental impact assessment and accord its approval subject to such conditions as it may deem fit to impose, or require that the environmental impact assessment be re-submitted after such modifications as may be stipulated or reject the project as being contrary to environmental objectives.</td>
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<td>(4) The Federal Agency shall communicate its approval or otherwise within a period of four months from the date the initial environmental examination or environmental impact assessment is filed complete in all respects in accordance with the prescribed procedure, failing which the initial environmental examination or, as the case may be, the environmental impact assessment shall be deemed to have been approved, to the extent to which it does not contravene the provisions of this Act and the rules and regulations made thereunder.</td>
<td>(4) The Provincial Agency shall communicate its approval or otherwise within a period of four months from the date the initial environmental examination or environmental impact assessment is filed complete in all respects in accordance with the prescribed procedure, failing which the initial environmental examination or, as the case may be, the environmental impact assessment shall be deemed to have been approved, to the extent to which it does not contravene the provisions of this Act and the rules and regulations made thereunder.</td>
<td>(4) The Agency shall communicate its approval or otherwise within a period of two months from the date that the initial environmental examination is filed, and within a period of four months from the date that the environmental impact assessment is filed complete in all respects in accordance with the regulations, failing which the initial environmental examination or, as the case may be, the environmental impact assessment shall be deemed to have been approved, to the extent to which it does not contravene the provisions of this Act and the rules and regulations:</td>
<td>(4) The Agency shall communicate its approval or otherwise within a period of four months from the date the initial environmental examination or environmental impact assessment is filed complete in all respects in accordance with the prescribed procedure, failing which the initial environmental examination or, as the case may be, the environmental impact assessment shall be deemed to have been approved, to the extent to which it does not contravene the provisions of this Act and the rules, provided that delay is not on part of the proponent for the provision of additional information asked for during the review process or conductance of public hearing of the project.</td>
<td>(4) The Government Agency shall communicate its approval or otherwise within a period of four months from the date the initial environmental examination or environmental impact assessment is filed complete in all respects in accordance with the prescribed procedure, failing which the initial environmental examination or, as the case may be, the environmental impact assessment shall be deemed to have been approved, to the extent to which it does not contravene the provisions of this Act and the rules and regulations.</td>
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<td>Category</td>
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<td>(5) Subject to sub-section (4), the Federal Government may in a particular case extend the aforementioned period of four months if the nature of the project so warrants.</td>
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<td>(6) The provisions of sub-sections (1), (2), (3), (4) and (5) shall apply to such categories of projects and in such manner as may be prescribed.</td>
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<td>(7) The Federal Agency shall maintain separate Registers for initial environmental examination and environmental impact assessment project, which shall contain brief particulars of each project and a summary of decisions taken thereon, and which shall be open to inspection by the public at all reasonable hours and the disclosure of information in such Registers shall be subject to the restrictions specified in sub-section (3).</td>
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<td>(8) No concession areas for any developmental activities shall be awarded to any...</td>
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<td>Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) (Continued)</td>
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<td>International/ National groups or firms without consultation and concurrence of the Government of Balochistan/ Environmental Protection Agency.</td>
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<td>(9) The prospect licenses for mining, quarrying, crushing etc. shall only be awarded/ granted in compliance with the sub section (1), (2), (3), (4) and (5).</td>
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<td>(9) The cellular companies shall obtain environmental approval from the Balochistan EPA before installing Base Transceivers Station (BTS).</td>
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<td>(10) The cellular companies shall obtain environmental approval from the Balochistan EPA before installing Base Transceivers Station (BTS).</td>
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<td>(10) The cellular companies shall only be awarded/ granted in compliance with the sub section (1), (2), (3), (4) and (5).</td>
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<td>(11) BTS Stations should be required to undergo routine evaluation for Compliance. Whenever an application is submitted to the Balochistan EPA for construction or modification of a transmitting facility. EPA shall have the authority to take action if a cellular base station antenna does not comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines and recommendations of the report titled 'Environmental and Health Related Effects of the Cellular Base Station Antennas' carried out by IT and Telecom Division, Ministry of Information Technology.</td>
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<td>(11) BTS Stations should be required to undergo routine evaluation for Compliance. Whenever an application is submitted to the Balochistan EPA for construction or modification of a transmitting facility. EPA shall have the authority to take action if a cellular base station antenna does not comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines and recommendations of the report titled 'Environmental and Health Related Effects of the Cellular Base Station Antennas' carried out by IT and Telecom Division, Ministry of Information Technology.</td>
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<td>Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) (Continued)</td>
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<td>(12) No person or company related to public and private sector shall commence construction or operation unless the concerned building authority accord approval under the provisions of the in vogue Building Code.</td>
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<td>(13) after fulfilling the sub section (12) an action plan shall be submitted to the concerned municipal/town/union council to carry out the activities for a specific time period as to provide the general public or road users an alternative corridor.</td>
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<td>(14) the waste generated during the construction or maintenance or repair of any building shall be appropriately disposed of or transported or collected to a designated place allocated for the purpose like any land fill site to avoid public nuisance.</td>
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<td>(15) the construction or repair activities especially in the main city area shall be carried out in a manner to minimize the road congestion or blockage.</td>
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<td>(16) the proponent of the project shall remit fifty thousand rupees as review fee of an Initial Environmental Examination (IEE) and one</td>
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<td>Public Participation and Disclosure</td>
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<td>Section 12</td>
<td>Section 17</td>
<td>Section 13</td>
<td>Section 15</td>
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<td>(3) Every review of an environmental impact assessment shall be carried out with public participation and no information will be disclosed during the course of such public participation which relates to--</td>
<td>(3) Every review of an environmental impact assessment shall be carried out with public participation and no information will be disclosed during the course of such public participation which relates to--</td>
<td>(3) Every review of an environmental impact assessment shall be carried out with public participation and, subject to the provisions of this Act, after full disclosure of the particulars of the project.</td>
<td>(3) Every review of an environmental impact assessment shall be carried out with public participation and no information will be disclosed during the course of such public participation which relates to--</td>
<td>(3) Every review of an environmental impact assessment shall be carried out with public participation and no information will be disclosed during the course of such public participation which relates to--</td>
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<td>(i) trade, manufacturing or business activities, processes or techniques of a proprietary nature, or financial, commercial, scientific or technical matters which the proponent has requested should remain confidential, unless for reasons to be recorded in writing, the Director-General of the Federal Agency is of the opinion that the request for confidentiality is not well-founded or the public interest in the disclosure outweighs the possible prejudice to the</td>
<td>(i) trade, manufacturing or business activities, processes or techniques of a proprietary nature, or financial, commercial, scientific or technical matters which the proponent has requested should remain confidential, unless for reasons to be recorded in writing, the Director-General of the Provincial Agency is of the opinion that the request for confidentiality is not well-founded or the public interest in the disclosure outweighs the possible prejudice to the</td>
<td></td>
<td>(a) trade, manufacturing or business activities, processes or techniques of a proprietary nature, or financial, commercial, scientific or technical matters which the proponent has requested should remain confidential, unless for reasons to be recorded in writing, the Director-General of the Agency is of the opinion that the request for confidentiality is not well-founded or the public interest in the disclosure outweighs the possible prejudice to the</td>
<td>(i) trade, manufacturing or business activities, processes or techniques of a proprietary nature, or financial, commercial, scientific or technical matters which the proponent has requested should remain confidential, unless for reasons to be recorded in writing, the Director General of the Balochistan Environmental Protection Agency is of the opinion that the request for confidentiality is not well-founded or the public interest in the disclosure outweighs the possible prejudice to the</td>
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hundred thousand as review fee for Environmental Impact Assessment (EIA).

