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Assessing Environmental Governance of the Hudson River Valley: Application of an IPPEP Model

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Stewardship of the environment, for humans and for natural systems, requires an understanding of how ecological, economic, and social forces interact. When a government's regulatory

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authority applies environmental standards for the conduct of enterprises and other economic actors, those with short-term economic interests will tend to oppose rules that cut into their economic profits.¹ Nature has no voice. Measures applied to sustain environmental quality are often neglected when regulators and enterprises oppose the application of regulations to protect nature.

If all aspects of nature conservation and public health safeguards are to be sustainably managed, it is essential that all the major parties or players in the process, including governmental regulatory authorities, enterprises, and “Third Parties” (such as environmental non-governmental organizations (NGOs), local governments, and the courts), correctly play their roles to protect the environment. A balanced interaction among the participants is critical for a successful system. In fact, regulatory authorities are often only able to apply and enforce environmental protection measures against powerful economic enterprises following interventions by “Third Parties.” These “Third Parties” act to offset economic pressure and sustain the application of environmental standards. This process, however, can be perverted to advance economic interests. For example, under statutory judicial review procedures in the United States,² more suits have been brought by enterprises and their trade associations to prevent the United States Environmental Protection Agency from applying and enforcing the law than have been brought by citizens to enforce the laws under the citizen suit procedures of environmental laws.³ In fact, recently U.S. courts

1. *Union Elec. Co. v. EPA*, 427 U.S. 246, 259 (1976), in which Mr. Justice Marshall held that the Clean Air Act could require electrical generating facilities to clean up their pollution or close in order to ensure clear air for the citizens of St. Louis, Missouri, and elsewhere. As a result of the Clean Air Act’s “technology forcing” provisions, unhealthy urban air pollution was largely abated in the United States. See Christopher D. Peloso, *Environmental Law: Union Electric Company v. EPA*, L. Sch. Case Briefs, <http://www.invispress.com/law/environmental/union.html> (last visited Oct. 1, 2013).

2. Administrative Procedure Act of 1946, 5 U.S.C. §§ 551-59 (2012).

3. See, e.g., Federal Water Pollution Control Act of 1972 § 505, 33 U.S.C. § 1365 (2012); Clean Air Act of 1970 § 307, 42 U.S.C. § 7607 (2012).

have sided, more often than not, with the economic enterprises.⁴ Courts can be “captured” by a prevailing governmental preference for economic enterprises over the need for applying environmental protection safeguards.

The process of obtaining effective implementation of environmental laws is a process of “environmental governance.” Law, including environmental law and other fields of law related to environmental law, is essential to frame, facilitate, and foster the major parties to correctly play their roles.

This thesis has been articulated through a Model of Interactions of Parties in the Process of Environmental Protection (IPPEP Model), which has been developed by Professor Wang Xi of Shanghai Jiao Tong University, in the context of the People’s Republic of China. The IPPEP Model is a tool for observing and accessing environmental governance at work. It is being tested by regional studies in various locations, such as the United States, the State of New York, and in this IPPEP case study of New York’s Hudson River Valley. The IPPEP model being examined, however, has universal applicability. Use of this model can predict that environmental standards will fail to be observed when necessary “Third Parties” are weak or absent. A nation with a commitment to the “rule of law” will enact and apply necessary legal procedures to ensure that each party can take part in the system and perform their role effectively.

Part I of this paper describes the IPPEP Model. Part II is a brief introduction to the history of Hudson River Valley. Part III introduces the major parties or players in the process of protecting Hudson River Valley. Part IV consists of five case studies applying the IPPEP Model in cases of Hudson River Valley conservation. Part V concludes the paper.

4. See Stephen M. Johnson, *The Roberts Court and the Environment*, 37 B.C. ENVTL. AFF. L. REV. 317, 317-18 (2010); JAY E. AUSTIN ET AL., ENVTL. L. INST., JUDGING NEPA: A “HARD LOOK” AT JUDICIAL DECISION MAKING UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (2004), available at <http://www.endangeredlaws.org/downloads/JudgingNEPA.pdf>.

I. THE IPPEP MODEL

Government regulatory actions to protect the environment are often the only sector considered in weighing the effectiveness of environmental governance. In fact, many parties play key roles in promoting or obstructing environmental protection: national, state and local governments, NGOs, economic enterprises, legislative oversight committees, the press, and the courts. In most instances, therefore, environmental governance is actually a process of mutual interactions among all the parties. An important job for environmental law scholars is to study the process and to examine how the law safeguards the environment or fails to do so.

A. Interactions of Parties in Process of Environmental Protection (IPPEP)⁵

The term “IPPEP” refers to the situations of mutual influence among the parties when they develop, utilize or protect the environment. This kind of interaction is one of the most important social interactions because it relates to the coexistence of human beings and their natural environment.

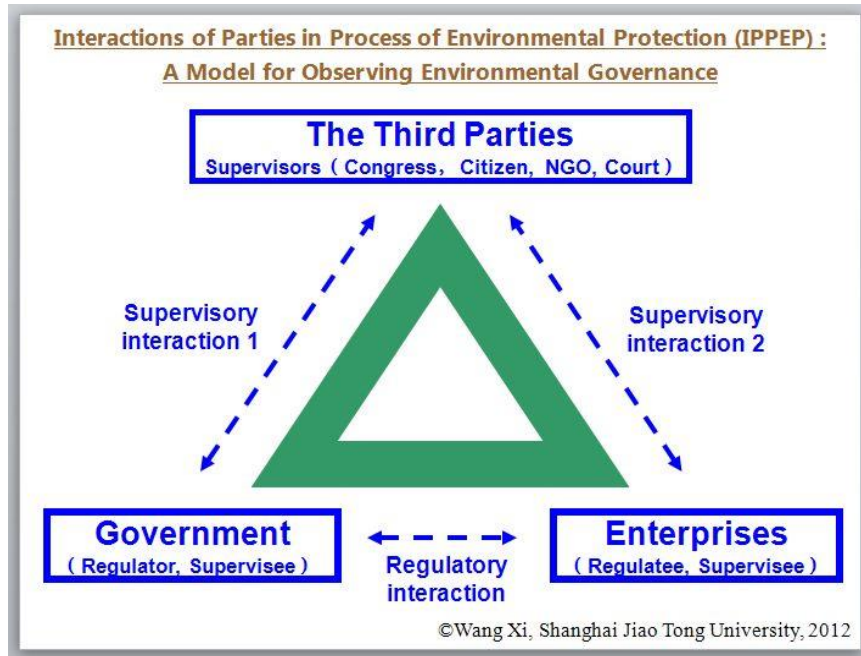
The following equilateral triangle model expresses the IPPEP Model, which will be applied to examine the Hudson Valley cases below.

5. In many other areas of public affairs, such as food security, public health, production safety, and urban and rural constructions, there are similar interactions among the various parties that have evolved in the respective processes of their areas. Therefore, the IPPEP Model can be applied to those areas too. In this sense, the significance of the model extends beyond the scope of environmental law.

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As shown in the model, there are three parties or major players in the process of environmental governance. They are: (1) government (both as Regulator and Supervisee), located in the bottom left corner of the triangle; (2) enterprises (both as Regulatees and Supervisees), located in the bottom right corner of the triangle; and (3) “Third Parties” (as Supervisors), located at the top apex of the triangle.

Government as a Regulator: Pursuant to the language of economics, regulation refers to the governmental intervention imposed on market entities to prevent or to correct market failures. Regulation is one of the reasons for the existence of government. In environmental governance, government carries out regulation through implementation of environmental laws and policies.

Government as a Supervisee: Some environmentally related governmental actions, such as local economic and industrial development planning, investment and business regulation, and project reviews and approvals make

governmental ministries or agencies into supervisees. They are supervised by the “Third Parties.” A government free from supervision will inevitably be slack, lazy, even corrupted.⁶ A lot of environmental pollution and ecologically destructive events in the world have proved the validity of this assertion.

Enterprises as Regulatees: Enterprises are usually regulated by government and supervised by the “Third Parties” because of the negative externalities caused by their operation and production methods.

“Third Parties”: The term “Third Parties” refers to an entire sector of parties that have the right to supervise government and enterprises in accordance with law, including legislative organs, prosecutorial organs, auditors and inspectors general, legislative oversight or investigatory committees, the courts, the press, and other tribunals, local authorities, citizens, citizen groups, and enterprises when they are not in the status of a regulatee.

As illustrated by the IPPEP Model, there are two major relationships in the process of environmental governance. One is “regulatory relationship,” and the other is the “supervisory relationship.” The “regulatory relationship” is the interaction between government and enterprises. The “supervisory relationship” refers to the interactions between the “Third Parties” as one side and government and enterprises as the other side. There are analogous relationships in other countries, reflecting different sorts of institutional arrangements, but engaged in rather similar relationships.⁷

B. Consequences of IPPEP

Generally, there are two kinds of consequences from the interactions of the major parties in the process of environmental governance. One is good. The other is bad.

6. See, e.g., STEVEN KELMEN, *PROCUREMENT AND PUBLIC MANAGEMENT: THE FEAR OF DISCRETION AND THE QUALITY OF GOVERNMENT PERFORMANCE* (1990) (discussing procurement corruption in government).

7. See generally JONA RAZZAQUE, *ENVIRONMENTAL GOVERNANCE IN EUROPE AND ASIA: A COMPARATIVE STUDY OF INSTITUTIONAL AND LEGISLATIVE FRAMEWORKS* (2013).

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The good example of the IPPEP relationships refers to the situation in which all the parties in the process effectively play their roles and work together to promote the progress of environmental protection. As explained by the model, in a good IPPEP, each of the three parties is neither omitting nor abusing its rights and powers, and their interactions form a stable equilibrium constituting a conjoined force driving development consistent with environmental protection. In a good IPPEP, the regulators effectively regulate, the regulatees accept regulation and restrict their acts detrimental to environment, the supervisors effectively supervise the performance of regulators, and regulatees make sure that they are in compliance with environmental law.

A bad example of the IPPEP relationships refers to stagnant, or even backsliding, situations in which one or more parties does not effectively exercise its rights and does not faithfully fulfill its duties under environmental law. For example, an absence or weakness of governmental or no regulation often results in enterprises wantonly discharging pollutants into the environment to secure a more competitive price for their products. Similarly, because of the weakness of government supervision over enterprises, government often makes mistakes in decisions on environmental issues, resulting in inadequate environmental law enforcement.

In recent years, the public media has exposed much environmental pollution and many ecologically destructive events in China. These events show the bad interactions described in the previous paragraph. The Central Committee of the Communist Party (CCCP—the political party with the governing power of the State) has officially recognized this situation by pointing out that the costs associated with the destruction of the environment and its natural resources for economic development in China are excessively high.⁸ The CCCP has called for

8. See generally *Full Text of Hu Jintao's Report at 17th Party Congress*, XINHUANET (Oct. 24, 2007), http://news.xinhuanet.com/english/2007-10/24/content_6938749.htm (presenting the text of Hu Jintao's Oct. 15, 2007 speech, *Hold High the Great Banner of Socialism with Chinese Characteristics and Strive for New Victories in Building a Moderately Prosperous Society in All Respects*, Report to the Seventeenth National Congress of the Communist Party of China).

accelerating the transformation of the mode of development, to make it environmentally harmonious.⁹ The “excessively high” costs are the result of bad interactions in the process of environmental protection. Therefore, it is imperative to turn the bad interactions into good ones for China. Bad IPPEP can be found in other countries too.¹⁰

C. The Essence of IPPEP

The essence of good IPPEP is cooperation, exchange, and mutual gain. It is highly consistent with the concepts and goals of sustainable development. The following excerpts from Professor James M. Buchanan, the 1986 Nobel Economics Prize winner, explain the essence of good IPPEP as follows:

Both the economic relation and the political relation represent co-operation on the part of two or more individuals. The market and the State are both devices through which **co-operation** is organized and made possible. Men co-operate through **exchange** of goods and services in organized markets, and such co-operation implies mutual gain. The individual enters into an exchange relationship in which he furthers his own interest by providing some product or service that is of direct benefit to the individual on the other side of the transaction. At base, political or collective action under the individualistic view of the State is much the same. Two or more individuals find it mutually advantageous to join forces to accomplish certain common purposes. In a very real sense, they “exchange” inputs in the securing of the commonly shared output.

The familiar Crusoe-Friday model may be introduced for illustrative purposes, although its limitations must be fully acknowledged. Crusoe is the better fisherman; Friday the better climber of coconut palms. They will find it mutually advantageous, therefore, to specialize and to enter into exchange. Similarly, both men will recognize the advantages to be secured from constructing a fortress. Yet one fortress is sufficient for the

9. *Id.*

10. Bad IPPEP models can also be found in countries such as North Korea and Russia, but neither of these will be discussed in this paper.

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protection of both. Hence they will find it mutually advantageous to enter into a political “exchange” and devote resources to the construction of the common good.¹¹

...

The economic approach, which assumes man to be a utility-maximizer in both his market and his political activity, does not require that one individual increase his own utility at the expense of other individuals. This approach incorporates political activity as a particular form of exchange; and, as in the market relation, mutual gains to all parties are ideally expected to result from the collective relation. In a very real sense, therefore, political action is viewed essentially as a means through which the “power” of all participants may be increased, if we define “power” as the ability to command things that are desired by men. To be justified by the criteria employed here, collective action must be advantageous to all parties. In the more precise terminology of modern game theory, the utility or economic approach suggests that the political process, taken in the abstract, may be interpreted as a **positive-sum game**.¹²

Ideally, the process of environmental governance would result in such cooperation, exchange, and a positive-sum game. The interplay of the major parties is actually the “exchange” mentioned by James Buchanan. The enterprises, which are both regulatees and supervisees, “exchange” legitimacy of their production and business operation by accepting regulation and complying with the law. As to the government, the “exchanges” can be divided into two categories, according to the different governmental behaviors. Firstly, as a regulator, the government “exchanges” for the legitimacy of its own existence good results of environmental regulation, namely by living up to the expectation and trust of the people for good public environmental services. Secondly, as a supervisee, the government “exchanges” for qualification for decision-making in economic and industrial

11. JAMES M. BUCHANAN & GORDON TULLOCK, *THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY* 18 (2004) (emphasis added).

12. *Id.* at 22-23 (emphasis added).

development planning, public investments and construction and project proposal review and approval, by soundly coordinating economic value with environmental value in the decision-making process. As for the “Third Parties,” the exchanges are different due to their complex composition. For the organs of state power, state prosecution, and state adjudication, they “exchange” the legitimacy of their existence for the effectiveness of their supervision. For the public, they “exchange” for good environmental regulation by the government and a healthy and safe environment, which is provided and protected by government, by contributing taxes.

All in all, in the process of environmental governance, parties promote the improvement of the overall environmental quality and maximize their own interests at the same time, by “exchanging” some things. In the process of environmental governance, the ultimate goal of all the parties is the same: to achieve economic and social development in a condition of harmonization of man and nature. All the interactions, including regulatory interactions and supervisory interactions, should be a “‘positive-sum game’ and produce ‘win-win’ results.”¹³ When all the major parties get what they want by doing the “exchanges” in the environmental protection process, the process is a positive-sum game.

D. Protecting Good IPPEP by Law

Laws set forth a framework and specified guarantees in the process of environmental governance. As indicated by the IPPEP Model, there are two important legal relationships in the process of environmental protection: regulatory relationships and supervisory relationships. Both of them must be protected by environmental law and other related laws, including constitutional law, criminal law, administrative law, tort law, and international law. Based on the two relationships, rules of environmental law can be divided into two categories. One is for establishing and ensuring governmental environmental

13. This paragraph is translated from Wang Xi, *Legal Protection for Interactions between Parties in the Cause of Environmental Protection*, 20 J. SHANGHAI JIAO TONG U. (Phil. & Soc. Sci.), no. 1, 2012, at 13-14 (trans.).

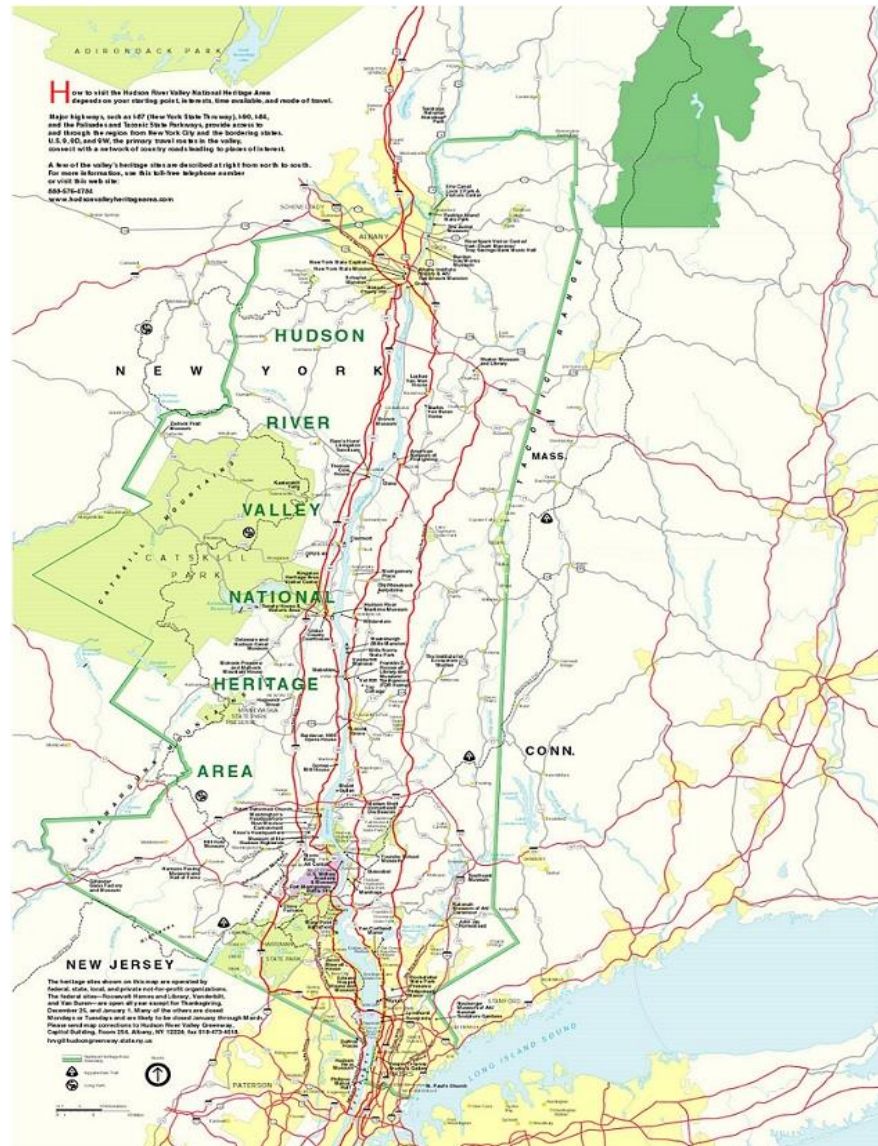
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regulation. The other is for establishing and ensuring supervision between “Third Parties” and government and between “Third Parties” and enterprises. The level of development of law, including environmental law, decides the level of the development of good IPPEP.

II. A BRIEF INTRODUCTION TO THE HUDSON VALLEY

The Hudson River Valley in New York was selected as the location outside of China to test the IPPEP model and to suggest the necessity of strengthening the legal foundations for the “Third Parties” sector. Since the late 19th century, law has been progressively developed to protect the environment in the Hudson Valley, and it is important to understand the location of the Hudson River, its watershed or basin, its rich history, and its ecological, cultural, and scenic resources. The Valley offers a bucolic setting that over the past four centuries has witnessed increased development, industrialization, pollution, and the need to deal with a post-industrial landscape as millions of citizens continue to actively use its rich and varied natural resources.