(17) the person or company in public or private sector intend to commence any scheme or project do not falling under schedule I and II of this Act shall remit twenty five thousand rupees as an Environmental approval fee to the Balochistan Environmental Protection Agency.
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<td>competitive position of the project or its proponent; or (ii) International relations, national security or maintenance of law and order, except with the consent of the Federal Government; or (iii) matters covered by legal professional privilege.</td>
<td>competitive position of the project or its proponent; or (ii) International relations, national security or maintenance of law and order, except with the consent of the Government; or (iii) matters covered by legal professional privilege.</td>
<td>additional comments and hear oral submissions.</td>
<td>competitive position of the project or its proponent; or (b) International relations, national security or maintenance of law and order, except with the consent of Government; or (c) matters covered by legal professional privilege.</td>
<td>possible prejudice to the competitive position of the project or its proponent; or (ii) international relations, national security or maintenance of law and order, except with the consent of the Government of Balochistan; or (iii) matters covered by legal professional privilege.</td>
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<td>Strategic Environmental Assessment</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Section 18</td>
<td>Section 12</td>
<td>Section 13</td>
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<td>(1) Government may ask to carry out strategic environmental assessment, of all or any of the plan or policy given below: (i) socio-economic development, industrial and agricultural development, urban and rural development; (ii) land use and water use management; (iii) the exploitation of natural resources; (iv) economic zones or industrial parks and estates; (v) transport and infrastructure; (vi) solid, municipal and industrial waste; (vii) tourism; (viii) any other plan or policy likely to have an adverse impact on environment;</td>
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<td>(1) This section regulates the conditions, methods and procedure according to which the assessment of impact of certain plans and programmes on the environment (hereinafter referred to as: strategic assessment) shall be carried out in order to provide for the environmental protection and improvement of sustainable development through integration of basic principles of environmental protection into the procedure of preparation and adoption of plans and programmes. (2) The Government at all levels of administration and in every sector shall incorporate environmental considerations</td>
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<td>Strategic Environmental Assessment (Continued)</td>
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<td>(i) prevention of water pollution through improper sanitation and control flow of sanitation water into the rivers; and (x) separate zones shall be specified for poultry and cattle farming and slaughtering houses.</td>
<td>into policies, plans, programmes and strategies.</td>
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<td>(1) All provincial government agencies, departments, authorities, local councils and local authorities responsible for formulating policies, legislation, plans and programmes to be implemented in Sindh province which may cause any environmental impact in the jurisdiction of the province shall, before submitting the same to the competent authority for approval, forward to the Sindh Environmental Protection Agency a strategic environment assessment containing —</td>
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<td>(2) All Government Agencies, Local Councils and Local Authorities and Departments may be asked to conduct and formulate the strategic environmental assessment statement and shall submit it to the Agency which may contain -</td>
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<td>(a) description of the objectives and features of the proposed policy, legislation, plan or programme that are in consonance with the principles of sustainable development;</td>
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<td>(i) objectives, scale and environmental characteristics; (ii) description of the natural, socio-economic and environmental conditions; and (iii) assessment of possible environmental impact likely to be caused during implementation.</td>
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<td>(b) assessment of the adverse environmental effects, if any, likely to be caused during implementation of the policy, legislation, plan or programme</td>
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<td>Strategic Environmental Assessment (Continued)</td>
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<td>along with proposed preventive, mitigation and compensatory measures;</td>
<td>(c) analysis of possible alternatives; and</td>
<td>(3) The Agency shall, within 120 days of the filing of a strategic environmental assessment screening statement, complete in all respects -</td>
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<td>(d) identification of those components of the policy, legislation, plan or programme, if any, in respect of which specific environmental impact assessment need to be carried out in due course.</td>
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<td>(i) circulate the strategic environmental assessment report and conduct a public hearing of the strategic environmental assessment report;</td>
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<td>(2) The Agency shall, in consultation with the concerned Government Agencies and Advisory Committees where established, review the strategic environment assessment, within sixty (60) days of its filing, and prepare a report containing its comments and recommendations in respect thereof which shall be forwarded to the initiating Government Agency, authority, local council or local authority and duly considered by it and the competent authority before approval or otherwise of the proposed policy, legislation, plan or programme.</td>
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<td>(ii) review any comments received from the circulation and public hearing carried out under clause (i); and</td>
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<td>(iii) advise the Government Agency, Local Council or Local Authority concerned to include such measures and take such steps, as it deems necessary, to modify the policy or development plan according</td>
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<td>Strategic Environmental Assessment (Continued)</td>
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<td>(3) The provisions of subsections (1), and (2) shall apply to such categories of policies, plans and programmes and in such manner as may be prescribed.</td>
<td>(4) The provisions of subsections (1), (2) and (3) shall apply to such categories of plans and policies and in such manner as may be prescribed.</td>
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<td>(5) The Agency shall maintain separate registers for strategic environmental assessment reports, which shall contain brief particulars of each policy and development plan and a summary of decisions taken thereon and which shall be open to inspection for the public at all reasonable hours and the disclosure of information in such registers shall be subject to the provisions of this Act.</td>
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# APPENDIX F in Chapter VIII

## Comparison of IEE and EIA Requirements in the Pakistani Regulations

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<td>1</td>
<td>Projects not requiring an IEE or EIA [Balochistan: Other Projects requiring an IEE or EIA]</td>
<td>5. (1) A proponent of a project not falling in any category listed in Schedules I and II shall not be required to file an IEE or EIA: Provided that the proponent shall file – (a) an EIA, if the project is likely to cause an adverse environmental effect; (b) for projects not listed in Schedules I and II in respect of which the Federal Agency has issued guidelines for construction and operation, an application for approval accompanied by an undertaking and an affidavit that the aforesaid guidelines shall be fully complied with. (2) Notwithstanding anything contained in sub-regulation (1), the Federal Agency may direct the proponent of a project, whether or not listed in Schedule I or II, to file an IEE or EIA, for reasons to be recorded in such direction: Provided that no such direction shall be issued without the recommendation in writing of the Environmental Assessment Advisory Committee constituted under Regulation 23. (3) The provisions of section 12 shall apply to a project in respect of which an IEE or EIA is filed under sub-regulation (1) or (2).</td>
<td>6. (1) A proponent of a project not falling in any category listed in Schedules-I, II and III shall not be required to file an IEE or EIA: Provided that the proponent shall file – (a) an EIA, if the project is likely to cause an adverse environmental effect; (b) an application for projects not listed in Schedules I, II and III in respect of which the Agency has issued guidelines for construction and operation for approval accompanied by an undertaking and an affidavit that the aforesaid guidelines shall be fully complied with. (2) Notwithstanding anything contained in sub-regulation (1), the Agency may direct the proponent of a project, whether or not listed in Schedule I or II or III, to file an IEE or EIA, for reasons to be recorded in such direction: Provided that no such direction shall be issued without the recommendation in writing of the Committee. (3) The provisions of section 17 shall apply to a project in respect of which an IEE or EIA or environmental checklist is filed under sub-regulation (1) or (2).</td>
<td>6. (1) In addition to any category specified in Schedules I and II, a proponent of any of the following projects shall file (a) an EIA if the project is likely to cause an adverse environmental effect; or (b) an application for approval for projects not listed in Schedules I and II but in respect of which the Agency has issued guidelines for construction and operation accompanied by an undertaking and an affidavit that the relevant guidelines shall be fully complied with. (2) Notwithstanding anything contained in Sub-Regulation (1), the Agency may direct the proponent of a project, whether or not listed in Schedule I or II, to file an IEE or EIA, for reasons to be recorded in such direction. (3) No direction under sub-regulation 2 shall be issued without the recommendation in writing of the Environmental Assessment Advisory Committee constituted under Regulation 25. (4) The provisions of section 12 shall apply to a project in respect of which an IEE or EIA is filed under sub-regulation (1) or (2).</td>
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<td>2</td>
<td>Preparation of IEE and EIA</td>
<td>6. (1) The Federal Agency may issue guidelines for preparation of an IEE or an EIA, including guidelines of general applicability, and sectoral</td>
<td>7. (1) The Agency may issue guidelines for preparation of an IEE or an EIA or an environmental checklist, including guidelines of</td>
<td>7.(1) The Agency may issue guidelines for preparation of an IEE or an EIA, including guidelines of general applicability, and sectoral</td>
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<td>Balochistan: Preparation of IEE, EIA, and IEE proforma</td>
<td>guidelines indicating specific assessment requirements for planning, construction and operation of projects relating to particular sector.</td>
<td>general applicability, and sectoral guidelines indicating specific assessment requirements for planning, construction and operation of projects relating to particular sector.</td>
<td>guidelines indicating specific assessment requirements for planning, construction, and operation of projects relating to a particular sector.</td>
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<td>Balochistan: Filing of IEE, EIA, and environmental checklist</td>
<td>(2) Where guidelines have been issued under sub-regulation (1), an IEE or EIA shall be prepared, to the extent practicable, in accordance therewith and the proponent shall justify in the IEE or EIA any departure therefrom.</td>
<td>(2) Where guidelines have been issued under sub-regulation (1), an IEE or EIA shall be prepared, to the extent practicable, in accordance therewith and the proponent shall justify in the IEE or EIA any departure therefrom.</td>
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<td>Sindh: Filing of IEE, EIA, and IEE proforma</td>
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<td>Review fee</td>
<td>Regulation 7 and Schedule III</td>
<td>Regulation 8 and Schedule IV</td>
<td>Regulation 8 and Schedule IV</td>
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<td>Filing of IEE and EIA</td>
<td>8.(1) Ten paper copies and two electronic copies of an IEE or EIA shall be filed with the Federal Agency.</td>
<td>9.(1) Ten hard copies and two electronic copies for an IEE or EIA reports shall be filed with the Agency prepared by Firm.</td>
<td>9. (1) An electronic copy of an IEE or EIA shall be filed with the Agency.</td>
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<td>Sindh: Filing of IEE, EIA, and environmental checklist</td>
<td>(2) Every IEE and EIA shall be accompanied by –</td>
<td>(2) Every IEE and EIA shall be accompanied by –</td>
<td>(2) Every IEE and EIA shall be accompanied by:</td>
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<td>Balochistan: Filing of IEE, EIA, and IEE proforma</td>
<td>(a) an application, in the form prescribed in Schedule IV; and</td>
<td>(a) an application, in the form prescribed in Schedule V;</td>
<td>(a) an application, in the form set out in Schedule V; and</td>
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<td>(b) copy of receipt showing payment of the Review Fee.</td>
<td>(b) copy of receipt showing payment of the Review Fee;</td>
<td>(b) copy of receipt showing payment of the review fee.</td>
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<td>5</td>
<td>Preliminary Scrutiny</td>
<td>9. (1) Within 10 working days of filing of the IEE or EIA, the Federal Agency shall –</td>
<td>10. (1) Within fifteen working days of filing of the IEE or EIA or environmental checklist, the Agency shall –</td>
<td>10. (1) Within 15 working days of filing of an IEE or EIA, the Agency shall</td>
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<td>(a) confirm that the IEE or EIA is complete for purposes of initiation of the review process; or (b) require the proponent to submit such additional information as may be specified; or (c) return the IEE or EIA to the proponent for revision, clearly listing the points requiring further study and discussion.</td>
<td>(a) confirm that the IEE or EIA is complete for purposes of initiation of the review process; or (b) require the proponent to submit such additional information as may be specified; or (c) return the IEE or EIA or environmental checklist to the proponent for revision, clearly listing the points requiring further study and discussion.</td>
<td>(a) confirm that the IEE or EIA is complete for purposes of initiation of the review process; or (b) require the proponent to submit such additional information as may be specified; or (c) return the IEE or EIA to the proponent for revision, clearly recording the reason(s) requiring further study and discussion.</td>
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<td>(2) Nothing in sub-regulation (1) shall prohibit the Federal Agency from requiring the proponent to</td>
<td>(2) Notwithstanding anything contained in sub-regulation (1), the Agency may require the</td>
<td>(2) Nothing in sub-regulation (1) shall prohibit the Agency from requiring the proponent to submit</td>
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<td>6</td>
<td>Public participation</td>
<td>(1) In the case of an IIA, the Federal Agency shall, simultaneously with issue of confirmation of completeness under clause (a) of sub-section (2) of Regulation 9, cause to be published in any English or Urdu national newspaper and in a local newspaper of general circulation in the area affected by the project, a public notice mentioning the type of project, its exact location, the name and address of the proponent and the places at which the IIA of the project can, subject to the restrictions in sub-section (3) of section 12, be accessed.</td>
<td>(1) In the case of an IIA, the Agency shall simultaneously with issue of confirmation of completeness under sub-section (2) of Regulation 9, cause to be published in any English or Urdu national newspaper and in a local newspaper of general circulation in the area affected by the project, a public notice mentioning the type of project, its exact location, the name and address of the proponent and the places at which the IIA of the project can, subject to the restrictions in sub-section (3) of section 17, be accessed.</td>
<td>(1) In the case of an IIA, the Agency shall, simultaneously with confirmation of completeness under clause (a) of sub-section (1) of Regulation 9, cause to be published through proponent in at least one English Daily and one Urdu National Daily of general circulation in the area affected by the project, a public notice mentioning the type of project, its exact location, the name and address of the proponent and the place at which the IIA of the project can, subject to the restrictions in sub-section (3) of section 12, be accessed.</td>
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<td>(2) The notice issued under sub-section (1) shall fix a date, time and place for public hearing of any comments on the project or its IIA.</td>
<td>(2) The notice issued under sub-section (1) shall fix a date, time and place for public hearing of any comments on the project or its IIA.</td>
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<td>(3) The date fixed under sub-section (2) shall not be earlier than 30 days from the date of publication of the notice.</td>
<td>(3) The date fixed under sub-section (2) shall not be earlier than fifteen days from the date of publication of the notice.</td>