A. History of the Hudson Valley



14. This map is courtesy of the Hudson River Valley Greenway.

The Hudson River has been essential to the social and economic development of New York, in pre-colonial times and ever since. The river begins high in the Adirondack Mountains, and flows 315 miles past the State capital in Albany, then past the Catskill Mountains, through the Hudson River Valley and a fjord known as the Hudson Highlands, and into an estuary encompassing the Tappan Zee and the harbor of New York City. Geologically, the river was carved by glaciers and its trough runs deep into the Atlantic Ocean. The river is named for Henry Hudson, the first European navigator to sail up the river from the Atlantic in 1609. The indigenous peoples that lived along the Hudson enjoyed its bountiful resources, with settlements dating back to 4000 years ago.¹⁵

The Hudson provided the first European immigrants, the Dutch and Swedes, a river pathway for exploring and settling deep into the continent. Waterways provided transport and the Hudson River was up to that task. During the early European settlement of the area, unregulated taking of beaver and sturgeon for export to Europe nearly extirpated both species.¹⁶ Diseases brought from Europe and conflicts also caused the death of the indigenous settlements in the lower Hudson Valley.¹⁷ The Dutch settled Manhattan as a major world trading port, and later ceded it to the English as a part of peace negotiations for wars fought in Europe.¹⁸ As a deep navigation channel, the Hudson featured in the French and Indian wars between the English and the French over colonial dominion of North America. When the American colonies revolted against the English king, the revolutionary army under George Washington held the Hudson Highlands and severed the British hold on its colonies along the Atlantic, preventing British forces in what is now Canada from linking

15. DANIEL E. HARMON, *THE HUDSON RIVER* 8 (2003).

16. Keith H. Nislow et al., *Aquatic Conservation Planning at Landscape Scale*, in *LANDSCAPE-SCALE CONSERVATION PLANNING* 99, 105 (Stephen C. Trombulak & Robert Baldwin eds., 2010).

17. *See generally* ALFRED W. CROSBY, *ECOLOGICAL IMPERIALISM: THE BIOLOGICAL EXPANSION OF EUROPE, 900-1900* (1986).

18. Phillip Lopate, *The Days of the Patriarchs: Washington Irving's A History of New York*, in *DUTCH NEW YORK: THE ROOTS OF HUDSON VALLEY CULTURE* 191, 207 (Roger G. Panetta ed., 2009).

with the British navy on the Atlantic coast.¹⁹ In honor of this importance of the Hudson Highlands, the United States Military Academy was established and still is situated at West Point in the Hudson Highlands.

The Hudson was essential to the early economic development of the State of New York and the nation. Commerce from the interior of New York enriched the harbor of New York City. The State's Erie Canal linked the Hudson to the Great Lakes, and this seaworthy transportation system fueled the development of Chicago and other Great Lakes ports. It was on the Hudson that Robert Fulton invented the steamboat, launching the *Clermont* as the first ship driven by a motor rather than by wind or oars.²⁰ This inaugurated a new era of navigation on the Hudson and all other rivers (including the Mississippi River, whose trade advanced via Chicago and the Erie Canal). These navigation pathways were reinforced by railroads as they were built, and towns grew parallel to the Hudson River, served by the shipping and rail transport systems. The New York Central Railroad Company, under Commodore Vanderbilt, built a railway line across New York State from Buffalo to Albany and down the shore of the Hudson River to Manhattan.²¹ During the Civil War, the iron mines and foundries in the Hudson Highlands supplied the Union Army with munitions and were instrumental to securing victory for the North.²²

During the settlement of the Hudson, the nation's earliest cultural development emerged. New York City was the principal commercial and political center for the new nation, serving as its capitol and seat of government.²³ The nation's first literary author, Washington Irving, lived and wrote in what is now the Village of Irvington along the Hudson.²⁴ Irving's small estate, "Sunnyside," became the model for romantic landscaping,

19. RICHARD BORKOW, *GEORGE WASHINGTON'S WESTCHESTER GAMBLE: THE ENCAMPMENT ON THE HUDSON AND THE TRAPPING OF CORNWALLIS* 79 (2011).

20. See CYNTHIA OWEN PHILIP, *ROBERT FULTON: A BIOGRAPHY* 204-05 (2003).

21. See WILLIAM G. THOMAS, *THE IRON WAY: RAILROADS, THE CIVIL WAR, AND THE MAKING OF MODERN AMERICA* (2011).

22. TOM LEWIS, *THE HUDSON: A HISTORY* 234 (2007).

23. See EDWIN G. BURROWS, MIKE WALLACE, *GOETHAM: A HISTORY OF NEW YORK CITY TO 1898*, at 288 (1999).

24. ARTHUR G. ADAMS, *THE HUDSON RIVER IN LITERATURE* 63 (1980).

inspiring A.J. Downing and the birth of American landscape architecture.²⁵ From their studios in Manhattan, the first indigenous school of painting emerged with Thomas Cole, Frederick Church, Asher B. Durand, and the entire Hudson River School.²⁶ Benson J. Lossing published his book, *The Hudson from the Wilderness to the Sea*, in 1866²⁷ and exploration began of the Catskill Mountains and the Adirondack Mountains, both accessible to the growing population of New York City via the river and adjacent railroad.²⁸ The beauty of the Hudson and its mountains became well-known and they were a magnet to tourism and natural resources exploitation, such as timbering. The author, Carl Carmer, celebrated the Hudson in the “Rivers of America” series in 1939,²⁹ recalling the cultural heritage of the river. Small farms, apple orchards, dairies, and America’s first commercial vineyard (Brotherhood Winery in 1839) provided an agricultural base in the Hudson Valley.³⁰ The culture, economy, and environment of Hudson thrived for much of the 1800s.³¹

For two centuries, the Hudson River accommodated socioeconomic and cultural development without showing significant environmental degradation. The Civil War foundries in Cold Spring, New York along the Hudson began a pattern of pollution which would escalate toward the end of the 19th century. By the mid-19th century, New York City lacked potable water as it had discharged its sewage into the ground water. Disease ravished the city each summer and the City was obliged to design a system of remote reservoirs and aqueducts to serve

25. ADAM W. SWEETING, *READING HOUSES AND BUILDING BOOKS: ANDREW JACKSON DOWNING AND THE ARCHITECTURE OF POPULAR ANTEBELLUM LITERATURE, 1835-1855*, at 88 (1996).

26. *See generally* BARBARA BABCOCK MILLHOUSE & KEVIN J. AVERY, *AMERICAN WILDERNESS: THE STORY OF THE HUDSON RIVER SCHOOL OF PAINTING* (2007).

27. *See generally* BENSON JOHN LOSSING, *THE HUDSON – FROM THE WILDERNESS TO THE SEA* (1866) (publishing 306 engravings by the author that he had published in London in the *Arts-Journal* in 1860 and 1861; New York City dwellers learned of the beauty of the Hudson Valley to their north).

28. *Id.* at 107.

29. *See generally* CARL CARMER, *THE HUDSON* (1939).

30. *THE ENCYCLOPEDIA OF NEW YORK STATE* 659 (Peter R. Eisenstadt & Laura-Eve Moss eds., 2005).

31. *See generally* JEFFREY SIMPSON, *THE HUDSON RIVER 1850-1918: A PHOTOGRAPHIC PORTRAIT* (1981).

the needs of the city for fresh water.³² The Croton River, a tributary to the Hudson, was dammed and the Croton Aqueduct established.³³ This system would be extended to further reservoirs in Westchester County, the Catskill Mountains, and the Delaware watershed, and ultimately provide clean water for nine million people.³⁴ Because of the health problems each summer, a tradition began of families leaving New York City by boat, traveling up the Hudson or along Long Island, to spend summers in nature, away from the pestilence.³⁵ This “vacation” tradition continued with resorts developing in the Catskills and along the Hudson. As commerce grew in Manhattan in the last quarter of the 19th century, the harbor became polluted, local shellfish beds were taken for piers and causeways for railroads, and all wastes from Manhattan were simply dumped into the Hudson River and the harbor.³⁶ New factories emerged and discharged their wastes into the waters. Storm sewers did the same from the city streets.³⁷

As the 1800s ended, the public was upset with the pollution and degradation of the environment, caused by the economic exploitation that sought profits and neglected care for nature. Across from Manhattan, quarries were demolishing the Palisades, a great escarpment of rock along the Hudson for building “brownstone” houses. To save this beautiful geological feature, a public campaign was launched and legislation enacted to preserve the site as parklands and the Palisades Interstate Park Commission was created.³⁸ To cut back pollution, the Federal Rivers and Harbors Act of 1890³⁹ was adopted which

32. DAVID SOLL, *EMPIRE OF WATER: AN ENVIRONMENTAL AND POLITICAL HISTORY OF THE NEW YORK CITY WATER SUPPLY* 19 (2013).

33. DAVID STRADLING, *THE NATURE OF NEW YORK: AN ENVIRONMENTAL HISTORY OF THE EMPIRE STATE* 70-72 (2010).

34. NEW YORK CITY 2012 DRINKING WATER SUPPLY AND QUALITY REPORT 1 (2012), *available at* <http://www.nyc.gov/html/dep/pdf/wsstate12.pdf>.

35. DAVID STRADLING, *MAKING MOUNTAINS: NEW YORK CITY AND THE CATSKILLS* 77 (2007).

36. SOLL, *supra* note 32.

37. *Id.*

38. *History*, PALISADES INTERSTATE PARK COMM’N, <http://www.njpalisades.org/history.html> (last visited Oct. 10, 2013).

39. Rivers & Harbors Appropriation (Refuse) Act of 1899, 30 Stat. 1121, 1151.

provided citizens with a bounty payment for turning in any one who dumped into the navigable waters.⁴⁰

By 1900, trapping in New York State had reduced its beaver population to only fifteen animals.⁴¹ Strict measures to restore flora and fauna began to be enacted, and by 1911 New York established a Conservation Department in its state government, the first in the country.⁴² In this same period of time, excessive logging in the Adirondack and Catskill mountains was destroying forested lands and causing vast flooding (including of the Hudson at the State capitol downstream in Albany), and bribery by timber companies had prevented the State Forest Commission from enforcing rules to avert forest fires and excessive tree cutting. Upset that the forests were being destroyed, and that the watersheds, which were needed to maintain navigation on the Erie Canal, might be lost, the people of the State of New York assembled in a constitutional convention and amended the State Constitution to set aside the entire forest preserve of the Adirondacks and Catskills to be “forever wild forest land.”⁴³ What is now Article XIV of the State Constitution also authorized any person to petition the courts to enforce this law for preservation. Because the constitutional mandate is very clear, the courts have sided with the public and prevented incursions into the Forest Preserve by economic interests.⁴⁴

In 1916, the federal government built a dam 153 miles above the mouth of the Hudson, at the City of Troy on the east and

40. 33 U.S.C. § 411 (2012).

41. Harold Faber, *New York Renews Trapping To Thin Beaver Population*, N.Y. TIMES (Mar. 11, 1990), <http://www.nytimes.com/1990/03/11/nyregion/new-york-renews-trapping-to-thin-beaver-population.html>; GLEN R. HARRIS, AN ENVIRONMENTAL HISTORY OF NEW YORK'S NORTH COUNTRY—THE ADIRONDACK MOUNTAINS AND THE ST. LAWRENCE RIVER VALLEY CASE STUDIES AND NEGLECTED TOPICS 100-03 (2012).

42. *History of DEC*, N.Y. DEP'T ENVTL. CONSERVATION, <http://www.dec.ny.gov/about/9677.html> (last visited Oct. 10, 2013).

43. Nicholas A. Robinson, Univ. Professor of Env'tl. Law, Arthur M. Crocker Lecture at the Center for the Forest Preserve Niskayuna, New York: “Forever Wild”: New York's Constitutional Mandates to *Enhance* the Forest Preserve 8 (Feb. 15, 2007), *available at* <http://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1283&context=lawfaculty>.

44. *See, e.g., Ass'n for Prot. of Adirondacks v. MacDonald*, 170 N.E. 902 (N.Y. 1930), *aff'd* 239 N.Y.S. 31 (App. Div. 3d Dep't 1930).

Green Island on the west side of the river to avert flooding, as well as to promote navigation of the Hudson River and its connecting canals.⁴⁵ A lock allows boats to pass by the dam. Upstream from Albany, this dam regulates flood waters and facilitates shipping and recreational vessels. The tidal portion of the Hudson now ends at this dam. The dam also had the effect of trapping sediments, among them the discharged polychlorinated biphenyls (PCBs), which had been discharged by the General Electric Company's factories along the upper Hudson River over many years.⁴⁶ The campaign to clean up the PCBs has been one of the strings of "Third Parties" illustrations of environmental law enforcement.

Far from the pollution of Manhattan or the resource degradation in the mountains, and continuing the tradition of spending summers up the Hudson, the affluent industrialists and economic leaders bought land in the Hudson Highlands and overlooking the Hudson River Valley, and built great estates, some building mansions emulating castles on the Rhine or English country houses. Following in Washington Irving's tradition, great architectural homes were built, many of which are now museums. These include "Lyndhurst" designed by A.J. Downing for a mayor of New York City, the Vanderbilt family mansion, President Van Buren's home, John D. Rockefeller's home at Pocantico Hills, and Franklin Roosevelt's home at Hyde Park.⁴⁷

In the Hudson's literary tradition, John Burroughs, a great naturalist writer, lived and wrote in the Hudson Valley.⁴⁸ John Muir's publisher lived in the Hudson Highlands, and Muir came from California to have his works published in New York and complete several manuscripts while camping along the Hudson.⁴⁹

45. STATE OF N.Y., SUPPLEMENT TO THE ANNUAL REPORT OF THE STATE ENGINEER AND SURVEYOR FOR THE YEAR ENDING JUNE 30, 1920, at 265 (1921).

46. Richard F. Bopp et al., *Contaminant Chronologies from Hudson River Sedimentary Records*, in THE HUDSON RIVER ESTUARY 383, 387 (Jeffrey S. Levinton & John R. Waldman eds., 2006).

47. GREGORY LONG, HISTORIC HOUSES OF THE HUDSON RIVER VALLEY 172, 211, 242, 244 (2004); H.D. EBERLEIN & C. VAN DYKE HUBBARD, HISTORIC HOUSES OF THE HUDSON VALLEY (1990); ALLAN KELLER, LIFE ALONG THE HUDSON (1976).

48. *See generally* EDWARD KANZE, THE WORLD OF JOHN BURROUGHS (1999).

49. FRANCES F. DUNWELL, THE HUDSON RIVER HIGHLANDS 157 (1991).

Olana, the home of the famous Hudson River School painter Frederick Church, was built across the Hudson from the home of Thomas Cole, the founder of that school.⁵⁰

Gradually, industry also became located along the Hudson. The General Motors automobile assembly plant in Tarrytown, New York dumped waste in the Hudson. Electrical power plants did the same all along the river. The concrete plants in Cementon, New York polluted the air and waters with cement dust.⁵¹ Waste from the railroad tracks went directly into the river. In the struggle to fight the Second World War, industrial uses expanded and the river became a launching area for troops and materiel via naval shipments. The pollution expanded after the war, as soldiers returned home and the economy grew.

The fishermen of the Hudson were among the first to protest. Robert Boyle and others founded the Hudson River Fishermen's Association to combat pollution.⁵² They used the Federal Refuse Act's bounty system to find polluters in the Hudson estuary and turn them into the U.S. Attorney's Office to be prosecuted. They established a citizen watchdog, "The Riverkeeper," to investigate pollution and stop it. Further up the river, the folk singer Peter Seeger and others founded a movement around the building of an ancient Hudson River Sloop, the *Clearwater*, which plied by the towns on the Hudson, its staff educating the populace and students about the ecology of the river while advocating the cleanup of its waters. Recreational and commercial shipping interests also were critical of the pollution from industry.⁵³ Citizen enforcement helped state and federal regulators by finding polluters and exposing their illegal conduct.

Modern environmental law was forged in the battles to protect the Hudson River after World War II. This field of law was stimulated by the battles on the Hudson River in the 1960s, including the classic decision, *Scenic Hudson Preservation*

50. LEWIS, *supra* note 22, at 313.

51. See generally *Boomer v. Atlantic Cement Co.*, 257 N.E.2d 870 (N.Y. 1970).

52. *A Brief History*, RIVERKEEPER, <http://www.riverkeeper.org/about-us/our-story/a-brief-history/> (last visited Oct. 16, 2013); see also ROBERT BOYLE, *THE HUDSON RIVER – A NATURAL AND UNNATURAL HISTORY* 170 (1979).

53. JACK HOPE, *A RIVER FOR THE LIVING – THE HUDSON AND ITS PEOPLE* 119-22 (1975).

Conference v. Federal Power Commission,⁵⁴ and other battles with companies that generate electricity along the Hudson. These companies had factories, and with governmental regulators who were lax in protecting the Hudson by not strongly enforcing applicable environmental laws, the condition of the river suffered.

The Hudson has benefitted from the emergence of “Third Parties” action to ensure that government regulators are strong and that economic interests are responsible and comply with regulations. Before the emergence of active “Third Parties” in the late 19th century, the environment of the Hudson River Valley had suffered, and the public demanded remedial measures. After the Second World War, a comparable lapse in enforcement emerged. Public demands for environmental protection led the federal Congress to enact in 1969 the National Environmental Policy Act, and to enact comparable state statutes in Albany, strengthening the legal foundation for rigorous law enforcement. In 1972, New York’s legislature completed a two-year process of enacting a comprehensive code for “Environmental Conservation” which included an article on environmental crimes and providing for citizen enforcement. Federal and state laws aggressively facilitated “Third Parties” actions to protect the environment.

Today, the Hudson is celebrated as an example of a proactive regime for stewardship and sustainable development. The river can be traveled from Lake Tear of the Clouds to Manhattan without encountering any significant water pollution, except the PCBs that have yet to be removed by General Electric and radioactive leaks from the Indian Point nuclear power plants.⁵⁵ The “Third Parties” efforts to close Indian Point is an example of an effort that has not succeeded, at least so far, because of the tremendous expenditures by the plant owners to extend the license of the plants and the bias in favor of nuclear plants by the regulator and the Federal Nuclear Regulatory Commission.

Organizations such as the Hudson River Environmental Society track ambient environmental conditions and assess new

54. 354 F.2d 608 (2d Cir. 1965).

55. See GARDIE TRUESDALE, HUDSON RIVER JOURNEY - IMAGES FROM LAKE TEAR OF THE CLOUDS TO NEW YORK HARBOR (2003). See also REED SPARLING, HUDSON RIVER VOYAGE - THROUGH THE SEASONS, THROUGH THE YEARS (2007).

challenges.⁵⁶ Organizations educate them about sustainable land development practices and ordinances.⁵⁷ As a result of “Third Parties” litigation to compel electrical power plants to use better ecological data in their decision-making,⁵⁸ the companies provided funding to establish the Hudson River Foundation, which finances ongoing scientific studies of the Hudson and its ecological conditions.⁵⁹ The Hudson Valley is home to the Cary Institute for Ecosystems Studies,⁶⁰ a fully endowed ecological research station. It also hosts a field research facility of NOAA. The Lamont-Doherty Laboratories of Columbia University studies the river,⁶¹ as do environmental studies programs of Vassar College,⁶² Bard College,⁶³ and other academic institutions on the river.⁶⁴ They collaborate in a Consortium led by Pace University’s Academy for Applied Environmental Studies.⁶⁵

Through the initiative of The Scenic Hudson Preservation Conference and other third parties, the New York State legislature established the Hudson River Greenway Council and a coalition of local authorities that integrate their land use decision-making through the Hudson Greenway Council. The Greenway Conservancy was also launched as a public authority

56. See HUDSON RIVER ENVTL. SOC’Y, <http://www.hres.org/> (last visited Oct. 1, 2013).

57. See SCENIC HUDSON, <http://www.scenichudson.org/> (last visited Oct. 1, 2013).

58. See THE HUDSON RIVER POWER PLANT SETTLEMENT (Ross Sandler & David Schoenbrod eds., 1981). See also, LAWRENCE W. BARNHOUSE ET AL., SCIENCE, LAW, AND HUDSON RIVER POWER PLANTS – A CASE STUDY IN ENVIRONMENTAL ASSESSMENT (1988).