<td>(3) The date fixed under sub-section (2) shall not be earlier than 30 days from the date of publication of the notice.</td>
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<td>(4) The Federal Agency shall also ensure the circulation of the IIA to the concerned Government Agencies and solicit their comments thereon.</td>
<td>(4) The Agency shall also ensure the circulation of the IIA to the concerned Government Agencies and solicit their comments thereon.</td>
<td>(4) The Agency shall, if deemed necessary, circulate the IIA to the concerned Government Agencies and solicit their comments thereon.</td>
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<td>(5) All comments received by the Federal Agency from the public or any Government Agency shall be collated, tabulated and duly considered by it before decision on the IIA.</td>
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<td>(6) The Federal Agency may issue guidelines indicating the basic techniques and measures to be adopted to ensure effective public consultation, involvement and participation in IIA assessment.</td>
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<td>(6) The Agency may issue guidelines indicating the basic techniques and measures to be adopted to ensure effective public consultation, involvement, and participation in IIA assessment.</td>
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<td>7</td>
<td>Review</td>
<td>(1) The Federal Agency shall make every effort to carry out its review of the IEE within 45 days, and of the IIA within 90 days, of issue of confirmation of completeness under Regulation 9.</td>
<td>(1) The Agency shall make every effort to carry out its review of the environmental checklist within thirty days, IIE within sixty days, and of the IIA within four months of issue of confirmation of completeness under Regulation 9.</td>
<td>(1) The Agency shall carry out its review of the IEE within 45 days, and of the IIA within 90 days of confirmation of completeness under Regulation 9.</td>
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<td>(2) In reviewing the IEE or IIA, the Federal Agency shall consult such Committee of Experts as may be constituted for the purpose by the Director-General,</td>
<td>(2) In reviewing the IEE or IIA, the Agency shall consult such Committee of Experts as may be constituted for the purpose by the Director-General,</td>
<td>(2) In reviewing the IEE or IIA, the Agency may consult such Committee of Experts as may be</td>
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<td>General, and may also solicit views of the sectoral Advisory Committee, if any, constituted by the Federal Government under sub-section (6) of section 5.</td>
<td>and may also solicit views of the concerned Advisory Committee, if any, constituted by the Agency.</td>
<td>constituted for the purpose by the Director-General where expert opinion is required.</td>
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<td>(3) The Director-General may, where he considers it necessary, constitute a committee to inspect the site of the project and submit its report on such matters as may be specified.</td>
<td>(3) The Director-General may, where he considers it necessary, constitute a committee to inspect the site of the project and submit its report on such matters as may be specified.</td>
<td>(3) The Director-General may, where he considers it necessary, constitute a committee to inspect the site of the project and submit its report on such matters as may be specified by him.</td>
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<td>(4) The review of the IEE or EIA by the Federal Agency shall be based on quantitative and qualitative assessment of the documents and data furnished by the proponent, comments from the public and Government Agencies received under Regulation 10, and views of the committees mentioned in sub-regulations (2) and (3) above.</td>
<td>(4) In reviewing the IEE, the Director General may constitute a committee of the officers from within the Agency on case to case basis in view of the jurisdiction and location of the project for the purpose to extend final recommendation about the approval or rejection of the IEE.</td>
<td>(4) The review of the IEE or EIA by the Agency shall be based on assessment of the documents and data furnished by the proponent, comments from the public and Government Agencies received under Regulation 10, and views of the committees mentioned in sub-regulations (2) and (3).</td>
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<td>(5) In reviewing the IEE, the Director General may direct the proponent and Firm to present the report before the committee as given under sub-regulation (4) and the Director General may also invite environmental experts from outside the Agency for the purpose of assistance.</td>
<td>(5) During the review process, the proponent and/or the consultant may be asked to make a presentation of the project at such place and time as may be specified.</td>
<td>(5) During the review process, the proponent and/or the consultant may be asked to make a presentation of the project at such place and time as may be specified.</td>
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<td>(6) The review of the IEE or EIA by the Agency shall be based on quantitative and qualitative assessment of the documents and the data furnished by the proponent and/or his consultant/firm, comments from the public and Government Agencies received under Regulation 10, and, where available, views of the committees mentioned in sub-regulations (2) and (3) above.</td>
<td>(6) The review of the IEE or EIA by the Agency shall be based on quantitative and qualitative assessment of the documents and the data furnished by the proponent and/or his consultant/firm, comments from the public and Government Agencies received under Regulation 10, and, where available, views of the committees mentioned in sub-regulations (2) and (3) above.</td>
<td>(6) The review of the IEE or EIA by the Agency shall be based on quantitative and qualitative assessment of the documents and the data furnished by the proponent and/or his consultant/firm, comments from the public and Government Agencies received under Regulation 10, and, where available, views of the committees mentioned in sub-regulations (2) and (3) above.</td>
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<td>(7) The environmental check list shall be reviewed as per guidelines issued by the Agency.</td>
<td>(7) The IEE proforma shall be reviewed as per guidelines issued by the Agency.</td>
<td>(7) The IEE proforma shall be reviewed as per guidelines issued by the Agency.</td>
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<td>13. (1) Subject to regulation 9 and 11, the documentary evidence in the form of videos (soft copies) of public hearing shall be submitted by the</td>
<td>(8) Subject to regulation 9 and 11, the documentary evidence in the form of videos (soft copies) of public hearing shall be submitted by the proponent</td>
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<td>8</td>
<td>Decision</td>
<td>12. On completion of the review, the decision of the Federal Agency shall be communicated to the proponent in the form prescribed in Schedule V in the case of an IEE, and in the form prescribed in Schedule VI in the case of an EIA.</td>
<td>13(2) On completion of the review, the decision of the Agency shall be communicated to the proponent in the form prescribed in Schedule-VI in the case of an IEE and environmental checklist, and in the form prescribed in Schedule VII in the case of an EIA and for environmental checklist.</td>
<td>13. (1) On completion of the review, the decision of the Agency shall be communicated to the proponent in the form prescribed in Schedule VI in the case of an IEE, and in the form prescribed in Schedule VII in the case of an EIA.</td>
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<td>9</td>
<td>Conditions of approval</td>
<td>13. (1) Every approval of an IEE or EIA shall, in addition to such conditions as may be imposed by the Federal Agency, be subject to the condition that the project shall be designed and constructed, and mitigatory and other measures adopted, strictly in accordance with the IEE/EIA, unless any variation thereto have been specified in the approval by the Federal Agency.</td>
<td>14. (1) Every approval of an IEE or EIA or check list shall, in addition to such conditions as may be imposed by the Agency, be subject to the condition that the project shall be designed and constructed, and mitigatory and other measures adopted, strictly in accordance with the IEE or EIA or environmental check list, unless any variation thereto have been specified in the approval by the Agency.</td>
<td>14.(1) Every approval of an IEE or EIA shall, in addition to such conditions as may be imposed by the Agency, be subject to the condition that the project shall be designed and constructed, and mitigatory and other measures adopted, strictly in accordance with the IEE/EIA, unless any variation thereto have been specified in the approval by the Agency.</td>
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<td>10</td>
<td>Confirmation of compliance</td>