59. See HUDSON RIVER FOUND., www.hudsonriver.org (last visited Oct. 4, 2013).

60. CARY INST. FOR ECOSYSTEMS STUDIES, <http://www.caryinstitute.org/> (last visited Oct. 1, 2013).

61. LAMONT-DOHERTY EARTH OBSERVATORY, <https://www.ldeo.columbia.edu/> (last visited Oct. 1, 2013).

62. *Environmental Studies*, VASSAR COLL., <http://environmentalstudies.vassar.edu/> (last visited Oct. 10, 2013).

63. *Environmental and Urban Studies Program*, BARD COLL., <http://eus.bard.edu/> (last visited Oct. 10, 2013).

64. BEACON INST. FOR RIVERS & ESTUARIES, <http://www.bire.org/home/> (last visited Oct. 1, 2013).

65. *Pace Academy for Applied Environmental Studies*, PACE U., <http://pace.edu/paaes/> (last visited Oct. 1, 2013); ENVTL. CONSORT. OF COLL. & U., <http://www.environmentalconsortium.org/ec.html> (last visited Oct. 1, 2013).

to foster green development in the Hudson Valley, launching a Hudson River recreational vessel water trail,⁶⁶ a bicycle trail, and is continuing to build recreational hiking trails along both sides of the river. Through the Pace Law School's Environmental Litigation Clinic, the Hudson Riverkeeper has a public interest law firm dedicated to the enforcement of the laws protecting the environment of the river.⁶⁷ The Hudson River today has been recognized nationally in an honorific way as an "American Heritage River."⁶⁸

Despite these successes, the Hudson remains threatened as economic development advances along its shores and up each of its tributaries, without accounting for the impact on the Hudson itself.⁶⁹ Pace University faculty, with others, have launched the Pocantico River Watershed Conservancy to prepare a science-based conservancy plan for this tributary of the Hudson. These professors have determined that this is necessary in order to prepare the tributary to be resilient in the wake of disturbances resulting from the impacts of climate change on the Pocantico River, leading to the Hudson itself.

In the future, as in the past, the role of "Third Parties" will be essential to environmental stewardship of the Hudson River Valley. Each of the case studies below reflects the heritage of this brief history, and in turn contributed to this overall history of the Hudson River Valley. After examining each case study, conclusions may be drawn about how each supports the theory of IPPEP.

66. Hudson River Valley Greenway Act of 1991, N.Y. ENVTL. CONSERV. LAW §§ 44-0101 to 44-0121 (McKinney). Governor Mario Cuomo appointed Pace Prof. Nicholas A. Robinson to establish the Hudson Greenway Conservancy. For the trail currently, see IAN H. GIDDY, *THE HUDSON RIVER WATER TRAIL GUIDE* (6th ed., 2003), available at http://www.hrwa.org/pages/the_guide.shtml (last visited Oct. 1, 2013).

67. PACE ENVTL. LITIG. CLINIC, <http://www.law.pace.edu/pace-environmental-litigation-clinic> (last visited Oct. 1, 2013).

68. Exec. Order No. 13,061, 62 Fed. Reg. 48,445 (Sept. 15, 1997); Proclamation No. 7112, 63 Fed. Reg. 41,949 (Aug. 5, 1998) (listing the Hudson River as an American Heritage River).

69. See STEPHEN P. STANNE ET AL., *THE HUDSON: AN ILLUSTRATED GUIDE TO THE LIVING RIVER* (1996).

B. Major Parties in the Process of Hudson River Valley Conservation

It is important to know the major parties involved in the Hudson River conservation before getting into the concrete case studies.

1. Governments at Various Levels

The Hudson River Valley is a geographic region, the environment of which is governed by many authorities. In order to set the stage for the case studies that follow, brief descriptions are provided for the principal regulatory powers with authority over the environment in the Hudson River Valley (located in the bottom left corner of the IPPEP triangle), the enterprises that affect the river (located at the bottom right corner of the IPPEP triangle), and “Third Parties” (located in the top apex of the IPPEP triangle).

Federal: There are many federal environmental laws that have application to the Hudson River and many federal agencies with jurisdiction in implementing them. The principal laws that pertain to our case studies are the National Environmental Protection Act (NEPA),⁷⁰ the Clean Water Act,⁷¹ the Marine Mammal Protection Act,⁷² the Magnuson-Stevens Fishery

70. National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. §§ 4321-4370h (2012) (signed by President Richard Nixon on Jan. 1, 1970 as Pub. L. No. 91-190, 83 Stat. 852 (1970), administered by the EPA and the Council on Environmental Quality (CEQ)); *National Environmental Policy Act*, COUNCIL ON ENVTL. QUALITY, <http://ceq.hss.doe.gov/> (last visited June 10, 2013).

71. Federal Water Pollution Control Act (Clean Water Act or CWA) of 1972, 33 U.S.C. §§ 1251-1387 (2012) (chiefly administered by the EPA with prescribed administration delegated to the states); see *Summary of the Clean Water Act*, EPA, <http://www2.epa.gov/laws-regulations/summary-clean-water-act> (last visited Oct. 2, 2013). Under § 404 of the Act, the Secretary of the Army is given authority, delegated to the Chief of the Corps of Engineers, to grant licenses under specified conditions for permitting the dumping of materials into the navigable waters of the United States. 33 U.S.C. § 1344; see *Regulatory Permits*, U.S. ARMY CORPS OF ENG'RS, <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx> (last visited Oct. 2, 2013).

72. Marine Mammal Protection Act (MMPA) of 1972, 16 U.S.C. §§ 1361-1423h (2012). This Act is administered by the Department of Commerce which, “through the National Marine Fisheries Service, is charged with protecting whales, dolphins, porpoises, seals, and sea lions. Walrus, manatees, otters, and

Conservation and Management Reauthorization Act of 2006,⁷³ the Safe Drinking Water Act of 1974,⁷⁴ The Federal Power Act of 1935,⁷⁵ and the Atomic Energy Act of 1954.⁷⁶

The federal regulatory agencies involved include the Secretary of the Army through the Army Corps of Engineers, empowered to issue dredge and landfill permits within “the waters of the United States”; the Federal Power Commission (FPC) (now the Federal Energy Management Agency (FEMA)) permitting interstate power facilities and all hydroelectric plants; the Environmental Protection Agency (EPA) administering NEPA and the Clean Water Act; and the Nuclear Regulatory Commission (NRC) licensing nuclear power plants. The Marine Mammal Protection Act is administered by the Department of Commerce which “through the National Marine Fisheries Service, is charged with protecting whales, dolphins, porpoises, seals, and sea lions. Walrus, manatees, otters, and polar bears are protected by the Department of the Interior through the U.S.

polar bears are protected by the Department of the Interior through the U.S. Fish and Wildlife Service.” *Office of Protected Resources and the Marine Mammal Protection Act*, NOAA FISHERIES SERV., http://www.nmfs.noaa.gov/pr/pdfs/mmpa_factsheet.pdf (last visited Oct. 2, 2013); see also *Marine Mammal Protection Act (MMPA)*, NOAA FISHERIES SERV., <http://www.nmfs.noaa.gov/pr/laws/mmpa/> (last visited Oct. 2, 2013).

73. Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, Pub. L. No. 109-479, 120 Stat. 3575 (administered by the Department of Commerce through the National Marine Fisheries Services); see *Magnuson-Stevens Fishery Conservation and Management Act Reauthorization*, NOAA FISHERIES SERV., <http://www.nmfs.noaa.gov/msa2007/> (last visited Oct. 2, 2013).

74. Safe Drinking Water Act (SDWA) of 1974, 42 U.S.C. §§ 300f-300j-26 (2012) (administered by EPA); see *Summary of the Safe Drinking Water Act (SDWA)*, EPA, <http://water.epa.gov/lawsregs/rulesregs/sdwa/> (last visited Oct. 2, 2013).

75. Federal Power Act of 1935, 16 U.S.C. §§ 791a-828c (2012) (administered by the Federal Power Commission (FPC)); see *Federal Power Act (FPA)*, TRIBAL ENERGY & ENVTL. INFO. CLEARINGHOUSE, http://teeic.anl.gov/lr/dsp_statute.cfm?topic=12&statute=247 (last visited Oct. 2, 2013).

76. Atomic Energy Act of 1954, 42 U.S.C. §§ 2011-2296b-7 (2012) (administered by the Nuclear Regulatory Commission (NRC)); see *Summary of the Atomic Energy Act*, EPA, <http://www2.epa.gov/laws-regulations/summary-atomic-energy-act> (last visited Oct. 2, 2013).

Fish and Wildlife Service.”⁷⁷ The Magnuson Acts are administered by the Department of Commerce through the National Marine Fisheries Service.

New York State: Environmental protection of the Hudson Valley region by New York State is comprised of a patchwork of regulations. In terms of property rights as a navigable water, “ownership of land under . . . [the Hudson River] is an incident of sovereignty”⁷⁸ unless alienated. In addition, the waters of the Hudson are held in common use and benefit of the people of the state under the public trust doctrine.⁷⁹

The primary State environmental administrative body in the Hudson Valley is the N.Y. State Department of Environmental Conservation (NYSDEC).⁸⁰ The NYSDEC is responsible for managing the natural resources of the river under the Hudson River Estuary Program.⁸¹

Mostly, local laws regulate historic places including the taking of fish and any construction causing an “alteration of waters or wetlands.”⁸² Moreover, New York has a State Pollutant Discharge Elimination System (SPDES) delegated program approved by the EPA authorizing the DEC to issue permits “for the control of wastewater and storm water discharges [nonpoint

77. *See Office of Protected Resources and the Marine Mammal Protection Act*, NOAA FISHERIES SERV., http://www.nmfs.noaa.gov/pr/pdfs/mmpa_factsheet.pdf (last visited Oct. 2, 2013).

78. *Montana v. United States*, 450 U.S. 544, 551 (1981).

79. *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 488 (1988) (O’Connor, J., Stevens, J., and Scalia, J., dissenting); *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 436 (1892) (noting that the public trust doctrine “is founded upon the necessity of preserving to the public the use of navigable waters from private interruption and encroachment”). For a discussion of the history of the doctrine, see Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970) (discussing how “government may never alienate trust property by conveying it to a private owner and that it may not effect changes in the use to which that property has been devoted”).

80. *About DEC*, N.Y. DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/> (last visited Oct. 2, 2013).

81. *Hudson River Estuary Program*, N.Y. DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/lands/4920.html> (last visited Oct. 2, 2013).

82. *Meet the Hudson River*, NY DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/lands/25564.html> (last visited Oct. 2, 2013).

sources] in accordance with the Clean Water Act.”⁸³ Similarly to the federal structure of NEPA, all major state, regional, and local actions are subject to the procedural requirements of the N.Y. State Environmental Quality Review Act (SEQRA) for all state actions that have a significant effect on the environment.⁸⁴

New York City: Where the river meets the Atlantic Ocean, lies the Hudson River estuary and its expansive watershed area. Supplying water to the City, the New York City Watershed is of major importance as it “is the largest unfiltered water supply in the United States (US) . . . provid[ing] approximately 1.2 billion gallons of high quality drinking water to nearly one-half the population of New York State every day.”⁸⁵ As a major source of drinking water, the Watershed must comply with the provisions of the federal Safe Drinking Water Act.⁸⁶ In order to abate pollution, even though the Watershed is primarily managed by the New York City Department of Environmental Protection,⁸⁷ in conjunction with the NYSDEC, a partnership of federal, state and local authorities is required along with a variety of educational and nonprofit organizations.⁸⁸ A Memorandum of Understanding in 1997 was created to manage the Watershed.⁸⁹ The Watershed is currently operating under a Long-term Watershed Protection

83. *State Pollutant Discharge Elimination System (SPDES)*, N.Y. DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/permits/6054.html> (last visited Oct. 2, 2013); 33 U.S.C. §§ 1342 (2012).

84. *SEQR - Environmental Impact Assessment in New York State*, N.Y. DEP’T ENVTL. CONSERVATION <http://www.dec.ny.gov/permits/357.html> (last visited Oct. 2, 2013).

85. *New York City Watershed Program*, N.Y. DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/lands/25599.html> (last visited Oct. 2, 2013).

86. *See generally* Safe Drinking Water Act of 1974, 42 U.S.C. §§ 300f–300j-26 (2012); Surface Water Treatment Rule, 40 C.F.R. § 141.71 (2013).

87. NYC DEP’T ENVTL. PROT., <http://www.nyc.gov/html/dep/html/home/home.shtml> (last visited Oct. 2, 2013). *See also* *Regulatory Background*, NYC DEP’T ENVTL. PROT., http://www.nyc.gov/html/dep/html/watershed_protection/regulatory_background.shtml (last visited Oct. 2, 2013).

88. *NYC Watershed MOA Partners*, N.Y. DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/lands/58597.html> (last visited Oct. 2, 2013).

89. NEW YORK CITY WATERSHED MEMORANDUM OF AGREEMENT (Jan. 21, 1997), available at <http://www.nysefc.org/Default.aspx?TabID=76&fid=389>. For an excellent history of the program, see Jennifer Church, *Avoiding Further Conflict: A Case Study of the New York City Watershed Land Acquisition Program in Delaware County, NY*, 27 PACE ENVTL. L. REV. 393 (2009).

Program⁹⁰ - any major actions in the Watershed are subject to both SEQRA⁹¹ and the New York City Environmental Quality Review Act (CEQRA).⁹²

As the Westway case demonstrates, sometimes the conflicting goals and actions of New York City have caused environmental problems. In Westway, the City government proposed to build a highway right in and along the shoreline of the river in Manhattan and in Westchester County. The proposed highway would have blocked access to the river for the residents of the City and Westchester riverside communities and threatened fish population survival.

Other municipalities: Major cities, counties, towns and villages in New York State also have a variety of environmental ordinances with agencies to implement their environmental laws. Since these municipal governments are varied and geographically dispersed, none of them has a system as extensive as New York City's. Those municipalities bordering the Hudson River thus have a wide range of laws and enforcement measures impacting the river.

In New York State, pursuant to its Municipal Home Rule Law, local governments are given the right to self-determination in a number of capacities including land use and zoning.⁹³ However, in the late 1980s, citizens of the Hudson Valley became concerned about cohesive management of the region.⁹⁴ Thus, in 1991, with the passage of the New York State Hudson River Valley Greenway Act,⁹⁵ the Hudson River Valley Greenway⁹⁶ was

90. *2011 Long-Term Watershed Protection Plan*, NYC DEP'T ENVTL. PROT., available at http://www.nyc.gov/html/dep/pdf/watershed_protection/2011_long_term_plan.pdf (last visited Oct. 2, 2013).

91. 5 N.Y. ENVTL. CONSERV. LAW § 8-0101-0117 (McKinney 2005); N.Y. COMP. CODES R. & REGS. tit. 6, § 617 (2013).

92. N.Y.C. Exec. Order No. 91 (1977).

93. N.Y. MUN. HOME RULE LAW § 10 (McKinney 1994).

94. See GREENWAYS IN THE HUDSON RIVER VALLEY: A NEW STRATEGY FOR PRESERVING AN AMERICAN TREASURE (Sleepy Hollow Press) (1988).

95. Hudson River Valley Greenway Act of 1991, N.Y. ENVTL. CONSERV. LAW §§ 44-0101 to 44-0121 (McKinney). The Hudson River Valley Conservancy, "a public benefit corporation," was also created with the passage of this Act to assist with tangible preservation efforts. *Overview and Mission*, HUDSON RIVER VALLEY GREENWAY,

born “creat[ing] a process for voluntary regional cooperation among 264 communities within 13 counties that border the Hudson River.”⁹⁷ The Council “functions like a state agency . . . [and] works with local and county governments to enhance local land use planning . . . [to] create a voluntary regional planning compact for the Hudson River Valley.”⁹⁸ The organization operates within a framework of set criteria—natural and cultural resource protection, regional planning, economic development, public access, and heritage and environmental education⁹⁹—in

<http://www.hudsongreenway.ny.gov/AbouttheGreenway/OverviewandMission.aspx> (last visited Oct. 2, 2013).

96. HUDSON RIVER VALLEY GREENWAY, <http://www.hudsongreenway.ny.gov/home.aspx> (last visited Oct. 2, 2013). The mission of the Greenway is “[t]o continue and advance the state’s commitment to the preservation, enhancement and development of the world-renowned scenic, natural, historic, cultural and recreational resources of the Hudson River Valley while continuing to emphasize economic development activities and remaining consistent with the tradition of municipal home rule.” *Overview and Mission*, HUDSON RIVER VALLEY GREENWAY, <http://www.hudsongreenway.ny.gov/AbouttheGreenway/OverviewandMission.aspx> (last visited Oct. 2, 2013).

97. *Overview and Mission*, HUDSON RIVER VALLEY GREENWAY, <http://www.hudsongreenway.ny.gov/AbouttheGreenway/OverviewandMission.aspx> (last visited Oct. 2, 2013); *see also* HUDSON RIVER VALLEY GREENWAY, http://www.hudsongreenway.ny.gov/Libraries/H2OtrailDocs/Greenway_Map06-07-10.sflb.ashx (last visited Oct. 2, 2013) (illustrating participating communities and the scope of the greenway).

98. *Greenway Council*, HUDSON RIVER VALLEY GREENWAY, <http://www.hudsongreenway.ny.gov/Organization/GreenwayCouncil.aspx> (last visited Oct. 2, 2013).

99. *Greenway Criteria*, HUDSON RIVER VALLEY GREENWAY, <http://www.hudsongreenway.ny.gov/AbouttheGreenway/GreenwayCriteria.aspx> (last visited Oct. 4, 2013). The specific criteria are listed below:

Natural and Cultural Resource Protection

Protect, preserve and enhance natural resources including natural communities, open spaces and scenic areas as well as cultural resources including historic places and scenic roads.

Economic Development

Encourage economic development that is compatible with the preservation and enhancement of natural and cultural resources including agriculture, tourism and the revitalization of established community centers and waterfronts.

Public

Access

Promote increased public access to the Hudson River through the creation of riverside parks and the development of the Hudson River Valley Greenway Trail System.

order to develop comprehensive voluntary regional plans in the form of county level compacts.¹⁰⁰

Federal and state regulatory agencies are often ineffective because the regulators appointed not infrequently come from the industries being regulated or may return to be employed by those economic enterprises, often at higher salaries, after they leave government. This “revolving” door compromises the integrity of decision-making by regulators. For example, the Nuclear Regulatory Commission has never required that a nuclear power plant be shut down despite many cases of egregious safety problems. This “capture” of the Atomic Energy Agency, which approved the construction of the Indian Point nuclear electrical generating plants on the Hudson River, resulted in the AEC being reformed under President Jimmy Carter,¹⁰¹ and being recast as the Nuclear Regulatory Commission. Unfortunately, the NRC still has these problems in this respect.¹⁰² These legacy issues create serious problems with the efforts of NGOs and New York State and local governments to close the Indian Point power plant. Regulators appointed by elected officials are often disabled

Regional	Planning
Communities can work together to develop mutually beneficial regional strategies for natural and cultural resource protection, economic development (including necessary public facilities and infrastructure), public access and heritage and environmental education[.]	

Heritage and Environmental Education

Promote awareness among residents and visitors about the Valley’s natural, cultural, scenic and historic resources[.]

Id.

100. *Greenway Compact*, HUDSON RIVER VALLEY GREENWAY, http://www.hudsongreenway.ny.gov/Planning/Greenway_Compact.aspx (last visited Oct. 2, 2013) (listing compacts for Dutchess, Westchester, Putnam, Rockland, Orange, and Ulster counties).

101. Energy Reorganization Act of 1974, 42 U.S.C. § 5801 (2012) (creating the NRC); *Governing Legislation*, NRC (Mar. 25, 2013), <http://www.nrc.gov/about-nrc/governing-laws.html#atomic>.

102. See Tamar Jergensen Cerafici, *40 Years and Counting Relicensing the First Generation of Nuclear Power Plants: Is New Always Better? The Case for License Renewal in the Next Generation*, 26 PACE ENVTL. L. REV. 391, 393-94 (2009), available at <http://digitalcommons.pace.edu/pelr/vol26/iss2/> (providing an excellent discussion of the legal problems).

from promulgating or applying effective regulation because of political considerations.

The federal and state governments and their agencies often failed in their duties to enforce environmental laws designed to protect assets such as the river and were often the defendants in the law suits to require them to do so. As previously observed, however, in the Hudson River Expressway case, it was the New York State government that proposed the damaging project and was the defendant in the law suit that led to the prevention of the Expressway being built. In the Indian Point controversy, it is the federal regulatory agent that is the culprit.

2. Economic Enterprises

Unfortunately, the Hudson has been the object of horrific pollution, desecration, and threats to some of its most scenic areas by commercial interests that often are defended by government agencies that are supposed to protect it. Sometimes governments themselves are the proposed desecrators. For example, the Consolidated Edison Company, the electric utility serving New York City and Westchester County, New York was licensed by the Federal Power Commission (now the Federal Energy Regulatory Commission) to build a giant pumped storage power plant on Storm King Mountain, one of the most scenic and historic areas of the Hudson Highlands. It is located at the center of the prolific striped bass spawning grounds and would have killed thousands of adult fish and fingerlings. The Anaconda Copper Company and other riverside industrial plants spilled vast amounts of toxic chemicals into the river, killing fish and endangering people in the area of the plant. The oil company, Exxon, dumped oil into the river from cleaning its ballast tanks. The General Electric Company dumped polychlorinated biphenyls into the river, which bioaccumulates, making the fish in the lower Hudson unsafe for humans to consume. These are some of the more egregious examples of the interests that threatened the river and its aquatic life.

Most frequently, the Enterprise is the defendant in "Third Party" actions to prevent pollution of the river and its shores. This was the case with Consolidated Edison and its successor-in-

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interest Entergy Company (Scenic Hudson Case), with Anaconda Copper and its successors-in-interest, and the General Electric company in the situations described above (PCB Contamination case). Although, as noted above, in the Westway case it was the New York City government, in the Hudson River Expressway Case, it was the New York State Government, and in the Indian Point Nuclear Power plant Case, it was the federal government that were the defendants and were found by the courts to have violated environmental laws.

3. The “Third Parties”

As indicated in the IPPEP triangle, the “Third Parties” include Congress, NGOs, the courts, etc. Almost all the major “Third Parties” entities presented and played important roles in the cases for protecting Hudson River.

a. Environmental NGOs

The problems with governments as environmental regulators, as indicated above, highlight the vital need for NGOs to be able to apply to the courts to enforce the laws, through legislative authorization for them to bring citizen suits against the government and polluting companies. In every instance in the Hudson River cases, it was NGOs that brought lawsuits to stop activities threatening the river.

Fortunately, the river has been blessed with a cadre of very avid defenders (mainly nongovernmental organizations and local governments), whose skillful public interest lawyers have fought, usually successfully, to fend off the polluters and others that threaten the river. The leading cast of characters includes: The Scenic Hudson Preservation Conference, a group of concerned citizens that brought the litigation which eventually stopped Consolidated Edison from building its proposed pumped storage plant on Storm King Mountain, and continues its actions to protect the river to this day; The Citizens Committee for the Hudson Valley, an *ad hoc* citizens’ group that led the successful litigation to stop the Hudson River Expressway in Westchester; and the Hudson Riverkeeper, represented by the Pace Law School Environmental Law Clinic, that has been instrumental in the

successful litigation against to stop the company from dumping oil from its ballasts in the river, and has brought cases against many other Hudson River polluters. There are many other NGOs that have participated in efforts and education to protect the river.

These NGOs and their lawyers have been—and continue to be—instrumental in protecting the Hudson River. They have raised the funds to pay for the litigation to protect the river, engaged the lawyers, many of whom volunteered to bring the cases against those responsible for defiling the river, and carried out extensive public education campaigns to gain support for their actions.

b. Courts

The problems with environmental regulation by governments, as indicated above, also highlight the vital importance of a qualified independent judiciary with the power to order enterprises and government agencies to comply with environmental laws. The judiciary's decisions cannot be influenced by economic enterprises or government officials. In every instance in the Hudson River cases it was the courts that were able to order the cessation of violation of environmental laws and penalize the transgressors. The independence of the judges is assured in the United States through long or even lifetime appointments of judges who can only be dismissed for commission of crimes. Their authority, bolstered through strong adherence to the rule of law, was key to stopping the destructive proposals and actions.

The court system operating within the Hudson Valley has three coexistent judicial layers—at the federal, state, and municipal levels. At the federal level, Article III of the Constitution provides that “[t]he judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish.”¹⁰³ Underneath the Supreme Court are the Federal Courts of Appeal, consisting of twelve regional Circuit Courts and

103. U.S. CONST. art. III, § 1.

a Federal Circuit.¹⁰⁴ Circuit courts hear appeal cases from district courts and from federal administrative agencies.¹⁰⁵ Hudson Valley cases fall within the purview of the four district courts in New York State (Northern, Southern, Eastern and Western Districts)¹⁰⁶ and are appealable to the Second Circuit Court of Appeals.¹⁰⁷ All the federal court judges have lifetime appointments and thus are not subject to governmental influence.

The New York Unified Court System¹⁰⁸ is the judicial framework coexisting at the state and municipal levels in the Hudson Valley. Similar to the federal system, New York has a tiered appellate structure with the highest court being the Court of Appeals, followed by the Appellate Divisions of the Supreme Court that in turn hear appeals from the Supreme Court, New York's trial level courts.¹⁰⁹ The New York State judges are either appointed or elected for long time periods to protect them against governmental influence. However, where the judges are elected, large campaign funds are often donated by enterprises seeking to influence their positions.¹¹⁰

104. 28 U.S.C. § 41 (2012); *Federal Court's Structure*, U.S. COURTS, <http://www.uscourts.gov/FederalCourts/UnderstandingtheFederalCourts/FederalCourtsStructure.aspx> (last visited Oct. 2, 2013).

105. *Courts of Appeals*, U.S. COURTS, <http://www.uscourts.gov/FederalCourts/UnderstandingtheFederalCourts/CourtofAppeals.aspx> (last visited Oct. 2, 2013).

106. 28 U.S.C. § 112 (2012).

107. 28 U.S.C. § 41 (2012) (listing Connecticut, New York, and Vermont in the Second Circuit); U.S. CT. OF APPEALS FOR THE SECOND CIRCUIT, <http://www.ca2.uscourts.gov/> (last visited Oct. 2, 2013).

108. NYCOURTS.GOV, <http://www.nycourts.gov/> (last visited Oct. 2, 2013).

109. JONATHAN LIPPMAN & ANN PFAU, *THE NEW YORK STATE COURTS: AN INTRODUCTORY GUIDE* (2010), available at <http://www.nycourts.gov/admin/NYCcourts-IntroGuide.pdf>. For an excellent overview of the New York state court system, see DAVID D. SIEGEL, *NEW YORK PRACTICE* §§ 8-22 (Practitioner's Series, 5th ed. 2011).

110. The U.S. Supreme Court recently allowed unlimited corporate contributions on the pretext of approving their "free speech." Thus, a new variable with unforeseen consequences has entered the United States political experience. See, e.g., Ian Millhiser, *Justice Ginsburg: Elections Are 'A Dreadful Way To Choose People For Judicial Office'*, THINKPROGRESS (July 30, 2013), <http://thinkprogress.org/justice/2013/07/30/2380321/justice-ginsburg-elections-are-a-dreadful-way-to-choose-people-for-judicial-office/>.

c. Congress

Congress can help by holding hearings to create public pressure on federal agencies to comply with environmental laws and regulations. This was the case with Congressman Dingell's hearings in the Hudson River Expressway case. Congress can also amend the laws to facilitate environmental compliance, but Congress can also impede environmental protection by exempting certain laws from complying with environmental laws. This was the case with the law promoting hydraulic fracturing procedures for recovering natural gas, which exempted these procedures from the Safe Drinking Water Act and other environmental statutes.

III. CASE STUDIES

This paper applies the IPPEP analytic model to the following environmental protection controversies in the Hudson River Valley: (1) preservation of Storm King Mountain by defeating plans to build a hydroelectric power plant on the mountain, referred to as the "Scenic Hudson Case"; (2) protection of the shorelines of the Tappan Zee by defeating plans to build a superhighway ("expressway") in the river, referred to as the "Hudson River Expressway Case"; (3) protection of the Hudson River along the river shores in Manhattan by defeating another superhighway, referred to as the "Westway Case"; (4) remediation of polychlorinated biphenyl (PCBs) from the sediments of the Hudson, referred to as the "PCB Contamination Case"; and (5) the ongoing battle to require closure of Indian Point nuclear power plants after their initially designated "useful" life has ended, referred to as the "Indian Point Nuclear Power Plant Case."

A. Scenic Hudson Case

1. Introduction

Early in 1963, Consolidated Edison Company of New York (Con Edison) announced its plan to build a new power generating

station at Storm King Mountain on the Hudson River, just north of West Point.¹¹¹ Storm King is one of the most beautiful and dramatic sites along the Hudson, rising directly out of the river in a sheer wall of granite and rounding 500 feet above the water to reach 1500 feet at its peak.¹¹² Together with the equally dramatic Breakneck Ridge to the east, Storm King creates what was known as the northern gateway to the gorge of the Hudson Highlands. The area is invaluable for many reasons, among them because it is in this stretch of the river that the highly valued Hudson River striped bass have their principal spawning grounds.

But in 1963, Con Edison had a pressing power demand to meet. As the supplier of electricity to all five boroughs of New York City and most of Westchester County, its 8,000,000 customers were expanding their use of electricity by close to ten percent a year. Additionally, the electrical loads were uneven—extremely high during the heat of the day in the summer when air conditioners are on full blast, but only half of that in the nighttime hours.

The solution, in Con Edison's judgment, was the pumped storage hydroelectric plant it proposed for Storm King. It was no small proposal. Indeed, at the time, it would have been the largest pumped storage plant in the world, capable of generating 2,000,000 kilowatts of power at its maximum capacity, enough to meet the growing demand for power for six years.¹¹³ The plant was to consist of a powerhouse 800 feet long and more than 100 feet high carved into the base of Storm King Mountain, with a large gantry crane perched on the roof of facility.¹¹⁴ A huge reservoir was to be constructed by damming a valley behind the

111. *The Scenic Hudson Decision*, MARIST ENVTL. HISTORY PROJECT, <http://library.marist.edu/archives/mehp/scenicdecision.html> (last visited Oct. 11, 2013).

112. CHRISTOPHER BROOKS & CATHERINE BROOKS, 60 HIKES WITHIN 60 MILES: NEW YORK CITY 38 (2008).

113. THE HUDSON RIVER POWER PLANT SETTLEMENT: MATERIALS PREPARED FOR A CONFERENCE SPONSORED BY NEW YORK UNIVERSITY SCHOOL OF LAW AND THE NATURAL RESOURCES DEFENSE COUNCIL, INC. 31 (Ross Sandler & David Schoenbrod eds., 1981).

114. *Id.*

Mountain 1000 feet above the river. The powerhouse and upper reservoir would be connected by a two-mile long tunnel.¹¹⁵

During nighttime hours, when demand for electricity was low and the unused capacity of very efficient plants was available and cheap, water would be pumped from the Hudson River up the 1000 feet to the reservoir where it would be stored until electric demand started to grow rapidly with the daytime heat. The water would then be released to flow down through the tunnel and drive the generators in the powerhouse, producing up to 2,000,000 kilowatts of very expensive peaking power, to be delivered to New York City through a series of new transmission lines stretching for thirty miles.¹¹⁶ Because of gravity, it would take three kilowatts of electricity to pump the water up into the reservoir for every two kilowatts generated by the plant when the water was released. But the three kilowatts used to pump the water up were from efficient plants that otherwise were underutilized at night, whereas the two kilowatts returned were when demand was high and using other means to meet it was very costly. According to the utility, the economic benefits to its customers would be in the tens of millions of dollars every year as compared to meeting the demand in some other way. The profits to the company would be comparably large.

Con Edison's announcement of its Storm King plan set the stage for a struggle that many believe marked the beginning of modern environmental law in the United States. In the ethic of the times, the need for an increased energy supply was seldom called into doubt. It was central to a robust economy and a higher standard of living, but the times were changing. Concern over the despoiling of America's natural wonders was increasing, as exemplified by the successful fight the Sierra Club waged to keep new dams out of the Grand Canyon.¹¹⁷ President Lyndon Johnson was soon to promote his "Great Society" initiative with

115. *Id.* at 25.

116. *Id.*

117. See Sierra Club History of Accomplishments 1, available at <http://www.sierraclub.org/history/downloads/SCtimeline.pdf> (last visited Oct. 16, 2013).

its emphasis on the quality of life.¹¹⁸ At Storm King Mountain, one the most dramatic pieces of river scenery in the United States, a band of citizen stalwarts was about to take a stand that, in the end, not only preserved the extraordinary natural beauty of the Hudson Highlands, but also opened a new chapter in environmental protection. The story of how the citizen stalwarts managed to defeat this giant project is described in a subsequent section of the article. Suffice to say at this point, that after seven court decisions and an aborted start of construction, Con Edison finally faced the reality that the Storm King plant was unlikely to be built.

In 1979, Con Edison, Central Hudson Gas and Electric, Orange and Rockland Utilities, Niagara Mohawk Power, the Power Authority of N.Y. ("Enterprise"), Scenic Hudson, and the Hudson River Fishermen along with the Natural Resources Defense Council (NRDC) ("Third Parties") entered into a mediation process to try to resolve the Storm King case and another ongoing proceeding before the U.S. Environmental Protection Agency (EPA) intended to determine whether expensive cooling towers would have to be installed at three other Hudson River Power plants¹¹⁹ in order to protect the striped bass. Government, in the form of the Federal Power Commission (FPC), was joined at this juncture by other government actors including the EPA, representatives of the New York State Attorney General's Office, and the DEC.

In April 1979, in order to avoid a lengthy and contentious administrative battle, Russell Train, a former EPA Administrator, was contacted to act as a private mediator for the dispute.¹²⁰ Over the course of twenty-months, the parties participated in over twenty meetings as well as a series of technical meetings focused on biologic information.¹²¹ Described

118. See generally JOHN A. ANDREW, LYNDON JOHNSON AND THE GREAT SOCIETY (1988).

119. The power plants at issue included Indian Point Units two and three, Bowline Point, and Roseton.

120. Mr. Train was EPA Administrator from 1973-1977. *Chronology of EPA Administrators*, EPA (July 18, 2013), <http://www2.epa.gov/aboutepa/chronology-epa-administrators>.

121. Russell E. Train, *Remarks of Russell E. Train Before the Task Force on Environmental Disputes Center for Public Resources*, in THE HUDSON RIVER

by the New York Times as a “Peace Treaty for the Hudson,”¹²² an agreement between the parties was signed on December 20, 1980. In exchange for ending all litigation and to avoid constructing cooling towers, “Enterprise” agreed to the following: (1) Con Edison would surrender its license for the Storm King Plant and convey the property it owned on the Mountain to an Interstate Park Commission to be held forever as parkland; (2) the generating units at each power plant were required to install new pumps designed to minimize water withdrawals, screens on intake pipes to divert fish, and to schedule outages to accommodate fish spawning at nursery seasons; (3) the utilities were required to construct and operate a hatchery, to create a \$12 million endowment to fund mitigation research, and to conduct biological impact monitoring; (4) and for the next twenty-five years no utility would propose any new sites above the George Washington Bridge that did not include closed-cycle cooling.¹²³

At the time, the settlement represented the “largest and most complex set of environmental issues ever resolved through mediated negotiation.”¹²⁴ While the uniqueness of the circumstances that led to the Hudson River Power Plant Settlement should not be underestimated, the value of mediation as a means of resolving complex environmental concerns between disparate parties is real. Under the IPPEP Model this Settlement represents a perfect illustration of the balance of power necessary to achieving environmental protection. Train himself noted that the years of litigation and “battle fatigue” of the Storm King case opened up the possibility of a productive negotiation, but a viable compromise would not have otherwise been possible unless there was a “reasonable balance of power among the parties . . . [and where] potentially major

POWER PLANT SETTLEMENT: MATERIALS PREPARED FOR A CONFERENCE SPONSORED BY NEW YORK UNIVERSITY SCHOOL OF LAW AND THE NATURAL RESOURCES DEFENSE COUNCIL, INC. 16 (Ross Sandler & David Schoenbrod eds., 1981).

122. *A Peace Treaty for the Hudson*, N.Y. TIMES, Dec. 20, 1980.

123. *Introduction*, in THE HUDSON RIVER POWER PLANT SETTLEMENT: MATERIALS PREPARED FOR A CONFERENCE SPONSORED BY NEW YORK UNIVERSITY SCHOOL OF LAW AND THE NATURAL RESOURCES DEFENSE COUNCIL, INC. 1, 2-3 (Ross Sandler & David Schoenbrod eds., 1981) (noting that all the utilities except Niagara Mohawk agreed to this provision).

124. Train, *supra* note 121, at 17.

concession[s] . . . [could] be made on either side.”¹²⁵ Here, mediation offered an opportunity to resolve both economic and political differences between parties on the many issues dividing them. Unfortunately, there are not enough Russell Trains around who can get such disparate parties to even sit down together.

In the period from 1985 to 2000, the “Third Parties” continued to be the only actors to press for full environmental protection of Storm King Mountain. The IPPEP Model continued to hold insofar as the “Third Parties” were able to convince the courts that “Government” had violated the applicable law by refusing to reevaluate the fisheries impacts. More often than not, such cases are lost and, but for changes in the economics of the project, Storm King might be the site of an immense pumped storage hydroelectric plant today. Insofar as the model also comprehends actions outside the courts to try to influence public opinion and/or Government, it can be said to have fairly reflected the overall effort between 1985 and 2000. But in the end, it seems that the core issue is: who has the power subject to what limits, if any? The presence of “Third Parties” is clearly a significant plus. However, their effectiveness depends on the power of government (i.e., the legislature or its substitute) and/or the courts to allow them.

2. The Major Parties

Under the IPPEP Model, Con Edison was the “Enterprise.” Its role was to develop new power supplies, supposedly at the lowest cost to its customers to meet their perceived needs. Unspoken, but definitely in play, was its interest in maximizing profits for its management and shareholders.

In this case, the “Government” was the Federal Power Commission (FPC, now the Federal Energy Regulatory Commission). Established by Congress under the 1920 Federal Power Act, the FPC regulates the construction of power facilities on all navigable waters of the United States. Before any such plant can be built, a license is required from the FPC, with public hearings to precede any decision. The Hudson being “navigable,”

¹²⁵. *Id.*

Con Edison was thus required to apply for an FPC license for the Storm King plant, and an opportunity for the public to participate followed from that. The role of the FPC, in theory at least, was to determine where the “public interest” lay, taking account of the factors it was obligated to consider and weigh under the Federal Power Act and the evidence presented in the hearing process.

The “Third Parties” were represented most prominently and effectively by the Scenic Hudson Preservation Conference. However, over the seventeen years that the battle wore on, many other organizations, ranging from national groups, such as the Sierra Club and the National Audubon Society, to organizations with special interests, such as the Hudson River Fishermen’s Association and New York Citizens for Clean Air, to much more local groups, such as the Putnam County Historic Society, joined the “Third Parties.” Indeed, by the time the case ended, a number of governmental representatives, including the New York State Attorney General, the U.S. Department of the Interior, and even the staff of the FPC had adopted a “Third Parties” position. The role of the “Third Parties” in the Storm King case was to present evidence on the public interest in protecting the natural beauty of the Mountain and safeguarding the Hudson River striped bass fishery. In this role, they opposed “Enterprise” and sought to hold “Government” to its legal duties and persuade it that the public interest lay in denying an FPC license.

Included in the IPPEP Model, as a member of the “Third Parties,” is the judiciary—the courts. These included, most significantly, the United States Court of Appeals for the Second Circuit. However, judicial challenges to the Storm King project were also heard and decided at three levels of the New York State Court system and, in one instance, in the United States District Court for the Southern District of New York. The role of the courts was to determine whether “Government”—primarily the FPC, but in the State Court cases, the State Department of Environmental Conservation—had met their obligations under the applicable Federal and State statutes.