<td>14. (1) The request for confirmation of compliance under clause (b) of sub- regulation (2) of Regulation 13 shall be accompanied by an Environmental Management Plan indicating the measures and procedures proposed to be taken to manage or mitigate the environmental impacts for the life of the project.</td>
<td>15. (1) The request for confirmation of compliance under clause (b) of sub- regulation (2) of Regulation 13 shall be accompanied by an Environmental Management Plan indicating the measures and procedures proposed to be taken to manage or mitigate the environmental impacts for the life of the project.</td>
<td>15. (1) The request for obtaining Environmental Approval for Operational Phase under clause (b) of sub-regulation (2) of Regulation 14 shall be accompanied by an environmental audit of the construction phase and the constructed project clearly indicating compliance with the conditions, if any, of the environmental approval and an</td>
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<td>Operational Phase</td>
<td>the project, including provisions for monitoring, reporting and auditing.</td>
<td>the project, including provisions for monitoring, reporting and auditing.</td>
<td>Environmental Management Plan indicating the measures and procedures proposed to be taken to manage or mitigate the environmental impacts for the entire life of the project, including provisions for monitoring, reporting, and auditing.</td>
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<td>(2) Where a request for confirmation of compliance is received from a proponent, the Federal Agency may carry out such inspection of the site and plant and machinery and seek such additional information from the proponent as may deem fit: Provided that every effort shall be made by the Federal Agency to provide the requisite confirmation or otherwise within 15 days of receipt of the request, with complete information, from the proponent. (3) The Federal Agency may, while issuing the requisite confirmation of compliance, impose such other conditions as the Environmental Management Plan, and the operation, maintenance and monitoring of the project as it may deem fit, and such conditions shall be deemed to be included in the conditions to which approval of the project is subject.</td>
<td>(2) Where a request for confirmation of compliance is received from a proponent, the Agency may carry out such inspection of the site and plant and machinery and seek such additional information from the proponent as it may deem fit: Provided that every effort shall be made by the Agency to provide the requisite confirmation or otherwise within twenty days of receipt of the request, with complete information, from the proponent. (3) The Agency may, while issuing the requisite confirmation of compliance, impose such other conditions as the Environmental Management Plan, and the operation, maintenance and monitoring of the project as it may deem fit, and such conditions shall be deemed to be included in the conditions to which approval of the project is subject.</td>
<td>(2) Where a request for issuance of Environmental Approval for operational phase is received from a proponent, the Agency may carry out such inspection of the project and plant and machinery and seek such additional information from the proponent as it may deem fit: Provided that every effort shall be made by the Agency to provide the requisite Environmental Approval for operational phase or otherwise within 45 days of receipt of the request complete in all aspects, from the proponent.</td>
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<td>11</td>
<td>Deemed approval</td>
<td>15. The four-month period for communication of decision stipulated in sub-section (4) of section 12 shall commence from the date of filing of an IEE or EIA in respect of which confirmation of completeness is issued by the Federal Agency under clause (a) of sub-regulation (1) of Regulation 9.</td>
<td>16. The period for communication of decision stipulated in sub-section (4) of section 17 shall commence from the date of filing of an IEE or EIA or environmental check list in respect of which confirmation of completeness is issued by the Agency under clause (a) of sub-regulation (1) of regulation 9.</td>
<td>16. The four-month period for communication of decision on IEE/EIA stipulated in sub-section (4) of Section 12 of the Act shall commence from the date of issuance of confirmation of completeness by the Agency under clause (a) of sub-regulation (1) of Regulation 10.</td>
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<td>12</td>
<td>Extension in review period</td>
<td>16. Where the Federal Government in a particular case extends the four-month period for communication of approval prescribed in sub-section (5) of section 12, it shall, in consultation with the Federal Agency, indicate the various steps of the review process to be taken during the period of four months under the provisions of sub-section (4) of section 17, it may extend the further period as it may deem fit, for the reasons to be recorded in writing thereof.</td>
<td>17. Where the Agency in a particular case extends the period of four months under the provisions of sub-section (5) of Section 12, it may extend the further period as it may deem fit, for the reasons to be recorded in writing thereof.</td>
<td>17. Where the Agency extends the four-month period for communication of approval prescribed in sub-section (5) of Section 12 of the Act, the Agency shall indicate the various steps of the review process to be taken during the extended period, and the estimated time required for each step.</td>
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| 13     | Validity period of approval | 17.(1) The approval accorded by a Federal Agency under section 12 read with Regulation 12 shall be valid, for commencement of construction, for a period of three years from the date of issue. 
(2) If construction is commenced during the initial three years validity period, the validity of the approval shall stand extended for a further period of three years from the date of issue. 
(3) After issue of confirmation of compliance, the approval shall be valid for a period of three years from the date thereof. 
(4) The proponent may apply to the Federal Agency for extension in the validity periods mentioned in sub-regulations (1), (2) and (3), which may be granted by the Federal Agency in its discretion for such period not exceeding three years at a time, if the conditions of the approval do not require significant change: Provided that the Federal Agency may require the proponent to submit a fresh IEE or EIA, if in its opinion changes in location, design, construction and operation of the project so warrant. | 18.(1) The approval accorded by the Agency under section 17 read with Regulation 12 shall be valid, for commencement of construction, for a period of three years from the date of issue. 
(2) If construction is commenced during the initial three years validity period, the validity of the approval shall stand extended for a further period of three years from the date of issue. 
(3) After issue of confirmation of compliance, the approval shall be valid for a period of three years from the date thereof. 
(4) The proponent may apply to the Agency for extension in the validity periods mentioned in sub-regulations (1), (2) and (3), which may be granted by the Agency in its discretion for such period not exceeding three years at a time, if the conditions of the approval do not require significant change: Provided that the Agency may require the proponent to submit a fresh IEE, or as the case may be, an EIA, if in its opinion, changes in location, design, construction and operation of the project so warrant. | 18. (1) The approval accorded by the Agency under Section 12 of the Act read with Regulation 13 shall be valid for commencement of construction for a period of three years from the date of its issuance. 
(2) If construction is commenced during the initial three years validity period, the validity of the approval shall stand extended for a further period of three years from the expiry of period specified in sub-regulation (1). 
(3) After issuance of environmental approval for operational phase, the approval shall be valid for a period of one year from the date thereof and shall, interalia, be subject to depositing of annual renewal fee as prescribed under these regulations. 
(4) The proponent may apply to the Agency for an extension in the validity period mentioned in sub-regulations (1) and (2), which may be granted by the Agency in its discretion for such period not exceeding three years at a time, if the conditions of the requested extension in approval do not constitute any change in the project. 
(5) For the purposes of sub-regulation (4) the Agency may require the proponent to submit a fresh IEE, or as the case may be, an EIA, if in its opinion, changes in location, design, construction and operation of the project so warrant. |
| 14     | Entry and inspection       | 18. (1) For purposes of verification of any matter relating to the review or to the conditions of approval of an IEE or EIA prior to, during or after commencement of construction or operation of a project, duly authorized staff of the Federal Agency shall be entitled to enter and inspect the project site, factory building and plant and equipment installed therein. 