3. The Interactions of the Major Parties

In January 1963, Con Edison first applied for an FPC license for the Storm King project.¹²⁶ There were no organized “Third Parties” at the time. But, within two months, a group of citizens who were appalled by the rendering of the plant the company had released, that showed a huge cut into the side of the Mountain, organized themselves into Scenic Hudson Preservation Conference to oppose the Project. Thus simply—in a February 1963 meeting attended by only eight individuals—the “Third Parties” sector was born.¹²⁷

Scenic Hudson’s first initiative was to hire a public relations firm, which had great success in securing media support, including editorials in the New York Times, the New York Herald Tribune, and Life Magazine opposing the project. The group also staged dramatic events that gained wide media coverage, including a naval flotilla that sailed up the Hudson to Storm King Mountain and, dressing a few members in Revolutionary War uniforms, planted signs that said “*Dig They Shall Not.*”¹²⁸

When the FPC scheduled public hearings on the license application, as it was required to do, Scenic Hudson hired a former FPC commissioner as its attorney. They presented evidence on the natural beauty and historic importance of the Hudson Highlands and identified alternatives that, if contended, could meet New York City’s need for electricity without defacing Storm King Mountain. When the FPC hearing examiner paid little attention to that testimony, Scenic Hudson organized a State legislative hearing in late 1964, where it presented a far more detailed alternative plan. Additionally, they presented powerful evidence that the Hudson River striped bass had its primary spawning grounds at and around Storm King, and that the huge intake of water that the project would require could decimate that recreationally and commercially vital fishery.

126. *The Scenic Hudson Decision*, *supra* note 111.

127. Dale McKnight, *Scenic Hudson’s 50th Anniversary: A History and the 17-Year Battle to Preserve Storm King Mountain*, HUDSON VALLEY MAG. (Sept. 18, 2013), <http://www.hvmag.com/Hudson-Valley-Magazine/October-2013/Scenic-Hudsons-50th-Anniversary-A-History-and-the-17-Year-Battle-to-Preserve-Storm-King-Mountain/>.

128. *Dig They Must?*, NEWSWEEK, Dec. 21, 1964, at 67.

When the State Commission issued a report supporting the Scenic Hudson points, the group presented it to the FPC and asked for reconsideration. Finally, when the FPC issued a license for the project in March 1965, concluding that the plant would not have a significant adverse effect on the natural beauty of Storm King Mountain, Scenic Hudson raised the money to hire a distinguished attorney, Lloyd Garrison. Garrison was assisted by the prime author here, Albert Butzel, to appeal the decision to the United States Court of Appeals for the Second Circuit in New York.

The appeal did not directly challenge the FPC finding on scenic beauty because, under governing administrative law, courts were not able to substitute their judgment for an agency's where there was conflicting evidence in the record. But the beauty and historic character of the Highlands were held up as background for why the FPC should have entertained the further evidence on alternatives that would have kept Storm King Mountain unimpaired.¹²⁹ Scenic Hudson argued, and the Court of Appeals agreed, that the legal precedents required the Commission to consider alternatives that might be more in the public interest.¹³⁰ Here, the FPC's rejection of the new evidence Scenic Hudson had presented was clearly in derogation of its obligation, as was its refusal to hear further testimony on the dangers to the striped bass. The Federal Power Act specifically identified "recreational opportunities" as one of the factors the FPC had to consider in deciding whether or not to license a project, and the Commission itself had previously ruled that the protection of scenic beauty fell within this term.¹³¹ In failing to treat "the preservation of natural beauty and national historic shrines as primary concerns,"¹³² the Court of Appeals held that the FPC had failed to comply with its obligations under the Federal Power Act and set aside the license for the project. However, as the Second Circuit emphasized, the role of the court was not to judge the merits but rather to require the agency to

129. *Scenic Hudson Pres. Conference v. Fed. Power Comm'n*, 354 F.2d 608 (2d Cir. 1965).

130. *Id.* at 617-20.

131. *Id.* at 614.

132. *Id.* at 624.

comply with the statute. Accordingly, it remanded the case to the Commission for renewed public hearings.¹³³

The Court of Appeals' 1965 decision was the first judicial articulation of a heightened concern for environmental protection in the United States. While its promise has not been fulfilled in the way many had hoped, it remains an important example of how courts have the capacity to graft emerging social concerns onto tired thinking that, in this case, might have treated the Storm King controversy as a simple administrative review matter in which the courts are bound to defer to agency expertise. Because the Second Circuit did not treat the case in that way, and chose to emphasize in ringing terms the value of our great natural assets, the decision remains significant despite the failure of future courts to follow through. Of equal or greater importance, the Storm King decision is generally thought to be the source of the central requirement in the National Environmental Policy Act that all major Federal actions having a significant impact on the environment be evaluated in a "detailed statement" focusing on, among other things, the impacts of the proposed action and alternatives that might avoid them. NEPA, in turn, has been the essential foundation for thousands of legal challenges seeking to protect the environment.

The Storm King decision is also of great significance because it opened the courts to citizen suits to protect the environment. Before the decision, a citizen's standing (capacity) to bring lawsuits had generally required a direct economic interest in the outcome. When Scenic Hudson took its appeal, the FPC argued that it lacked such an interest and thus lacked "standing" to challenge the Commission decision.¹³⁴ The Court of Appeals found that under the Federal Power Act, the FPC was obligated to consider recreational concerns and scenic beauty in deciding whether or not to issue a license.¹³⁵ The Second Circuit held that this created both a duty on the part of the FPC, and a right of enforcement in those who participated in the hearings and showed through their activities that they had a special interest in

133. *Id.*

134. *Id.* at 615.

135. *Scenic Hudson Pres. Conference*, 354 F.2d at 614-16.

the resource in issue.¹³⁶ Scenic Hudson had shown this not only through its pursuit of the case as a “Third Party,” but also because of its members’ use of the area for hiking and other recreational activities. As later reinterpreted by the United States Supreme Court, this became the standard for standing in the thousands of NEPA and other judicial challenges that have helped create our current body of environmental law.

The 1965 decision did not, however, stop the project. To the contrary, after five years of renewed hearings, the FPC relicensed the pumped storage facility; and this time, in 1971, the Court of Appeals upheld the license in a 2-to-1 decision.¹³⁷ Despite this decision, the Storm King plant was never built, due very much to the persistence of Scenic Hudson and a change in the economics of the project. The start of construction was slowed by lawsuits in the State courts that took two years before the cases were dismissed. In 1973, when an analysis of fisheries impacts in hearings on other Hudson River power plants indicated that up to forty percent of the entire striped bass population might be destroyed by the Storm King plant alone, Scenic Hudson and the Hudson River Fishermen took another appeal to the Second Circuit.¹³⁸ This time, the FPC was ordered to reevaluate the fishery impacts and reconsider its licensing decision in light of the reevaluation. A month earlier, Con Edison had taken a few tentative steps to initiate construction of the project, but after the Court of Appeals decision, it stopped. A year later, the Court of Appeals enjoined further work pending the conclusion of the FPC reevaluation. That analysis was never completed, as Con Edison seemed in no rush to present its evidence, and work on the plant never resumed.

Several important points concerning this case should be kept in mind.

First, it was the judiciary that allowed the “Third Parties” to challenge the FPC decision in the courts. If the Second Circuit (and later the Supreme Court) had not found that the “Third

136. *Id.*

137. *Scenic Hudson Pres. Conference v. Fed. Power Comm’n*, 453 F.2d 463 (2d Cir. 1971).

138. *Hudson River Fishermen’s Ass’n v. Fed. Power Comm’n*, 498 F.2d 827 (2d Cir. 1974).

Parties” had the right (standing) to bring suit, there would have been no ability for the “Third Parties” to plead its case. This is a major problem in the United States because the courts at most levels have continuously been narrowing the qualifications for standing. If “Third Parties” are to have an effective role in the IPPEP Model, they must have the right to sue polluters and the government.

Second, to the extent that the right to participate as a “Third Party” in the judicial process is assured, the effectiveness of the participation still depends significantly on the law that the courts apply. As suggested above, the 1965 Scenic Hudson decision raised hopes that in environmental cases, the courts might be protective of the environmental interests and less deferential to “Government” (i.e., administrative agencies) and “Enterprise” than was the historical norm. With the passage of NEPA and early court decisions that followed, there was reason to be optimistic. But it has proved a false hope. In large part, courts have come to accord the same deference to agency decisions in cases affecting the environment as they do in other cases—i.e., great deference with little to no willingness to consider the substantive merits. This may be the outgrowth of the separation of powers in the United States, but it leaves “Government” ascendant; and since “Government” is often aligned with “Enterprise,” it largely undercuts “Third Parties” effectiveness.

This suggests that the IPPEP Model may need to input another factor or variable. If it is enough that the “Third Parties” be able to hold “Government” and “Enterprise” to the applicable law, then the model should work. If, however, the goal is to allow the “Third Parties” to have power beyond simply enforcing conformity with applicable law, then the effectiveness of the model will depend on (1) the breadth and specifics of the applicable statute or statutes and (2) how the courts interpret “conforming with the law.” In the United States, judicial interpretations are increasingly narrow, pro-enterprise and government, and do not strongly encourage NGO supervision.

There followed the mediation that resulted in Con Edison agreeing to abandon the plant as described above.

B. Hudson River Expressway Case

Governor Nelson Rockefeller decided to construct The Hudson River Expressway along the shore of Hudson River's Tappan Zee in Westchester County. It would have closed two village marinas, a bathing beach, disrupted the ecological conditions in the river, and cut off people from access to the shore of the river. Despite executive decisions that ordered the establishment of the expressway, it was never built. This account of why illustrates the IPPEP "Third Parties" analysis aptly.

The Hudson River Expressway (the "Expressway") case¹³⁹ remains one of the hallmarks of "Third Parties" success in protecting the environment despite the efforts of private enterprise and regulators to complete the roadway. Multiple actors were involved in the final outcome of this case, including the U.S. Congress through the efforts of Congressman Richard Ottinger, various nongovernmental organizations, local New York municipalities that would be impacted by the Expressway, state and federal government agencies, and private enterprise. The parties are detailed in the table below.

Group	Major Constitution
Governmental Agencies	U.S. Environmental Protection Agency New York State Department of Environmental Protection U.S. Army Corps of Engineers U.S. Department of Interior
Private Enterprise	While there was no private enterprise directly involved in the HRE project, private interests were indirectly involved. These include: The Rockefeller Family IBM

139. Unless otherwise noted, all information in this section derives from ALLAN R. TALBOT, *POWER ALONG THE HUDSON: THE STORM KING CASE AND THE BIRTH OF ENVIRONMENTALISM* (1st ed. 1972).

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Citizen Groups and Other “Third Parties”	Scenic Hudson ¹⁴⁰
	Sierra Club Hudson River Fishermen’s Association ¹⁴¹
Regulator & Courts	Citizens Committee of the Hudson Valley ¹⁴²
	Village of Tarrytown
	Congress
	New York State Department of Transportation Hudson River Valley Commission Federal and New York State Courts

The construction of additional highways near the Hudson was proposed as motor vehicles competed with railways and shipping in the late 1960’s,¹⁴³ due to the increased traffic congestion on existing roads in the greater New York City metropolitan area and affected portions of the Hudson Valley.¹⁴⁴ The Expressway was officially proposed as a solution to traffic congestion, but there are indications that private enterprises played an even stronger role in moving the project through the regulatory process. Governor Nelson Rockefeller sought construction of the Expressway as a means of diverting traffic away from roads such as the congested, historic Albany Post Road (NYS highway nine).¹⁴⁵ In addition, after the Expressway project had been proposed and the route determined, the

140. SCENIC HUDSON, *supra* note 57. Scenic Hudson is a non-profit organization dedicated to protecting and restoring the Hudson River and the Hudson River Valley.

141. HUDSON RIVER FISHERMEN’S ASSOC., <http://www.hrfanj.org/> (last visited Oct. 2, 2013). The Hudson River Fishermen’s Association is a non-profit recreational group that fishes the New York Bight and surrounding waters and is concerned with preservation of these fisheries.

142. The Citizens Committee for the Hudson River Valley is an unincorporated association of citizens who reside in the area of the proposed Expressway. *See* Citizens Comm. for Hudson Valley v. Volpe, 302 F. Supp. 1083 (S.D.N.Y. 1969), *aff’d sub nom.* Citizens Comm. for Hudson Val. v. Volpe, 425 F.2d 97 (2d Cir. 1970).

143. TALBOT, *supra* note 139, at 162.

144. *Id.* at 167.

145. *Id.*

Rockefeller family sold a portion of its land to the IBM Corporation, which constructed a corporate office building on the site. The parcel purchased by IBM was directly adjacent to the Expressway's proposed route, suggesting that both the Rockefellers and IBM shared an interest in the project's completion.¹⁴⁶

The Hudson River Valley Commission, which Governor Rockefeller had established in 1968 as a planning agency responsible for evaluating large developments in the Hudson Valley,¹⁴⁷ also strongly supported the Expressway. Other agencies and government entities involved in the project were the U.S. Army Corps of Engineers (the Corps), which is responsible for issuing dredge and fill permits, and the U.S. and New York State Departments of Transportation.

In harmony with the pressure applied by the Governor and private enterprise interests, the primary government agencies responsible for the Expressway's development reflected a bias toward the economic and political interests favoring the new highway. For example, rather than conducting its own review of risks posed to aquatic species in the portions of the Hudson River most likely to be impacted by the Expressway, the Department of Transportation simply relied on a memorandum prepared by a New York State Conservation Department fisheries biologist who had a mere three weeks to prepare his report.¹⁴⁸

The N.Y.S. Department of Transportation (NYSDOT) held public meetings on the Expressway project, which were attended by a staggering 1500 people from affected areas. While seventy-three people gave testimony during the meetings, only three were in support of the Hudson River Expressway, yet the NYSDOT ignored the overwhelming public opposition to the project and applied for the required Corps permit *the day* after the last meeting.¹⁴⁹ This incident is indicative of the NYSDOT's lack of regard for public participation in agency decision-making at the time. While the public was given an opportunity to attend meetings and give testimony, this participation was hardly

146. *Id.* at 173.

147. *Id.* at 161.

148. *Id.* at 175.

149. TALBOT, *supra* note 139, at 173.

meaningful considering that the agency moved forward with the permitting process without seriously considering the public's comments. In addition, this incident highlights the vital role that "Third Parties" play in ensuring that the environmental governance process adequately protects the Hudson River.

Recognizing the potentially severe impacts that the Expressway would have on the Hudson River's environmental, recreational, and scenic value, several nongovernmental organizations joined forces to oppose the project. NGOs such as Scenic Hudson, the Sierra Club, the Citizens Committee for the Hudson Valley, and the Hudson River Fishermen's Association identified a number of projected impacts, including the scenic impacts on Hudson-adjacent villages and the impact of placing fill in the river on aquatic life.¹⁵⁰ Additional concerns voiced by these and other organizations were the environmental impacts of proposed recreational parks that would be constructed along the Expressway,¹⁵¹ as well as the potential for silt deposits to interfere with the spawning runs of native fish.¹⁵² Further opposition to the project came from several municipalities located along the planned route, although not all municipalities were opposed to the Expressway—local interests dictated each municipality's response. For example, the Village of Tarrytown opposed the Expressway because construction would require a great deal of land acquisition along the proposed route, resulting in a loss of tax revenue to the Village. Conversely, the Town of Ossining was in favor of the Expressway, as it would reduce traffic in the area.¹⁵³

In response to the strong opposition mounted by these Third Parties, the Expressway's length was reduced¹⁵⁴. However, by shortening the road, the project's proponents ironically minimized their strongest point in favor of its construction—namely, its necessity for reducing traffic in the region,¹⁵⁵ thus further suggesting that interests other than traffic congestion were

150. *Id.* at 163.

151. *Id.* at 170.

152. *Id.* at 175.

153. *Id.* at 170.

154. *Id.* at 168-69.

155. TALBOT, *supra* note 139, at 169.

responsible for accelerating the Expressway. Ultimately, the New York State Legislature approved construction of the Hudson River Expressway in 1965,¹⁵⁶ and the State subsequently petitioned for and received the necessary dredge and fill permits from the Corps, with the approval of the Department of Interior¹⁵⁷. In response, several Third Parties—the Sierra Club, the Village of Tarrytown, which, as mentioned above, was opposed to the Expressway, and Citizens Committee of the Hudson Valley—filed for an injunction to prevent the Corps from giving the permit to New York State, and while the U.S. district court initially denied the plaintiffs’ motion, the Second Circuit Court of Appeals reversed the decision and ordered a trial on the issues.¹⁵⁸

Following attorney David Sive’s skillful examination of illegalities in the permitting process, the federal district court ruled in favor of the plaintiffs, finding that the Corps issued the dredge and fill permit to New York State in violation of the 1899 Rivers and Harbors Act which the plaintiffs successfully argued prohibited the Corps from building dikes in navigable rivers without the consent of Congress.¹⁵⁹ On appeal, the Second Circuit issued a decision extremely significant for the environmental community, as it not only upheld the district court’s ruling, but further expanded the scope of “Third Party” standing that was previously established in *Scenic Hudson Preservation Conference v. Federal Power Commission*.¹⁶⁰ Effectively, the court’s decision terminated the Hudson River Expressway project.

Undoubtedly, however, Congress also played an important role in derailing the Expressway proposal. Indeed, U.S. Representative Richard L. Ottinger worked actively to levy Congressional power against the project. Pursuant to his

156. *Id.* at 168.

157. *Id.* at 177.

158. *Id.*

159. *Id.* at 179. *See also* Citizens Comm. for Hudson Valley v. Volpe, 302 F. Supp. at 1083, 1083 (S.D.N.Y. 1969).

160. TALBOT, *supra* note 139, at 180-81. *See also* Citizens Comm. for Hudson Valley v. Volpe, 425 F.2d 97, 97 (2d Cir. 1970). For the *Scenic Hudson* decision, see *Scenic Hudson Pres. Conference v. Fed. Power Comm’n*, 354 F.2d 608 (2d Cir. 1965).

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recommendation, Representative John Dingell, Chair of the federal House Subcommittee on Fisheries and Wildlife conservation, convened a Congressional hearing on the Hudson River Expressway.¹⁶¹ The Committee was extremely critical of the agencies involved, finding that New York State and the Department of Interior gave only cursory reviews to the project proposal and its potential impacts to the region.¹⁶² Thus, in combination with the efforts of nongovernmental organizations, local municipalities, clear public opposition to the project, and the federal courts, “Third Parties” were able to preserve the environmental integrity of the Hudson River from the impacts of the proposed Expressway, a feat truly remarkable in light of the extremely powerful influence of private enterprise, Governor Rockefeller and government regulators in support of the project. In the absence of the “Third Parties” efforts, there is little doubt that the expressway would have been constructed.

C. Westway Case

Four decades ago, the Westway was abandoned after a fourteen-year seesaw battle. This event was marked as “one of the great citizen victories of our time”.¹⁶³ It is a good example of the essentiality of NGOs and the courts to achieving environmental protection in the face of opposition by the private sector and relevant government agencies.

161. TALBOT, *supra* note 139, at 181.

162. *Id.* at 181-82.

163. See Tom Robbins, *Westway, the Highway that Tried to Eat New York, Defeated 25 Years Ago this Week*, VILL. VOICE BLOG (Oct. 1, 2010, 8:10 AM), http://blogs.villagevoice.com/runninscared/2010/10/westway_the_hig.php.

1. Historical Background and Overview of Westway Case¹⁶⁴

The original West Side Highway (elevated way), from West 72nd Street south to Chambers Street in New York City, was constructed between 1927 and 1931. As time passed by, the decayed situation of the West Side Highway became serious. In order to tackle the challenge of excessive traffic as well as to satisfy conformance with a local development plan, New York City proposed building the “Wateredge” highway (the Westway) in 1971. A replacement highway was to be built on pilings and platforms in the area between the edge of land at the bulkhead line and the ends of the piers at the pier headline. The alternative adopted was the “Outboard Alternative,” which would have transformed the Hudson River waterfront to a great extent.

At the time, there were two opposite views on the Westway Project. The Government of New York City, the New York Chamber of Commerce and Industry, and several dozen groups representing business, shipping, building trades, theaters, trucking, business, and labor all held that the project was critical to the economic survival of Manhattan and to create job opportunities.¹⁶⁵ The outcry of opposition was from community, civic and environmental groups maintaining that the government’s decision “improperly favored development geared toward the car, not mass transit or the pedestrian”,¹⁶⁶ and would exacerbate air pollution and destroy important fishery habitat.¹⁶⁷

2. The Major Parties

Throughout the whole Westway Case, the following three groups of players interacted with each other:

164. The overview information is from the Westway Case record. See *Action for Rational Transit v. W. Side Highway Project* By Bridwell, 536 F. Supp. 1225 (S.D.N.Y. 1982), *aff’d*, 699 F.2d 614 (2d Cir. 1983), and *aff’d in part, rev’d in part sub nom. Sierra Club v. U.S. Army Corps of Engr’s*, 701 F.2d 1011 (2d Cir. 1983); *West Side (Joe Dimaggio) Highway – Historical Overview*, NYC ROADS, <http://www.nycroads.com/roads/west-side/> (last visited Oct. 3, 2013).

165. See Edward C. Burk, *Issue and Debate: The West Side Highway Project*, N.Y. TIMES, Feb. 3, 1975, at 25.

166. ROBERTA BRANDES GRATZ, *THE BATTLE FOR GOTHAM* 216 (2010).

167. Burk, *supra* note 165.

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Groups	Major Constitution
Governmental Agencies	Governor of New York State, Mayor of New York City, Federal Highway Administration (FHWA), the New York State Department of Transportation (NYSDOT), New York Department of Environmental Conservation (NYDEC), the Corps, U.S. Environmental Protection Agency (EPA), the United States Fish and Wildlife Service (FWS), the National Marine Fishery Service (NMFS)
Citizen Groups ¹⁶⁸	Sierra Club, the Hudson River Fishermen's Association, NYC Clean Air Campaign, the Hudson River Sloop Clearwater Inc., Committee for Better Transit, Inc., West 12th Street Block Association, Friends of The Earth, community boards, local politicians
Courts	The District Court for the Southern District of New York (The District Court), and the United States Court of Appeals for the Second Circuit (the Circuit Court)

The IPPEP Model ordinarily treats projects proposed by enterprises, regulated by government agencies, and held to conformance with environmental laws and regulations by NGOs and the courts. Westway, however, was a project proposed by the government, supported by private enterprise parties, and opposed successfully by NGO "Third Parties" through legal action in the courts.

168. *See* *Sierra Club v. U.S. Army Corps of Eng'rs*, 614 F. Supp. 1475 (S.D.N.Y. 1985).

3. The Interactions of the Major Parties

a. The Role and Regulatory Interaction of Governmental Agencies

Each agency listed in the above chart had a certain portion of power with regard to the Westway Project. Since the project was to be federally funded, it was under the jurisdiction of the Federal Highway Administration (FHWA). The State's interest in the conformance of the project with New York environmental laws was handled by the NYSDOT and NYSDEC. Also, "[t]he Governor and the Mayor of New York both had the political power to prevent the highway from being built, the Governor by withholding state matching funds and the Mayor by refusing to transfer the right of way to the state."¹⁶⁹

Apart from funding, the NYSDOT had to obtain a landfill permit, an air quality permit, and water quality permit for the Project. Due to the permit requirements, the administrative agencies were divided into two categories: applicants and issuers. The NYSDOT was the applicant, while the NYSDEC was both the air permit and water permit issuer, and the Corps was the landfill permit issuer. At this point, this subtle transition indicates that the role of government in the IPPEP Model could split into two opposite positions under this circumstance. On one hand, the issuers act as the traditional government image, which was "as trustee of a public trust for the benefit of the people" to minimize the damages brought by urban developments.¹⁷⁰ On the other hand, the applicant needs to obtain a legal right to "degrade" the environment within a certain scope through due process. In the Westway Case, the major interaction of these agencies lay on obtaining the landfill permit.

As the issuer, the Corps has four levels for permit review: the District Engineer, the Division, Chief of Engineers, and the

169. Daniel Ackman, *Highway to Nowhere: NEPA, Environmental Review and the Westway Case*, 21 COLUM. J.L. & SOC. PROBS. 325, 359 (1988).

170. *Colberg, Inc. v. State ex rel. Dep't of Pub. Works*, 432 P.2d 3, 8 (Cal. 1967).

Secretary of the Army.¹⁷¹ The Secretary of the Army is required to subject a proposed project to public interest review during the application process, specifically including protection of “fish and wildlife values.”¹⁷² Moreover, since the federal project may have “significant” effects on the environment, the Corps has an obligation to develop an independent Environmental Impact Statement (EIS) report under NEPA to make the decision.¹⁷³

Apart from the internal review, the Corps has an obligation to cooperate and consult with other administrative agencies to obtain further information to enable making a reasonable decision. The regulations demand that the Corps give full consideration to the views of the agencies such as the Fish and Wildlife Service (FWS) and the National Marine Fishery Service (NMFS) on fish and wildlife matters in deciding on the issuance, denial, or conditioning of individual or general permits.¹⁷⁴ The Corps also is required to comply with guidelines under section 404(b) of the Clean Water Act that were promulgated by EPA.

Notwithstanding, the Corps issued the permit without abiding by the above requirements. First, the Corps only relied upon the environmental assessment that was developed by the applicant (NYSDOT and the Federal Highway Administration) to make its permit decision rather than prepare its own EIS report.¹⁷⁵ Second, the Corps did not take other related agencies’ opinions seriously during the decision-making process. Before the application reached the level of the Secretary of the Army, NMFS, EPA and FWS wrote to the different levels of the Corps to express concerns, but the Corps still made its decision without addressing their concerns to issue the Westway landfill permit, even though the result of another independent study prepared by the firm of Lawler Matusky & Skelly (LMS Study) proved the correctness of these concerns and revealed that there was an

171. *Action for Rational Transit v. W. Side Highway Project By Bridwell*, 536 F. Supp. 1225, 1240 (S.D.N.Y. 1982).

172. *See* 33 C.F.R. § 320.4(a)(1) (2013).

173. *See* 42 U.S.C. § 4332(C) (2012).

174. *See* 33 C.F.R. § 320.4(c) (2013).

175. *See Action for Rational Transit*, 536 F. Supp. at 1236.

“astonishing amount of fish life in the interior area.”¹⁷⁶ The permit was issued anyway. Third, the Corps deviated from its duty to present facts and conclusions in support of issuing the landfill permit. There were substantive differences between the Draft Supplemental Environmental Impact Statement (DSEIS) and the Final Supplemental Environmental Impact Statement (FSEIS). The former showed that the candidate location for the Westway Project would bring adverse impacts to the striped bass, while “the conclusions in the FSEIS were virtually the opposite of those in the DSEIS”.¹⁷⁷ But the Corps did not provide a persuasive explanation for this obvious change that could affect the final permit decision.

The above demonstrates that the Corps, as the government issuer agency, failed to follow the statutory requirements for its review, particularly with respect to the environment. In theory, the explicit provisions of the statute could have helped the agencies themselves check and balance each other. But as a matter of fact, these agencies had their own interests, shared equal position levels, and they did not have the compulsory power to correct the other agencies even when they found out something was going wrong. The only remedy for these defects was for the interested “Third Parties” to take the Corps to the courts.

b. The Role and Regulatory Interaction of the “Third Parties”

To remedy the defects of such government failures, “Third Parties” can exercise close supervision of the governmental agencies as an external force. In the Westway Case, citizen groups strategically cooperated with the local communities of the Hudson River Basin to protect the fishery habitat. Furthermore, the citizen groups acted dynamically to bring lawsuits to supervise the government. The citizen groups also interacted with news media to advocate their viewpoints.

¹⁷⁶ EPA prevailed upon the Westway Project to make such study. *See id.* at 1242-43.

¹⁷⁷ *Sierra Club v. U.S. Army Corps of Eng'rs*, 614 F. Supp. 1475, 1496 (S.D.N.Y. 1985).

(i) Citizen Groups

Before the passage of National Environmental Policy Act (NEPA) and section 4(f) of the Department of Transportation Act, the process of weighing the costs and benefits of constructing a highway usually was not a matter of public debate.¹⁷⁸ Administrative agencies “made decisions about highway placement, location, scope, and type” with the scientific data provided by technical experts¹⁷⁹ and emphasized “[e]ngineering concerns and technical feasibility rather than human impact”.¹⁸⁰ With the public disclosure required by NEPA,¹⁸¹ the public has an opportunity to access the relevant information that might influence the final decision. Further, NGOs can sue to force the agencies to take required actions when they fail to comply with NEPA or other statutory requirements.

In the Westway Case, there were two types of citizen groups. One type was the community-based citizen groups that usually enjoy a high reputation among the local residents such as the Hudson River Fisherman’s Association that represents the fishermen as well as residents to fight for their interests. This group has “wider credibility and a connection with long-term community aspirations that give it special effectiveness in confronting polluters in the courts and the press and before political decision makers.”¹⁸² Based on the above advantages, the Fishermen’s Association easily detected the flaws with respect to fisheries and habitat which were a key to the permit decision. The other type of NGO consisted of national and regional citizen groups such as the Sierra Club. These broad-based NGOs were equipped with lawyers, experts and other valuable resources that community-based groups often lack. When the two types of citizen groups worked together, they could draw on the strong points of each other and offset their individual weaknesses.

178. Roger Nober, *Federal Highway and Environmental Litigation: Toward a Theory of Public Choice and Administrative Reaction*, 27 HARV. J. ON LEGIS. 229, 232 (1990).

179. *Id.* at 237.

180. *Id.*

181. 42 U.S.C. § 4332(C)(v) (2012).

182. JOHN CRONIN & ROBERT F. KENNEDY, JR., *THE RIVERKEEPERS* 170 (1997).

**(ii) Interaction between the Citizen Groups
and News Media**

News media have been a critical instrument for facilitating public participation for a long time because they provide a platform for common people to acquire useful information and to influence policy and the decision-making processes.

Surprisingly, the mainstream media showed a distant attitude to opinions that opposed the Westway Project. At the time of Westway decision-making, criticism of the proposed highway in the press was rare.¹⁸³ The *New York Times* reports on the Westway Project were based mostly on quotations by government and enterprise officials on the project's progress.¹⁸⁴ Although the *New York Times* did describe both views of proponents and opponents, it did not give a detailed explanation of the opponents' real concerns.¹⁸⁵ Some commentators wrote "occasional brilliant op-ed pieces" in the *New York Times*, "but they were lonely voices."¹⁸⁶ While there were some articles in specialty magazines and newspapers of local communities, "the mainstream press was less interested and less editorially supportive."¹⁸⁷

**(iii) Interaction Between the Citizen Groups
and the Courts**

The major source of United States' environmental law is federal law that often delegates authority to administrative agencies or the states to promulgate and enforce regulations. Citizen groups have a right to bring a lawsuit if an agency fails to fulfill legislative and regulatory requirements. Once judicial procedures are triggered, the courts provide a platform for

183. See GRATZ, *supra* note 166, at 211-26.

184. According to the archives information, from 1975-1986, *New York Times* from time to time reported the Westway Project. The peak time of the news load was in 1977 (152 new releases), 1978 (148 news releases), and 1981 (151 news releases).

185. See Burk, *supra* note 165, at 25. See also Edward C. Burk, *Westside Highway Plan Faces Hurdles that May Kill It*, N.Y. TIMES, July 15, 1975, at 37.

186. See GRATZ, *supra* note 166, at 327.

187. *Id.* at 212.

mutual interaction of different parties, including the court itself. The courts usually have the final say in litigated disputes about compliance with federal laws, though Congress has the ability, seldom used, to change the applicable laws.

“[O]ver the years, Congress has followed major court decisions closely in making amendments to federal environmental laws.”¹⁸⁸ Thus, courts have indirect impacts on making as well as enforcing environmental law. However, it is noted that, under the check-and-balance system, courts still show much respect to agency decisions.

In the Westway Case, a few citizen groups formed an alliance to oppose the Westway Project at every step in the licensing process. The first attempt was *Action for Rational Transit v. West Side Highway Project*,¹⁸⁹ which was brought by a consumer group with a claim that, the project had violated the State Implementation Plan (SIP) under the Clean Air Act, which allegedly served as a bar to federal funding of the Westway Project.¹⁹⁰ But the court found that the claim was moot. Apart from this, the Sierra Club had challenged that the Corps issued the landfill permit without an adequate and reasonable basis three times.¹⁹¹ The first lawsuit was dismissed as premature in 1979.¹⁹²

In the Westway Case, the main written records were the EIS reports. In the Sierra Club’s second suit, the federal Second Circuit Court of Appeals, affirming judgment by the district court, held that the Corps, the FHWA, and the NYSDOT had neither developed the FEIS report “in objective good faith” nor “were consonant with proper scope of review and proper view of

188. Patricia M. Wald, *The Role of the Judiciary in Environmental Protection*, 19 B.C. ENVTL. AFF. L. REV. 519, 520 (1992).

189. Technically speaking, it was the Sierra Club that brought the first lawsuit to challenge the Corps District Engineer’s rejection of its request for a Supplemental EIS in the Westway Case, but this lawsuit was dismissed as premature. See *Sierra Club v. U.S. Army Corps of Engr’s*, 701 F.2d 1011, 1024 (2d Cir. 1983).

190. See *Action for Rational Transit v. W. Side Highway Project by Bridwell*, 699 F.2d 614, 617 (2d Cir. 1983).

191. See *infra* note 290.

192. See *Sierra Club v. U.S. Army Corps of Eng’rs*, 481 F. Supp. 397, 398 (S.D.N.Y. 1979).

obligations” to consider the aquatic impact in the candidate location.¹⁹³ The Sierra Club’s goal was to stop the Westway Project by pushing the administrative agencies to collect and notice important information on the striped bass breeding area.

The court employed the “arbitrary and capricious” standard in the 1985 appeal. Under this standard, the court was only required to affirm the Corps’ permit issuance had “a rational basis” to reach the decision as presented.¹⁹⁴ Nevertheless, through comparing the DSEIS and FSEIS carefully, the court found that the Corps failed to provide a trustworthy and reasonable post-hoc analysis of the change “from ‘significant adverse impact’ [on striped bass habitat] in the DSEIS to the ‘minor impact’ in the FSEIS.”¹⁹⁵ Therefore, the court decided in favor of the plaintiff “Third Parties.”

It is also necessary to point out that the courts fully respect the agencies’ legitimate discretion, even though the courts act as a supervisor and adjudicator. Thus, the court remanded the permit matter to the Corps¹⁹⁶ and required the FHWA and the Corps “to make their own independent evaluations” of the fisheries in order to decide whether to issue the landfill permit.¹⁹⁷ As a result, the Westway project was dropped.

D. PCB Contamination Case

1. Background of the Hudson River PCB Case

The Hudson River is one of the largest Superfund sites in the United States.¹⁹⁸ Two hundred miles of the majestic river are classified by the U.S. Environmental Protection Agency (EPA) as a Superfund site due to contamination by polychlorinated biphenyls or PCBs. When all facets of the cleanup are completed,

193. *Sierra Club*, 701 F.2d at 1011.

194. *Sierra Club v. U.S. Army Corps of Eng’rs*, 772 F.2d 1043, 1050 (2d Cir. 1985).

195. *Id.* at 1055.

196. *Action for Rational Transit v. W. Side Highway Project By Bridwell*, 536 F. Supp. 1225, 1254 (S.D.N.Y. 1982).

197. *See Sierra Club*, 701 F.2d at 1048.

198. *Hudson River Cleanup, Hudson River PCBs Superfund Site*, EPA (Apr. 12, 2013), <http://epa.gov/hudson/cleanup.html#quest1>.

it may be one of the most expensive cleanups as well. Together with the New York State Department of Environmental Conservation (DEC), the EPA has taken vigorous and effective action to address the contamination and hold the liable party responsible for not only the cleanup but for the recovery of the governments' costs.

PCBs were widely used as a fire preventive and insulator in the manufacture of electrical devices, like transformers and capacitors, because of their ability to withstand exceptionally high temperatures. During a thirty-year period ending in 1977, when EPA banned the discharge of PCBs in United States waters under the Clean Water Act, approximately 1.3 million pounds of the chemicals was discharged into the Hudson River by the General Electric Company (GE). While production of PCBs ceased in 1977, PCBs continued to be discharged into the Hudson daily in plant cleanup water. These discharges, from the GE's capacitor manufacturing plants located in the towns of Fort Edward and Hudson Falls, New York, and became bound in the river sediments.¹⁹⁹ In 1973, the Fort Edward Dam was removed and two flood events in 1974 and 1976, significantly contaminated sediments were released down river. These release events and changing river levels revealed PCB remnant deposits in the riverbed. The manufacturing facilities, the remnant deposits, and other contaminated areas are subject to ongoing remediation.

a. Federal Authority to Remediate the River

In 1980, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) became law.²⁰⁰ The Act gave broad authority to the federal government (and state governments) to address releases or threatened releases of hazardous substances into the environment.²⁰¹ CERCLA also imposed a tax on regulated industry that collected

199. *Id.*

200. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675 (2012) (originally Pub. L. No. 96-510, 94 Stat. 2767 (1980)).

201. *CERCLA Overview*, EPA (Dec. 12, 2011), <http://www.epa.gov/superfund/policy/cercla.htm>.

about \$1.6 billion in its first five years, and was used to fund cleanups when potentially responsible parties (PRPs) were unwilling or unable to do so. Among its provisions were those that imposed liability for PRPs at hazardous waste sites, provided funding for cleanups, and imposed requirements for closed and/or abandoned hazardous waste sites. As a general rule, CERCLA and its regulations favor active remedies or treatments that “permanently and significantly reduce the volume, toxicity or mobility of hazardous substances.”²⁰²

In 1984, the river, between Hudson Falls in the north to the Battery in New York City, was placed on the United States’ list of most contaminated hazardous waste sites, known as the National Priorities List.²⁰³ The Hudson River site is divided into the Upper Hudson River (the length of river between Hudson Falls and the Federal Dam at Troy, New York) and the Lower Hudson River (the length of river between Federal Dam at Troy and the Battery). For purposes of the remediation, EPA further divided the Upper Hudson River area into three main sections known as River Section 1, 2, and 3. The site also includes five remnant deposits (the PCB contaminated sediment areas).²⁰⁴

b. The Decision Documents

In September 1984, EPA issued its first Record of Decision (ROD). The selected remedy called for the in-place containment of the remnant deposits, the evaluation of downstream domestic water quality at Waterford, New York, and an interim “No Action” determination as to the PCB contaminated river sediment. The 1984 ROD indicated that both the “No Action” decision for the river sediments and the containment remedy for the remnant deposits might be reexamined by EPA in the future. The containment remedy for the remnant deposits was performed by GE under a 1990 Consent Decree with EPA. “In addition, in 1990, NYSDEC completed the evaluation of downstream

202. 42 U.S.C. § 9621(b) (2012).

203. *Hudson River Cleanup*, *supra* note 198.

204. EPA, Hudson River PCBs Site New York, Record of Decision i (2002) [hereinafter Hudson River PCB ROD], available at <http://www.epa.gov/hudson/RecordofDecision-text.pdf>.

domestic water quality at Waterford, which concluded that PCB concentrations were below analytical detection limits after treatment and met standards applicable to public water supplies.”²⁰⁵

After much public and political pressure, in December 1989, EPA announced its decision to initiate a detailed Reassessment Remedial Investigation/Feasibility Study (RI/FS) of the September 1984 “No Action” decision.²⁰⁶ The decade following that decision witnessed one of the most expansive, emotionally-charged, and outrageously expensive public relations war ever waged over the cleanup of a site.²⁰⁷ GE, which was a PRP at dozens of contaminated sites across the country (including several other water bodies), argued vehemently that the river was in essence cleaning itself up.²⁰⁸ GE argued that any active remedy, such as dredging the river sediments (the presumed remedy), would only re-suspend the PCBs that had long fallen out of the water column and had been covered over with sediment.²⁰⁹

The environmental groups and a majority of the citizens countered that the evidence did not support GE’s position. They argued, in part, that the PCBs remained in the water column and in the biota, and due to the dynamic river flow and flood events, the contaminants were re-suspended with great frequency. The sediment sampling during the Reassessment demonstrated that most of the contaminated sediments were in “hot spots” situated in a forty-mile stretch of the river between the town of Fort Edward and the Troy Dam. The environmental advocates argued that those “hot spots” could be effectively removed, and thus, the bulk of the PCBs would be permanently removed from the river.²¹⁰

205. *Id.* at i-ii.