19. (1) For purposes of verification of any matter relating to the review or to the conditions of approval of an IEE or EIA or environmental check list prior to, before or during and after commencement of construction or operation of a project, duly authorized staff of the Agency shall be entitled to enter and inspect the project site, factory building and plant and equipment installed therein. | 19. (1) For purposes of verification of any matter relating to the review or to the conditions of approval of an IEE or EIA prior to, during, or after commencement of construction or operation of a project, duly authorized staff of the Agency shall be entitled to enter and inspect the project site, factory building and plant and equipment installed therein. | 19. (1) For the purposes of verification of any matter relating to the review or to the conditions of approval of an IEE or EIA prior to, during, or after commencement of construction or operation of a project, duly authorized staff of the Agency shall be entitled to enter and inspect the project site, factory building and plant and equipment installed therein. |
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<td>(2) The proponent shall ensure full cooperation of the project staff at site to facilitate the inspection, and shall provide such information as may be required by the Federal Agency for this purpose and pursuant thereto.</td>
<td>(2) The proponent shall ensure full cooperation of the project staff at site to facilitate the inspection, and shall provide such information as may be required by the Agency for this purpose and pursuant thereto.</td>
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<td>15</td>
<td>Monitoring</td>
<td>19. (1) After issue of approval, the proponent shall submit a report to the Federal Agency on completion of construction of the project.</td>
<td>20. (1) After issue of approval, the proponent shall submit a report to the Agency on completion of construction of the project.</td>
<td>20. (1) After issuance of environmental approval for operational phase, the proponent shall submit a report to the Agency on operational compliance of the project before commencement of operations.</td>
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<td>(2) After issue of confirmation of compliance, the proponent shall submit an annual report summarizing operational performance of the project, with reference to the conditions of approval and maintenance and mitigatory measures adopted by the project.</td>
<td>(2) After issue of confirmation of compliance, the proponent shall submit an annual report summarizing operational performance of the project, with reference to the conditions of approval and maintenance and mitigatory measures adopted by the project.</td>
<td>(2) After issue of commencing operations of the project, the proponent shall submit an environmental audit of the operation of the project summarizing operational performance of the project, with reference to the conditions of approval and maintenance and mitigatory measures adopted by the project, as required in the Environmental Approval of the operational phase of the project.</td>
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<td>(3) To enable the Federal Agency to effectively monitor compliance with the conditions of approval, the proponent shall furnish such additional information as the Federal Agency may require.</td>
<td>(3) The proponent shall, in order to enable the Agency to effectively monitor compliance with the conditions of approval, the proponent shall furnish such additional information as the Agency may require.</td>
<td>(3) To enable the Agency to effectively monitor compliance with the conditions of approval, the proponent shall furnish such additional information as the Agency may require from time to time.</td>
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<td>16</td>
<td>Cancellation of approval</td>
<td>20. (1) Notwithstanding anything contained in these Regulations, if, at any time, on the basis of information or report received or inspection carried out, the Federal Agency is of the opinion that the conditions of an approval have not been complied with, or that the information supplied by a proponent in the approved IEE or EIA is incorrect, it shall issue notice to the proponent to show cause, within two weeks of receipt thereof, why the approval should not be cancelled.</td>
<td>21. (1) Notwithstanding anything contained in these Regulations, if, at any time, on the basis of information or report received or inspection carried out, the Agency is of the opinion that the conditions of an approval have not been complied with, or that the information supplied by a proponent in the approved IEE or EIA or environmental check list is incorrect, it shall issue notice to the proponent to show cause, within two weeks of receipt thereof, why the approval should not be cancelled.</td>
<td>21. (1) Notwithstanding anything contained in these Regulations, if, at any time, on the basis of information or report received or inspection carried out, the Agency is of the opinion that the conditions of an approval have not been complied with, or that the information supplied by a proponent in the approved IEE or EIA is incorrect, it shall issue notice to the proponent to show cause, within two weeks of its receipt thereof, as to why the approval should not be cancelled.</td>
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<td>(2) If no reply is received or if the reply is considered unsatisfactory, the Federal Agency may, after giving the proponent an opportunity of being heard:</td>
<td>(2) If no reply is received or if the reply is considered unsatisfactory, the Federal Agency may, after giving the proponent an opportunity of being heard:</td>
<td>(2) If no reply is received or if the reply is considered unsatisfactory, the Agency may, after giving the proponent an opportunity of being heard:</td>
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<td>require the proponent to take such measures and to comply with such conditions within such period as it may specify, failing which the approval shall stand cancelled; or (ii) cancel the approval.</td>
<td>(i) require the proponent to take such measures and to comply with such conditions within such period as it may specify, failing which the approval shall stand cancelled; or (ii) cancel the approval.</td>
<td>(a) require the proponent to take such measures and to comply with such conditions within such period of time as it may be specified, failing which the approval shall stand cancelled; or (b) cancel the approval.</td>
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<td>(3)</td>
<td>On cancellation of the approval, the proponent shall cease construction or operation of the project forthwith.</td>
<td>(3) On cancellation of the approval, the proponent shall cease construction or operation of the project forthwith.</td>
<td>(3) On cancellation of the approval, the proponent shall cease construction or operation of the project forthwith.</td>
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<td>(4)</td>
<td>Action taken under this Regulation shall be without prejudice to any other action that may be taken against the proponent under the Act or rules or regulations or any other law for the time being in force.</td>
<td>(4) Action taken under this Regulation shall be without prejudice to any other action that may be taken against the proponent under the Act or rules or regulations or any other law for the time being in force.</td>
<td>(4) Any action taken under this Regulation shall be without prejudice to any other action that may be taken against the proponent under the Act, rules, regulations or any other law for the time being in force.</td>
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<td>17</td>
<td>Registers of IEE and EIA projects</td>
<td>21. Separate Registers to be maintained by the Federal Agency for IEE and EIA projects under sub-section (7) of section 12 shall be in the form prescribed in Schedule VIII.</td>
<td>22. Separate Registers to be maintained by the Agency for IEE, EIA and environmental check list projects under sub-section (6) of section 17 shall be in the form prescribed in Schedule IX.</td>
<td>22. Separate Registers shall be maintained by the Agency for IEE and EIA projects under sub- section (7) of section 12 of the Act in the form setout in Schedule IX.</td>
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<td>18</td>
<td>Registration of Consultants for preparation of IEE &amp; EIA Reports</td>
<td>23. (1) The Agency shall register with consultants having prescribed qualification and experience for conducting IEE/EIA against non-refundable registration fee and refundable security as mentioned in schedule-III. A license renewable annually shall be issued by the Agency to the consultant. No one other than the proponent himself/herself shall be competent to prepare IEE or EIA reports for any project for the purpose of environmental approval. The Agency shall issue necessary instructions in shape of guidelines for environmental consultants from time to time. The license holder under this regulation shall abide by the terms and conditions of license as well as the guidelines. In case of any violation either reported to Agency or comes into the notice of Agency by any mean, after affording an opportunity of hearing to the concerned license holder, the Agency shall i. Cancel the registration and license and ban such person from practicing as such for the period of 3-5 years, and ii. Forfeit of the security.</td>
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<td>19</td>
<td>Environmentally sensitive areas</td>
<td>22.(1) The Federal Agency may, by notification in the official Gazette, designate an area to be an environmentally sensitive area. (2) Notwithstanding anything contained in Regulations 3, 4 and 5, the proponent of a project situated in an environmentally sensitive area shall be required to file an EIA with the Federal Agency. (3) The Federal Agency may from time to time issue guidelines to assist proponents and other persons involved in the environmental assessment process to plan and prepare projects located in environmentally sensitive areas. (4) Where guidelines have been issued under sub-regulation (3), the projects shall be planned and prepared, to the extent practicable, in accordance therewith and any departure therefrom justified in the EIA pertaining to the project.</td>