206. *Id.* at ii.

207. SHELDON KAMIENIECKI, CORPORATE AMERICA AND ENVIRONMENTAL POLICY: HOW OFTEN DOES BUSINESS GET ITS WAY? 145-50 (2006).

208. *Id.*

209. *Id.*

210. *Id.* at 145-46.

In December of 2000, EPA introduced its Proposed Plan for cleaning up PCB contaminated sediments in the Hudson River.²¹¹ EPA provided significant opportunities for public participation and comment both in the process leading up to this proposed plan and also during the extended public comment period following its release. The public process did not disappoint. Both supporters and opponents of the proposed remedy dramatically increased their advocacy advertising, public relations and lobbying campaigns.

In February 2002, EPA issued the current Record of Decision (2002 ROD), which selected the final cleanup plan for the Site. The 2002 ROD called for dredging 2.65 million cubic yards of contaminated sediment from a forty-mile stretch of the upper Hudson River which would remove an estimated 150,000 pounds of PCBs.²¹² The 2002 ROD contained performance standards for air quality and noise, consistent with state and federal law to minimize impacts to the surrounding communities during dredging.²¹³ Other important performance standards, including those for PCB re-suspension and production rates during dredging, were to be developed during the design phase. The 2002 ROD also required performance standards to be peer reviewed by a panel of independent scientists before they were applied to the cleanup.²¹⁴ In addition, the plan called for the development of a new community involvement program and extensive monitoring throughout the life of the project to evaluate whether the cleanup was achieving its intended environmental goals. All totaled, the initial cost of the remedy was estimated at approximately \$460 million,²¹⁵ but later swelled to an estimated \$700 million.²¹⁶

The EPA's 2002 ROD demonstrated considerable progress in its long-standing effort to address PCBs in the river. After

211. *Record of Decision (ROD) & Responsiveness Summary, Hudson River PCBs Superfund Site*, EPA, <http://www.epa.gov/hudson/rod.htm> (last visited Oct. 11, 2013).

212. Hudson River PCB ROD, *supra* note 204, at 60.

213. *Id.* at 95.

214. *Id.* at 96.

215. *Id.* at 98.

216. *Shareowner Proposal No. 3, 2005 Proxy Statement*, GE.COM, <http://www.ge.com/ar2004/proxy/prop03.jsp> (last visited Oct. 11, 2013).

issuance of the ROD, the focus quickly shifted to if and when GE would agree to implement the selected remedy. While EPA had the authority to order GE to undertake the cleanup, under CERCLA Section 106, such a course of action was not without risks. The preferred course here, as in all cases, was to achieve a consensual agreement for the cleanup.

In October 2005, EPA announced a judicial Consent Decree with GE. It required the company only to commit to conduct the first of two phases of the cleanup, which accounted for approximately ten percent of the site. Additionally, the Consent Decree weakened the cleanup standards in EPA's 2002 ROD.²¹⁷

From May to November 2009, Phase 1 of the project under the Consent Decree was conducted by GE with oversight by EPA. During this phase, approximately 283,000 cubic yards of PCB contaminated sediment was removed from a six-mile stretch of the Upper Hudson River. After an extensive evaluation by the required independent panel of scientists and input from a broad range of stakeholders, EPA developed plans for the second part of the cleanup.²¹⁸

In December 2010, after much discussion, negotiation and political pressure, GE agreed to undertake Phase 2 of the cleanup.²¹⁹ In June 2011, Phase 2 began addressing the removal

217. Press Release, NRDC, Council Lawsuit Seeks Crucial EPA Records on Hudson River PCB Cleanup Plan as Concerns Grow over Agency Retreat from GE Crackdown: With Important Decisions Nearing, Officials Withhold over a Thousand Documents (Apr. 6, 2006), <http://www.nrdc.org/media/pressreleases/060406.asp>.

218. *Hudson River Cleanup*, *supra* note 198.

219. Under the terms of the Consent Decree, following GE's completion of the Phase 1 dredging, the dredging was evaluated by an independent peer review panel. EPA was then required to consider the conclusions of the peer review panel and the public in order to determine whether any adjustments should be made to the performance standards. EPA was then to inform GE of any modifications to Phase 2 of the dredging program and GE was to have the option to agree to conduct Phase 2 of the dredging. If the company agreed to perform Phase 2, the work was to be carried out under the terms of the Consent Decree. If GE did not agree to conduct the Phase 2 dredging, EPA fully reserved all of its enforcement authorities, including its right to order the company to perform the dredging and/or sue in district court to require GE to perform the work or to reimburse EPA for its costs if EPA had to conduct the work using government funds. EPA, SETTLEMENT WITH GE ON HUDSON RIVER DREDGING FACTSHEET (Oct. 2005), *available at* http://www.epa.gov/hudson/consent_decree/2005factsheet.pdf.

of the remainder of the contaminated sediment targeted for dredging (approximately 2.4 million cubic yards of sediment). The second phase of the cleanup is estimated to take five to seven years to complete. At this point in the process, the dredging effort has proven to be quite successful.

2. The IPPEP Model and the Parties' Roles

The Hudson River PCB case is a complex case study due to the number of stakeholders, complex technical and logistical issues, the entrenched views of participants, the personalities and politics involved, and the amount of money at stake. A brief discussion of the major players and issues relevant to the IPPEP Model are addressed by this analysis.

a. Enterprise—General Electric Co.

Under the IPPEP Model, GE was the "Enterprise." As a public company its role was to develop and produce consumer products while maximizing profits for its shareholders. Obviously, GE would rather not have undertaken the required dredging. Not only would the dredging be very expensive, but a dredging remedy for this site would be a precedent for similar dredging remedies for other waterways, many of which contained GE's PCBs. GE's former CEO, Jack Welsh, negotiated a settlement with the state of New York in 1976, which he believed limited GE's responsibility for polluting the Hudson River to \$3 million.²²⁰ Welsh was not about to accede to undertaking what he may have genuinely believed was an unnecessary cleanup with an unprecedented price tag and a settled matter.

In response to the call for an active cleanup, GE mounted a high-profile political and public relations campaign to stop the dredging plan. GE spent millions of dollars on television commercials, newspaper ads, billboards, bus signs, newsletters, and web sites on what some had termed "the misinformation

220. BRADLEY K. GOOGINS ET AL., *BEYOND GOOD COMPANY: NEXT GENERATION CORPORATE CITIZENSHIP* 11 (2007).

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campaign of the century.”²²¹ The company²²² spent considerable resources lobbying government agencies, contributing to politicians to advance their message, and introducing certain “riders” to legislation to help further its cause. GE funded dredging opposition groups and began filing or supporting a number of lawsuits to either delay the cleanup or undercut the federal government’s ability to force a cleanup under Superfund.

b. Government—The Federal and State Players

This case study demonstrates the interplay between and the joint efforts of the federal and state governments in environmental remediation efforts. Multiple federal and state agencies played a part. On the issue of oversight of the Hudson River remediation effort, EPA is the lead agency for the Superfund site. The NYSDEC’s role involves addressing the remediation and cleanup of the PCB production facilities in the upper Hudson River valley. NYSDEC is actively contributing to the current Natural Resources Damages Assessment, as the State’s trustee of natural resources. The federal trustees of natural resources, the United States Department of Interior (Fish and Wildlife Service), and the United States Department of Commerce (National Oceanic and Atmospheric Administration) also play important roles in the Natural Resources Damages Assessment.²²³

(i) EPA—Encouraging Public Involvement throughout the Superfund Process

While the Superfund process offers many opportunities for interested citizens to participate in cleanup decisions, the level of public involvement in this contaminated site was unprecedented. Due to the high-profile nature of the case and number of affected communities, EPA created one of the most expansive, innovative,

221. *The Battle over Dredging*, RIVERKEEPER, <http://www.riverkeeper.org/campaigns/stop-polluters/pcbs/dredging-battle/> (last visited Oct. 3, 2013).

222. *Id.*

223. *Hudson River PCBs – Background and Site Information*, EPA, <http://www.epa.gov/udson/background.htm> (last visited Oct. 3, 2013).

and expensive community outreach programs in the history of the Superfund program to accommodate the ever-evolving dialogue.

The site's boundaries are lengthy, encompassing rural, suburban, and metropolitan areas in fourteen different counties in the State of New York, as well as portions of New Jersey. The expansive area draws on a large and diverse population for recreational, commercial, industrial, and cultural reasons. Needless to say, the cleanup of the site generated enormous public interest. EPA employed both customary and expanded approaches to provide the greatest opportunity for all interested parties to participate in the project. First, EPA provided for extensive community/public participation and kept citizens, government officials, environmental groups, and private interest groups aware of and updated on each step of the Reassessment process through personal communications, the distribution of fact sheets and press releases, and numerous public meetings. Also, a Technical Assistance Grant, which provides funding for activities to help the communities located along the Hudson River understand the technical details of the Reassessment and to participate in the decision-making process, was issued to the environmental group, Scenic Hudson. In addition, EPA established a comprehensive Community Interaction Program (CIP).²²⁴

EPA also established and maintained sixteen Information Repositories, located in public buildings from Glens Falls to New York City, and placed copies of the key reports into these repositories. Many of the reports were also available on the internet at EPA's website. EPA held more than seventy-five public meetings during the course of the Reassessment. The agency also responded to public comment on the Reassessment reports, established a peer review process for the Reassessment RI/FS Report in which panels of independent experts reviewed and commented on the reports, and made other reports and relevant materials available to the public in the Administrative Record File.

Additionally, due to several requests, the comment period was extended to allow more opportunity for input. During the

224. Hudson River PCB ROD, *supra* note 204, at 9.

comment period, a total of eleven well-attended public meetings were held to provide the public with information on the preferred remedy and receive feedback.²²⁵ By the end of the public comment period, nearly 73,000 separate individual comments had been submitted on the Proposed Plan. Similar comments were combined into 274 “master comments” in various topical areas capturing the significant issues raised by each of the comments. EPA responded to each master comment.²²⁶

EPA established a Hudson River Field Office in upstate New York with staff available to answer questions and provide information about the cleanup.²²⁷ Periodic meetings were held by EPA and/or GE to update the local community about cleanup progress. In addition, the Hudson River PCBs Site Community Advisory Group (CAG) hosted and still hosts open meetings several times a year to discuss issues related to the cleanup. EPA also maintains a comprehensive website and “Listserv” to help citizens stay abreast of the latest developments.

(ii) New York State Department of Environmental Conservation

In 1975, EPA responded to GE’s request for a Clean Water Act discharge permit by granting a permit, authorizing discharge of thirty pounds of PCBs per day, and requiring the New York State DEC to monitor compliance. Then later in 1975, despite the permit, DEC commenced an administrative proceeding against GE seeking to cease discharge of PCBs, to collect penalties, and to rehabilitate the PCB contaminated upper Hudson River. The case settled, requiring the company to cease discharging the chemicals, to build wastewater treatment

225. EPA initially scheduled a sixty-day public comment period as opposed to the typical thirty-day period. In January 2001, EPA extended the public comment period an additional sixty days, thus extending the public comment period to April 17, 2001. This extension thus gave the public a total of more than 120 days to give EPA its input and feedback on the proposed plan. It is also worth noting that approximately 5000 people attended the public meetings. *Id.* at 9.

226. *Record of Decision (ROD) & Responsiveness Summary, Hudson River PCBs Superfund Site*, EPA (May 10, 2012), <http://www.epa.gov/hudson/rod.htm>.

227. *Get Involved, Hudson River PCBs Superfund Site*, EPA (Apr. 30, 2013), <http://www.epa.gov/hudson/getinvolved.html>.

facilities at its two plants, and to contribute to a \$7 million effort for the investigation of PCBs and the development of methods to reduce or remove the threat of PCB contamination.²²⁸ In 1975, the New York State Department of Health began to issue health advisories recommending that people limit their consumption of fish from the Hudson River. In 1976, NYSDEC issued a ban on all fishing in the Upper Hudson River from Hudson Falls to the Federal Dam at Troy, due to the potential risks from consuming PCB-contaminated fish.²²⁹ The DEC is also addressing onsite contamination at the two GE manufacturing sites.

The Upper Hudson River region includes certain areas that have been and may continue to be sources of PCB contamination to the river, including GE's Hudson Falls plant and Fort Edward plant, and Remnant Deposits 1-5, which are areas of PCB contaminated sediment that became exposed after the river water level dropped following removal of the Fort Edward Dam in 1973. These source areas have been and/or are planned to be addressed by response actions by EPA, NYSDEC, and GE.²³⁰

**(iii) Natural Resource Damage Trustees /
Natural Resource Damage Assessment
(NRDA)**

The United States Department of Interior (Fish and Wildlife Service) and the United States Department of Commerce (National Oceanic and Atmospheric Administration) are federal trustees of natural resources.²³¹ The New York State trustee, the NYSDEC, and the federal Trustees work together in determining

228. The settlement required GE to make a \$3 million payment to New York to study PCB pollution and/or carryout rehabilitation measures, and to do \$1 million of internal environmentally oriented in-house research. Among other things, the State agreed to put \$3 million into the fund, to set up an Advisory Committee of independent experts, and to seek funding from other sources if rehabilitation was necessary. John E. Sanders, *PCB Pollution in the Upper Hudson River*, in NAT'L RESEARCH COUNCIL, *CONTAMINATED MARINE SEDIMENTS: ASSESSMENT AND REMEDIATION* 365, 375 (1989), available at http://www.nap.edu/openbook.php?record_id=1412&page=365.

229. Hudson River PCB ROD, *supra* note 204, at 4.

230. GRATZ, *supra* note 166, at 212.

231. *Natural Resource Damage Assessment, Hudson River PCBs Superfund Site*, EPA (May 10, 2012), http://www.epa.gov/hudson/natural_resources.html.

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how to compensate for losses caused by hazardous substances released into the environment, in this case the PCBs in the Hudson River south of the Town of Hudson Falls. In 1997, the Trustees determined that an assessment was necessary. The goal of the NRDA is to restore and enhance natural resources, preferably through restoration projects. The assessment process is a separate and parallel effort to the clean-up.²³² An assessment looks at both biota in the affected ecosystem, as well as direct chemical contamination of the physical environment. In the Hudson River, the effort leading to the assessment plan involved investigations into the health effects on fish, mink, otter and muskrats, birds, and snapping turtles. Floodplain soil and biota analyses were also conducted. The NRDA Damage Assessment Plan was released in September 2002.

c. “Third Parties”—Citizen Groups and the Judiciary

Under the IPPEP Model, “Third Parties” include environmental organizations, citizen groups, individual citizens in the river communities (including local politicians), and the judiciary. As the Hudson River stretches through a diverse range of communities and spans multiple political jurisdictions, many citizen groups, environmental groups, municipalities, and politicians took very active roles in the cleanup process.

(i) Citizen Groups and their Tools

(a) Dissemination of information through Public Relations and Media

Many regional environmental groups were forceful advocates for an active remedy for the river. The major groups included, among others, Riverkeeper (formerly the Hudson River Fishermen’s Association), Scenic Hudson, and Clearwater. Later in the process those organizations banded together with others and formed “Friends of a Clean Hudson Coalition,” which was comprised of ten regional environmental organizations and spoke

232. 43 C.F.R. § 11 (2013).

with one organized voice for the Hudson. Groups that did not favor an active remedy, such as Citizen Environmentalists Against Sludge Encapsulation (CEASE) and Farmers Against Irresponsible Remediation (FAIR), coordinated their public participation and legal efforts with GE and, at times, industry lobbying groups.

Over the decades it has taken to address the river contamination, organizations grew more organized, strategic, and effective. The groups adeptly used the media by drafting focused and well-timed press releases, op-ed pieces, and buying advertising in major papers to publicize the issues. Additionally, they organized protests and vigils. Groups made their case not only to the affected public and the governments, through letter-writing campaigns and appearing at public meetings, but also to GE's Board of Directors by purchasing just enough shares in the company to allow an individual to speak at the shareholder meetings. They produced fact sheets, bumper stickers, and created websites to further publicize their position and what they believed to be the inaccuracies in GE's work product. In addition to the massive and multifaceted public relations campaign, they employed a number of other tools including using laws to obtain government records and to bring their issues before the judiciary.

(b) Access to Information State and Federal Freedom to Access Information Laws

In 1966, the Freedom of Information Act (FOIA)²³³ amended the Administrative Procedure Act, providing a statutory basis for public access to government information. The FOIA statute establishes a presumption that all records of governmental agencies are accessible to the public unless they are specifically exempted from disclosure by FOIA or another statute. The principles of openness and accountability underlying FOIA are inherent in the democratic ideal: "The basic purpose of FOIA is to ensure an informed citizenry, vital to the functioning of a democratic society, needed to check against corruption and to

233. *See generally* 5 U.S.C. § 552 (2012).

hold the governors accountable to the governed.”²³⁴ The states have similar laws, which cover the release of documents by state agencies as well.²³⁵ Over the course of this matter, there were many FOIA requests for agency documents. The requests represent one of the most effective tools for public access to government documents.

(c) Environmental Citizen Suits

The major environmental statutes are carried out by the federal government or by state governments upon receiving authorization from EPA. In passing these statutes, Congress authorized citizen lawsuits to ensure that the environmental laws were enforced.²³⁶ These provisions exist in almost every major environmental law. Generally, if certain specified provisions of law are violated, and such violations are intermittent or recurring, citizens are authorized to act as private Attorney Generals by bringing an action to enforce the law in federal court.²³⁷ Citizen suits are meant to act as a supplement to government enforcement actions, not to replace government action. Thus, the suit must specify the precise violations of law and must provide notice, usually for sixty days, to the government agency, which is where the facility is located, and to the alleged violator.²³⁸ If the government has not commenced and is not diligently prosecuting a civil or criminal action within the sixty days, the citizen suit may proceed in federal court.²³⁹ If a party that brings the action substantially prevails in their case, the court is authorized to award that party court and attorney

234. Thomas M. Susman & David C. Vladek, ABA, Sec. on Admin. L. & Reg. Prac., Freedom of Information, Sunshine, Advisory Committees 1 (2001) (citing *NLRB v. Robbins Tire & Rubber Co.*, 437 U.S. 214, 242 (1978)).

235. See, e.g., N.Y. PUB. OFF. LAW § 87 (McKinney 2007).

236. The citizen suit provision of the Clean Water Act is found in § 505. 33 U.S.C. § 1365 (2012).

237. See generally *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167 (2000); *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found., Inc.*, 484 U.S. 49 (1987).

238. See 40 C.F.R. § 135.3 (2013); *Hudson Riverkeeper Fund, Inc. v. Putnam Hosp. Ctr., Inc.*, 891 F. Supp. 152 (S.D.N.Y. 1995).

239. 33 U.S.C. § 1365(b)(1)(B) (2012); *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 890 F. Supp. 470 (D.S.C. 1995).

fees.²⁴⁰ There have been many successful citizen suits since the inception of modern environmental law in the United States, and they have enforced the law or have required government to comply with specified statutory mandates.

In the case of the Hudson River, bringing a citizen suit because of PCB contamination would have been problematic. Under the Clean Water Act, the discharge of PCBs was permitted for less than a year and then discharge was prohibited by the NYSDEC and EPA. Although PCBs still managed to find ways into the Hudson River for some time, the government was actively involved in investigating and seeking ways to address those discharges as set forth in the 1975 DEC administrative settlement and by numerous actions thereafter. While CERCLA contains a citizen suit provision and PCBs are hazardous substances that could be addressed by the statute, such a lawsuit would have been of little assistance. As the site was being handled under the Superfund program, CERCLA § 113(h) essentially deprives the federal court of jurisdiction to review any challenges to a remedial action (i.e. the cleanup) except in a few limited circumstances.²⁴¹ None of those circumstances existed in this case.

(ii) The Judiciary

The judiciary's role figured prominently in this matter. Over the years, there have been numerous lawsuits by both "Third Parties" and GE (or GE-financed groups) and amicus ("friend of the court") briefs filed in related proceedings.