<td>23.(1) The Agency may, by notification in the official Gazette, designate an area to be an environmentally sensitive area. (2) Notwithstanding anything contained in regulations 3, 4 and 5, the proponent of a project situated in an environmentally sensitive area shall be required to file an EIA with the Agency. (3) The Agency may from time to time issue guidelines to assist proponents and other persons involved in the environmental assessment process to plan and prepare projects located in environmentally sensitive areas. (4) Where guidelines have been issued under sub-regulation (3), the projects shall be planned and prepared, to the extent practicable, in accordance therewith and any departure therefrom justified in the EIA pertaining to the project.</td>
<td>24. (1) The Agency may, by notification in the official Gazette, designate an area to be an environmentally sensitive area. (2) Notwithstanding anything contained in Regulations 3, 4 and 5, the proponent of a project situated in an environmentally sensitive area shall be required to file an EIA with the Agency. (3) The Agency may from time to time issue guidelines to assist proponents and other persons involved in the environmental assessment process for planning and preparing projects located in environmentally sensitive areas. (4) Where guidelines have been issued under sub-regulation (3), the projects shall be planned and prepared, to the extent practicable, in accordance therewith and any departure therefrom justified in the EIA pertaining to the project.</td>
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<tr>
<td>20</td>
<td>Environmental Assessment Advisory Committee</td>
<td>23. For purposes of rendering advice on all aspects of environmental assessment, including guidelines, procedures and categorization of projects, the Director-General shall constitute an Environmental Assessment Advisory Committee comprising – (a) Director EIA, Federal Agency ... Chairman (b) One representative each of the Provincial Agencies ... Members (c) One representative each of the Federal Planning Commission and the Provincial Planning and Development Departments … Members (d) Representatives of industry and non-Governmental organizations, and legal and other experts … Members</td>
<td>24. For purposes of rendering advice on all aspects of environmental assessment, including guidelines, procedures and categorization of projects, the following Advisory Committee shall be constituted – (i) Director Technical, Sindh Environmental Protection Agency (EIA/IEE) ... Chairman (ii) Chief Environment, Planning and Development Department ... Member (iii) Four representatives on each of industry, non-Governmental organization, legal and other experts … Members</td>
<td>25. For purposes of rendering advice on the processes of environmental assessment, including guidelines, procedures and categorization of projects, the Director-General may constitute certain Environmental Assessment Advisory Committees as deemed required.</td>
</tr>
<tr>
<td>21</td>
<td>Other approvals</td>
<td>24. Issue of an approval under section 12 read with Regulation 12 shall not absolve the proponent of the duty to obtain any other approval or consent that may be required under any law for the time being in force.</td>
<td></td>
<td>26. (1) Issue of an approval under section 12 of the Act read with Regulation 13 shall not absolve the proponent of the responsibility of obtaining any other approval or consent that may be required</td>
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<td>22</td>
<td>Repeal and Savings</td>
<td>25. (1) The provisions of the Pakistan Environmental Protection Agency Review of Initial Environmental Examination and Environmental Assessment Impact Regulations 2000, to the extent of the Province of Sindh are hereby repealed. (2) All orders made, notification issued, actions taken under the repealed Regulations shall remain in force until amended, altered or repealed by the provisions of these Regulations.</td>
<td>27. (1) The provisions of the Pakistan Environmental Protection Agency Review of Initial Environmental Examination and Environmental Assessment Impact Regulations 2000, to the extent of the Province of Balochistan are hereby repealed. (2) All orders made, notification issued, actions taken under the repealed Regulations shall remain in force until amended, altered or repealed by the provisions of these Regulations.</td>
<td>under any law of the land for the time being in force.</td>
</tr>
</tbody>
</table>
### Appendix G

in

Chapter IX

Comparison of Projects requiring IEE and EIA Approvals in Pakistan

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Projects</th>
<th>IEE</th>
<th>EIA</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Pakistan</td>
<td>Sindh</td>
</tr>
<tr>
<td>1</td>
<td>Agriculture, Livestock and Fisheries</td>
<td>1. Poultry, livestock, stud and fish farms with total cost more than Rs.10 million</td>
<td>1. Poultry, livestock, stud and fish farms</td>
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<tr>
<td></td>
<td></td>
<td>2. Projects involving repacking, formulation or warehousing of agricultural products</td>
<td>a. Projects involving packaging, formulation, cold storage and warehouse of agricultural, Chemical products and others i.e. Pesticides, pharmaceuticals etc.</td>
</tr>
<tr>
<td>2</td>
<td>Energy</td>
<td>1. Hydroelectric power generation less than 50 MW</td>
<td>1. Hydroelectric power generation less than 100 MW</td>
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<tr>
<td></td>
<td></td>
<td>2. Thermal power generation less than 200 KW</td>
<td>2. Thermal power generation less than 100 KW</td>
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<tr>
<td></td>
<td></td>
<td>3. Coal fired power plants with capacity less than 50 MW</td>
<td>3. Coal power generation less than 100 MW</td>
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<tr>
<td></td>
<td></td>
<td>4. Transmission lines less than 11 KV and grid station</td>
<td>4. Transmission lines less than 11 KV and large distribution projects</td>
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<tr>
<td>Sr. No.</td>
<td>Projects</td>
<td>IEE</td>
<td>EIA</td>
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<td>Pakistan</td>
<td>Sindh</td>
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<tr>
<td></td>
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<td>including bio-mass less than 25 MW</td>
<td>8. BTS, telecom &amp; other wireless communication towers</td>
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<td></td>
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<td>6. Solar project</td>
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<td></td>
<td></td>
<td>7. Wind project</td>
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</tr>
<tr>
<td>4</td>
<td>Manufacturing and processing</td>
<td>1. Ceramics and glass units with total cost more than Rs.50 million</td>
<td>1. Cement plants</td>
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<td></td>
<td></td>
<td>2. Food processing industries including sugar mills, beverages, milk and</td>
<td>2. Chemicals projects</td>
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<td></td>
<td></td>
<td>2. Food processing industries with total cost less than Rs.200 million</td>
<td>3. Fertilizer plants</td>
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<tr>
<td></td>
<td></td>
<td>2. Food processing industries including ice mills, rice units, flour mills, poultry feed</td>
<td>4. Steel Mills</td>
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<tr>
<td></td>
<td></td>
<td>2. Food processing industries including ice mills, rice units, flour mills, poultry feed</td>
<td>5. Sugar Mills and Distilleries</td>
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<tr>
<td></td>
<td></td>
<td>4. Food processing industries including sugar mills, beverages, milk and dairy</td>
<td>6. Food processing industries including beverages, dairy milk and products, slaughter</td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Projects</td>
<td>IEE</td>
<td>EIA</td>
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<td></td>
<td>dairy products, with total cost less than Rs.100 million</td>
<td>mills using wheat, maize etc. as raw material, ghee and oil mills, beverages, milk &amp; dairy products and all edible processing/producing, with total cost less than Rs.100 million</td>
<td>products, with total cost of Rs.100 million and above</td>
</tr>
<tr>
<td>3</td>
<td>3. Man-made fibers and resin projects with total cost less than Rs. 200 million</td>
<td>1. Manufacturing of apparel, including dyeing, bleaching and printing, with total cost less than Rs. 50 million</td>
<td>5. Industrial estates (including export processing zones)</td>
</tr>
<tr>
<td>4</td>
<td>4. Manufacturing of apparel, including dyeing and printing, with total cost more than Rs.25 million</td>
<td>3. Man-made fibers and resin projects with total cost less than Rs.100 million</td>
<td>6. Man-made fibers and resin projects with total cost of Rs.100 M and above</td>
</tr>
<tr>
<td>5</td>
<td>5. Wood products with total cost more than Rs.100 million</td>
<td>10. Manufacturing of apparel, textile garments unit, including dyeing, bleaching and printing, with total cost less than Rs. 100 million</td>
<td>7. Pesticides (manufacture or formulation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Marble cutting units, stone crushers, stone grinding mills,</td>
<td>9. Synthetic resins, plastics and man-made fibers, paper and paperboard, paper pulping, plastic products, textiles (except apparel), printing and publishing, paints and dyes, oils and fats</td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Projects</td>
<td>IEE</td>
<td>Balochistan</td>
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<td></td>
<td></td>
<td>floor tiles manufacturing mills, pipes manufacturing mills, fan manufacturing, sanitary fitting &amp; other electrical appliances manufacturing units, plaster of Paris units with total cost less than Rs. 100 million</td>
<td>publishing, paints and dyes, oils and fats and vegetable ghee projects, with total cost more than Rs. 10 million</td>
</tr>
<tr>
<td>12.</td>
<td>Steel re-rolling mills</td>
<td>7. Steel mills, furnaces with total cost less than Rs. 50 million</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Recycling plants</td>
<td>9. Biogas Plants, Boilers</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Pharmaceutical units</td>
<td>10. Pharmaceutical industries.</td>
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<tr>
<td>5.</td>
<td>Carpet manufacturing units</td>
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<td>6.</td>
<td>Rice mills, ghee/oil mills</td>
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<td>7.</td>
<td>Brick kilns</td>
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<td>8.</td>
<td>Stone crushing units</td>
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<td>Sr. No.</td>
<td>Projects</td>
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<td>EIA</td>
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<td></td>
<td>Pakistan</td>
<td>Sindh</td>
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<tr>
<td>5</td>
<td>Mining and mineral processing</td>
<td>Commercial extraction of sand, gravel, limestone, clay, sulphur and other minerals not included in Schedule II with total cost less than Rs.100 million</td>
<td>1. Commercial extraction of sand, gravel, limestone, clay, sulphur and other minerals not included in Schedule II with total cost less than Rs.100 million</td>
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<tr>
<td></td>
<td></td>
<td>2. Crushing, grinding and separation processes</td>
<td>1. Crushing, grinding and separation processes</td>
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<td></td>
<td></td>
<td>3. Smelting plants with total cost less than Rs.50 million</td>
<td>2. Smelting plants with total cost less than Rs.50 million</td>
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<tr>
<td>6</td>
<td>Transport</td>
<td>1. Federal or Provincial highways (except maintenance, rebuilding or reconstruction of existing metalled roads) with total cost less than Rs.50 million</td>
<td>1. Federal or Provincial highways, bridges, overheads, underpasses (except maintenance, rebuilding or reconstruction of existing metalled roads) with total cost less than Rs. 100 million</td>
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<tr>
<td></td>
<td></td>
<td>2. Ports and harbor development for ships less than 500 gross tons</td>
<td>2. Ports and harbor development for ships having less than 500 gross tons capacity per day.</td>
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<tr>
<td></td>
<td></td>
<td>1. Flyovers, underpasses and bridges having total length less than 500 meters</td>
<td>1. Federal or Provincial highways, bridges, overheads, underpasses (including rehabilitation or reconstruction of existing roads) with total cost of Rs.50 million and above</td>
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<td></td>
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<td>2. Federal or Provincial highways or major roads, bridges, overheads, underpasses (except maintenance, rebuilding or reconstruction of existing roads) with total cost of Rs. 100 million and above</td>
<td>2. Federal or Provincial highways or major roads (including rehabilitation or rebuilding or reconstruction of existing roads) with total cost of Rs. 100 million and above</td>
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16. Petroleum refining units, oil reclamation units cost more than Rs. 100 million
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<tr>
<th>Sr. No.</th>
<th>Projects</th>
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<th>EIA</th>
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<td></td>
<td>Pakistan</td>
<td>Sindh</td>
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<tr>
<td>5.</td>
<td>Flyovers, underpasses and bridges having total length of more than 500m</td>
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<td>6.</td>
<td>Water management, dams, irrigation and flood protection</td>
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<td>7</td>
<td>1. Dams and reservoirs with storage volume less than 50 million cubic meters of surface area less than 8 square kilometers</td>
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<td></td>
<td>2. Irrigation and drainage projects serving less than 15,000 hectares</td>
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<td></td>
<td>3. Small-scale irrigation systems with total cost less than Rs.50 million</td>
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<td></td>
<td>1. Dams and reservoirs with storage volume less than 25 million cubic meters of surface area less than 4 square kilometers</td>
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<td>2. Small-scale irrigation systems with total cost less than Rs.100 million</td>
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<td>3. Irrigation and drainage projects serving 15,000 hectares and above</td>
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<td></td>
<td>3. Small-scale irrigation systems with total cost less than Rs.50 million</td>
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<td>4. Irrigation and drainage projects serving 15,000 hectares and above</td>
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<td>5. Flood Protection</td>
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<td>8</td>
<td>Water supply and treatment</td>
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<td>[In case of Sindh, Water supply and filtration]</td>
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<td></td>
<td>Water supply schemes and treatment plants with total cost less than Rs.25 million</td>
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<td></td>
<td>Water supply schemes and filtration plants with total cost less than 100 million (including projects of maintenance, upgradation, reconstruction of existing projects.)</td>
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<td></td>
<td>Water supply schemes and treatment plants with total cost less than Rs.25 million</td>
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<td>Water supply schemes and treatment plants with total cost of Rs.25 million and above</td>
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<td>Water supply schemes and filtration plants</td>
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<td>Large water supply schemes and filtration plants</td>
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<td>Water supply schemes and treatment plants with total cost more than Rs.25 million</td>
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<td>9</td>
<td>Waste disposal</td>
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<td>[In case of Sindh, Water disposal and treatment]</td>
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<td></td>
<td>Waste disposal facility for domestic or industrial wastes, with annual capacity less than 10,000 cubic meters</td>
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<td>1. Solid and non-hazardous waste with annual capacity less than 10,000 tons</td>
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<td>2. Waste water treatment for sewerage treatment facility with</td>
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<td>Waste disposal processing facility unit for domestic or industrial wastes, with annual capacity less than 10,000 cubic meters</td>
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<td>1. Waste disposal and/or storage of hazardous or toxic wastes (including landfill sites, incineration of hospital toxic waste)</td>
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<td>1. Handling, storage or disposal of hazardous or toxic wastes or radioactive waste (including landfill sites, incineration of hospital toxic waste)</td>
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<td>1. Drainage schemes, Waste disposal and/or storage of hazardous or toxic wastes (including landfill sites, incineration of hospital toxic waste) with total cost more than Rs. 25 million</td>
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<td>Sr. No.</td>
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<td>Sindh</td>
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</tr>
<tr>
<td>10</td>
<td>Urban development and tourism</td>
<td>1. Housing schemes less than 10 acres</td>
<td>1. Housing schemes less than 10 acres</td>
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<tr>
<td></td>
<td></td>
<td>2. Public facilities with significant off-site impacts (e.g. hospital wastes)</td>
<td>2. Multi-story buildings having residential and commercial setup on the total plot size is less than 2000 sq.yards</td>
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<tr>
<td></td>
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<td>3. Urban development projects</td>
<td>3. Construction of Educational, Academic institutions on land less than 10 acres</td>
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<td></td>
<td>4. Construction of Educational, Academic institutions on land less than 10 acres</td>
<td>4. Commercial buildings having area less than 02 acres and height less than 200 feet</td>
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<td>3. Hospitals with capacity of 50 beds, healthcare units/laboratories with 500 OPD/day.</td>
<td>5. Marriage halls, ware houses for industrial goods and cold storage</td>
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<tr>
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<td>Projects</td>
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<td>EIA</td>
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<td>Pakistan</td>
<td>Sindh</td>
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<tr>
<td>7</td>
<td>7. Hotels / guest houses less than 50 living rooms</td>
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<td>8</td>
<td>8. General bus &amp; truck stands (Category D &amp;above)</td>
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<tr>
<td>11</td>
<td>Environmentally Sensitive Areas</td>
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<tr>
<td>12</td>
<td>Other projects</td>
<td>Any other project for which filing of an IEE is required by the Federal Agency under sub-regulation (2) of Regulation 5</td>
<td>Any other project for which filing of an IEE is required by the Agency under sub-regulation (2) of Regulation 5</td>
</tr>
</tbody>
</table>