Before EPA issued the 2002 ROD, there were several lawsuits aimed at delaying the cleanup or preventing EPA from being able to order GE to undertake the work if the parties could not reach a consensual agreement. The most involved and high-profile case was a GE-led constitutional attack on EPA's authority to issue unilateral orders under CERCLA § 106. The case, which was originally brought in 2000, evolved into a "systemic" challenge, known as a "pattern and practice" challenge

240. *Farrar v. Hobby*, 506 U.S. 103, 123 (1992); *cf. Sierra Club v. Shell Oil Co.*, 817 F.2d 1169 (5th Cir. 1987).

241. 42 U.S.C. § 9613(h) (2012).

to the constitutionality of CERCLA since it did not challenge any particular cleanup but, instead, challenged the CERCLA statute and program as a whole. After nearly a decade of litigation and a massive national discovery effort, in June 2010 the D.C. circuit court rejected GE's constitutional challenge to EPA's statutory authority to issue, under CERCLA, administrative cleanup orders. In addition, the court found that the "pattern and practice" by which EPA implements its Unilateral Administrative Order program passes constitutional due process muster.²⁴² Not surprisingly, after its legal setbacks, on December 29, 2010, GE petitioned for certiorari to the U.S. Supreme Court. The United States filed papers in opposition to GE's certiorari petition and on June 6, 2011, the U.S. Supreme Court denied cert., thus ending the resource-intensive battle that spanned over a decade.

In July of 2001, a newly formed dredging opposition group called Farmers Against Irresponsible Remediation (FAIR) initiated another lawsuit against EPA alleging that the agency failed to disclose certain vital information it needed to participate meaningfully in the EPA's notice and commentary period. FAIR argued that EPA should have disclosed basic information regarding the locations of hazardous waste treatment plants, mines used to provide backfill material, and any highway and rail routes that might be used to implement its dredging decision. FAIR argued that the EPA's failure to disclose this information violated, *inter alia*, its First Amendment rights, various CERCLA provisions, the National Contingency Plan, and the National Environmental Policy Act. FAIR sought both a declaratory judgment from the court and a preliminary injunction preventing EPA from issuing a final Record of Decision.

FAIR argued, in part, that EPA should not issue a formal decision regarding the site until it disclosed this information and allowed the public to provide comments.²⁴³ In response, EPA filed a motion to dismiss, arguing, in part, that the court does not have subject matter jurisdiction over the causes of action in FAIR's complaint, related to its injunctive relief request, that these causes of action fail to state a claim upon which relief can

242. Gen. Elec. Co. v. Jackson, 610 F.3d 110 (D.C. Cir. 2010).

243. Farmers Against Irresponsible Remediation (FAIR) ex rel. Hanehan v. EPA, 165 F. Supp. 2d 253, 255-57 (N.D.N.Y. 2001).

be granted, and that FAIR was not entitled to the relief it seeks. The court agreed with EPA and concluded that it did not have subject matter jurisdiction over those portions of FAIR's complaint which underpinned its request for injunctive relief.²⁴⁴

The lawsuits did not end with the selection of the cleanup remedy in 2002. Two other lawsuits were filed against EPA over alleged improper withholding of documents concerning the details of the cleanup. In July 2002, the New York Public Interest Research Group (NYPIRG) sued EPA claiming that EPA had violated FOIA, 5 U.S.C. § 552(a)(4)(B), by withholding GE's submissions and internal notes and memoranda regarding the site. NYPIRG maintained that GE's submissions were not exempt as commercial and confidential information. NYPIRG also claimed that EPA's meeting notes and memoranda were not interagency or intra-agency communications or deliberations and, therefore, they were not exempt from FOIA.

In *New York Public Interest Research Group v. U.S. Environmental Protection Agency*, on March 10, 2003, a federal court ordered EPA to release to NYPIRG documents that were exchanged between GE, EPA, and the White House during EPA's original deliberations on whether or not to dredge the river.²⁴⁵ Later, in April 2006, NRDC filed suit asking a federal court to order EPA to release more than a thousand documents detailing the agency's plans for the cleanup. NRDC's concern was that EPA was replacing a scientifically sound protocol adopted with great fanfare in 2002 with a poorly crafted and significantly weaker substitute that could allow GE to foist a significant share of its cleanup costs onto taxpayers. At issue was information about EPA's then-proposed settlement with GE, which had been subject to widespread criticism by state officials, members of Congress, other federal agencies, and even some of EPA's own technical staff.²⁴⁶ The matter was settled by a Stipulation and

244. *Id.* at 257.

245. *New York Pub. Interest Research Grp. v. EPA*, 249 F. Supp. 2d 327 (S.D.N.Y. 2003).

246. Press Release, NRDC, Lawsuit Seeks Crucial EPA Records on Hudson Records on Hudson River PCB Cleanup Plan as Concerns Grow over Agency Retreat from GE Crackdown, <http://www.nrdc.org/media/pressreleases/060406.asp> (last visited Oct. 3, 2013).

Order (Stipulation) in September 2006. Through the Stipulation, EPA agreed to release certain records on a regular basis going forward, and further agreed to certain rules that would apply to FOIA requests submitted by Friends of a Clean Hudson for Hudson River records that are not automatically released under the Stipulation.²⁴⁷

Some upstate communities remained concerned about where certain facilities connected with the dredging effort would be located and sought to have a greater role in that process. Allowing the communities to participate in this process would certainly have delayed the construction of such facilities. The Town of Fort Edward (Town) appealed a judgment of the U.S. District Court for the Northern District of New York approving the 2005 consent decree between EPA and GE. The Town argued that a provision of the consent decree that exempted a sediment processing transfer facility from local permit requirements violated CERCLA § 121 and 40 C.F.R. § 300.400(3). The Town submitted that the district court erred as a matter of law in concluding that the facility qualifies as “onsite” for purposes of 40 C.F.R. § 300.400(e)(1). On January 3, 2008, the United States Court of Appeals for the Second Circuit issued a decision, affirming the district court’s decision to enter the consent decree.²⁴⁸ The court ruled that the consent decree does not violate CERCLA by exempting the processing facility from local permitting requirements.²⁴⁹

On February 25, 2009, several upstate governments sued EPA claiming that the protections provided for their water supplies during dredging were not sufficient, and demanding that GE and EPA provide and finance independent alternative water supplies for the entire period of dredging.²⁵⁰ The towns, which

247. Stipulation and Order, N.Y. Pub. Interest Research Grp. v. EPA, 06 CIV. 2676 (S.D.N.Y. Sept. 2006).

248. Town of Ft. Edward v. United States, No. 06-5535-CV, 2008 WL 45416, at *1 (2d Cir. Jan. 3, 2008).

249. *Id.* at *2.

250. The lawsuit was brought by the Village and Town of Stillwater, the Village and Town of Waterford, the Town of Halfmoon, the water commissioners in Waterford, and Saratoga County. Vill. of Stillwater v. Gen. Elec. Co., No. 09-CV-228 DNH DRH, 2010 WL 4025601 (N.D.N.Y. Oct. 13, 2010). *See also* Danielle Sanzone, *Hudson River Towns Sue to Delay PCB Dredging*, TROY REC.

draw their drinking water from the Hudson River, were concerned that PCBs would be stirred up by the dredging and would enter their water supplies. While the 2002 ROD included stringent measures to protect the water supplies, these governments did not feel that was sufficient. Anticipating ongoing concerns about the safety of drinking water supplies and a possible delay of the dredging, EPA decided to construct an alternate water supply connection to the towns as a contingency measure in the event that the dredging resulted in PCB levels that threatened the towns' water supplies. The 4.5 mile waterline was constructed in record time, through challenging weather and physical conditions, and at considerable expense. The issue over who should pay for the water and alternate water supplies continued after the case was settled.

As cleanup costs continue to escalate, not surprisingly, GE has focused its latest lawsuit on recouping some of its remediation costs from a company it believes is partially responsible for the cleanup costs. In April of this year GE sued National Grid, PLC ("National Grid"), an investor-owned utility company, in federal court seeking costs associated with the Hudson River cleanup.²⁵¹ National Grid had previously acquired Niagara Mohawk, the company GE believed should contribute to the cost of the cleanup since its removal of the Fort Edward Dam in 1973 caused GE's PCBs to contaminate the downstream portions of the river. National Grid has vowed to defend its position as the company did not use or dispose of the PCBs and it believes that its customers should not be required to help pay for the remediation.²⁵²

(Feb. 26, 2009), <http://www.troyrecord.com/articles/2009/02/26/news/doc49a61dce29f95885461631.txt>.

251. Chris Dolmetsch, *GE Sues National Grid for Payment of Hudson Dredging Cost*, BLOOMBERG NEWS (Apr. 30, 2013), <http://www.bloomberg.com/news/2013-04-30/general-electric-sues-niagara-mohawk-over-hudson-dredging-costs.html> (referencing the pending case as *Gen. Elec. Co. (GE) v. Niagara Mohawk Power Corp.*, No. 1:13-cv-00473 (N.D.N.Y. 2013)).

252. *Id.*

(iii) Others—Individual Citizens

The first public discussions about the extent of PCB contamination in United States waterways were started by private citizens. In a 1970 article in *Sports Illustrated* by Hudson River Fishermen's Association, Robert Boyle, an active and avid Hudson River fisherman, reported the results of testing of several fish for chemical contamination.²⁵³ Although the human health implications of PCB residues in fish consumed by humans was not fully understood at the time, the results showed that the highest residues of PCB in fish flesh were in Hudson River striped bass.²⁵⁴ By 1975, Boyle penned another article.²⁵⁵ At this time, more was known about the health implications of ingesting contaminated fish, the extent of the spread of PCBs through the ecosystem, and that PCB use was still widespread. Among other issues discussed in the 1975 article was the demand that the government act to protect citizens and address the ongoing contamination issue. Notable was that the PCB concerns that were being raised at that time resulted in the New York State government warning the public against eating striped bass. Over the past several decades, individual citizens have played an active role in the cleanup process.

3. Conclusion

The Hudson River case studies demonstrate the efficacy of the IPPEC model to address cases of widespread environmental contamination. The efforts to address and remediate the contamination in the river also demonstrate the United States federalism system at work. The process has involved all levels and branches of government—the legislative, executive, and judicial branches and the federal, state, and local governments. It also involved companies and citizens exercising their rights to

253. Robert H. Boyle, *My Struggle to Help the President*, *SPORTS ILLUSTRATED* (Feb. 16, 1970), <http://sportsillustrated.cnn.com/vault/article/magazine/MAG1083338/index.htm>.

254. *Id.*

255. See Robert H. Boyle, *The Spreading Menace of Pcb*, *SPORTS ILLUSTRATED* (Dec. 1, 1975), <http://sportsillustrated.cnn.com/vault/article/magazine/MAG1090530/index.htm>.

participate in the system of laws and regulations that will ultimately effectuate and authorize the remedial cleanup effort. Indeed, it was a private citizen that made the first efforts to identify and quantify the extent of the PCB contamination in an open and public way. Through the interplay of these three major participants—enterprise, government, and “Third Parties” (citizens and the judiciary) — a lengthy and complex remediation continues to advance.

In this case, government (legislature and executive branches), was the first line in enacting law authorizing the cleanup of environmental contamination and requiring those responsible to pay for their pollution and for natural resources restoration. Government (executive branch—EPA) was also the first major participant to advance formal remedial efforts. The government is legally obligated to protect the environment and the public health of its citizens. With significant environmental and public health implications and a price tag that could exceed \$1 billion, enterprise (the responsible party) and “Third Parties” (citizens and the judiciary) played critical roles as the investigation, analyses, and remediation efforts have spanned decades. This case study demonstrates the necessity of empowered citizens and an independent judiciary.

E. Indian Point Nuclear Power Plants Case²⁵⁶

1. A Brief Introduction

The Indian Point Energy Center (Indian Point) contains two active nuclear power plants and one deactivated plant all built by the Consolidated Edison Corporation (Con Edison). It is currently owned by the Entergy Corporation (Entergy). It is located in the Village of Buchanan, New York, some forty miles north of New York City. Indian Point has been in operation since the mid- to late-nineteen seventies.²⁵⁷ The plant’s two operating

256. The principal authors of this section are Professor Richard L. Ottinger and Radina Valova, in consultation with Professor Karl S. Coplan, Professor of Law and Co-director of the Pace Environmental Litigation Clinic.

257. *About Us*, INDIAN POINT ENERGY CENTER, <http://www.safesecurevital.com/about-us/> (last visited Oct. 3, 2013).

reactors, Units two and three, collectively have a capacity of over 2000 megawatts.²⁵⁸ Since its beginning, the plant used cooling water from the river, killing millions of fish as it sucked in millions of gallons of water at high pressure. These fish kills led to the Hudson River Fishermen's Association demanding measures to safeguard fish. When the screens installed to save fish failed to operate effectively, "Third Parties," including Riverkeeper and the Attorney General of the State of New York, have demanded that the power plants be closed after their initially authorized forty years of operation come to an end.

Indian Point is currently in the process of applying to renew its forty-year operating licenses for an additional twenty years under United States law governing nuclear power facilities.²⁵⁹ A heated public debate is underway regarding whether or not Units two and three should be permitted to continue operating. Public outcry against Indian Point has focused on environmental, safety, and since 9/11 in 2001, terrorism vulnerability concerns, while advocates for keeping the facilities point principally to its important contribution to providing electricity to the greater New York City area with almost no greenhouse gases emitted in its operation.²⁶⁰

2. The Major Parties in the Case

A number of players are involved in the license renewal process. The chart below summarizes the key entities. It is important to note that, while this section focuses primarily on environmental governance issues related to the relicensing of Indian Point's reactors, there are separate issues related to the permits required under various U.S. environmental laws for

258. *Indian Point Energy Center*, ENTERGY, http://www.entergy-nuclear.com/plant_information/indian_point.aspx (last visited Oct. 3, 2013).

259. The license for Unit two expires on September 29, 2013, and the license for Unit three expires on December 12, 2015. *Id.*

260. There are, however, substantial carbon dioxide emissions and other toxic chemical emissions in the mining and processing of uranium, a fact never mentioned by the industry and never recognized by the NRC. *See* NAT'L RESEARCH COUNCIL, URANIUM MINING IN VIRGINIA: SCIENTIFIC, TECHNICAL, ENVIRONMENTAL, HUMAN HEALTH AND SAFETY, AND REGULATORY ASPECTS OF URANIUM MINING AND PROCESSING IN VIRGINIA 123-77 (2012), *available at* http://www.nap.edu/catalog.php?record_id=13266.

ongoing operation of the plants. In the permitting context, there are additional players involved that are not direct participants in the relicensing process. These entities are included in the chart below indicated with an asterisk (*), and their involvement in protecting the Hudson River is briefly discussed below.

Group	Major Constitution
Governmental Agencies	Nuclear Regulatory Commission (NRC) Atomic Safety and Licensing Board, <i>part of the Nuclear Regulatory Commission</i> New York State Department of State U.S. Environmental Protection Agency* New York State Department of Environmental Protection*
Private Enterprise	Entergy Corporation
Citizen Groups	Riverkeeper, Inc. ²⁶¹ Hudson River Sloop Clearwater, Inc. ²⁶²
Regulator & Courts	Federal and New York State Courts

The above parties have sought to assert their influence over the relicensing process, either directly through participating in the relicensing hearings, or indirectly by seeking to influence public opinion. This results in a complex web of interactions in which the “Third Parties”—the entities involved other than the regulators (the Nuclear Regulatory Commission) and private

261. Riverkeeper is a member-supported watchdog organization dedicated to defending the Hudson River and its tributaries and protecting the drinking water supply of 9,000,000 New York City and Hudson Valley residents. *Our Story*, RIVERKEEPER, <http://www.riverkeeper.org/about-us/our-story/> (last visited Oct. 3, 2013).

262. Hudson River Sloop Clearwater, Inc. (Clearwater) is a member-supported, nonprofit organization with a mission to preserve and protect the Hudson River, its tributaries, and related bodies of water. *About*, CLEARWATER, <http://www.clearwater.org/about/> (last visited Oct. 3, 2013).

enterprise (Entergy Corporation)—are driving efforts to close the plants or, failing that, to ensure that all environmental and safety issues are addressed before a renewed license is issued.

3. The Interactions of the Major Parties

a. Overview of Nuclear Power Plant Relicensing and Role of the NRC

Regulation of nuclear power plants is split between states and the federal government. Authority to issue licenses rests with the NRC, while states retain control roughly over issues of power requirements, generation, rates, sale, and in-state transmission of nuclear-produced electricity.²⁶³ States also have the authority to regulate the environmental impacts of nuclear power plants through the Clean Air Act and the Clean Water Act.²⁶⁴

The controversy over the license renewal for the Vermont Yankee power plant, located in the State of Vermont (which is also owned by Entergy) presents an interesting example of the balance of power between states and the federal government in relicensing nuclear power plants. Vermont's General Assembly decided in 2006 to prohibit the renewal of Vermont Yankee's license without the Assembly's approval, and Entergy filed suit against the State of Vermont following passage of the act.²⁶⁵ While there is no appellate decision in this case, the trial court found in favor of Entergy, holding that the Vermont law was preempted by the licensing provisions of the Atomic Energy

263. Hope Babcock, *Can Vermont Put the Nuclear Genie Back in the Bottle?: A Test of Congressional Preemptive Power*, 39 *ECOLOGICAL L.Q.* 691, 704 (2012). See also *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983) (noting that “the federal government maintains complete control of the safety and ‘nuclear’ aspects of energy generation; the states exercise their traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like”).

264. Babcock, *supra* note 263, at 707.

265. *Id.* at 714-16.

Act.²⁶⁶ The case demonstrates the complex jurisdictional relationship between states and the federal government's authority over nuclear power plant licensing, as well as the judiciary's deference to the government regulatory agencies generally, and specifically as it relates here to nuclear power plant licensing proceedings.

Pursuant to the Atomic Energy Act,²⁶⁷ the Nuclear Regulatory Commission (NRC) is the agency responsible for issuing licenses to operators of nuclear power plants.²⁶⁸ The Atomic Safety and Licensing Board of the NRC conducts the licensing hearings.²⁶⁹ They act in this capacity as a quasi-judicial body, as the hearings include many features of court proceedings, including the filing of motions, the involvement of interveners, presenting of evidence, and a formal record appealable to the federal courts.²⁷⁰

Initial operating licenses are granted for a period of forty years,²⁷¹ after which operators may apply for renewed licenses running for periods of twenty years.²⁷² The purpose for restricting the duration of licenses rests, in part, on the need to ensure that nuclear power plants will not continue operating past the point at which they are no longer safe due to aging equipment.²⁷³ However, license renewal standards also explicitly incorporate environmental review, requiring that "any applicable requirements" of the NRC regulations implementing the National Environmental Policy Act (NEPA) be met.²⁷⁴ As such, license renewal focuses on two main issues: the continued safety of the power plant, and any environmental concerns identified through the environmental impact review process.

266. *Entergy Nuclear Vt. Yankee, LLC. v. Shumlin*, 838 F. Supp. 2d 183, 190 (D. Vt. 2012), *aff'd in part, rev'd in part*, 12-707-CV L, 2013 WL 4081696 (2d Cir. Aug. 14, 2013).

267. 42 U.S.C. §§ 2011-2296b-7 (2012).

268. *Id.* § 5842.

269. *Id.* § 2241.

270. *See generally*, 10 C.F.R. § 2(C) (2013).

271. 42 U.S.C. § 2133(c) (2012).

272. 10 C.F.R. § 54.31(b) (2013).

273. 10 C.F.R. § 54.29 (2013).

274. *Id.* The Nuclear Regulatory Commission's regulations implementing NEPA are found in 10 C.F.R. § 51 (2013).

Generally, there are only two parties directly involved in license renewal: the regulated entity and the NRC and its Atomic Safety and Licensing Board. However, under the NRC *Agency Rules of Practice and Procedure*, third parties may petition for intervenor status, which allows them to participate as full parties to the hearings, with the right to submit evidence and question witnesses.²⁷⁵ This procedural provision is the most critical tool that NGO and state “Third Parties” may use in ensuring a more transparent and thorough environmental governance process, if necessary through legal action in the courts. The section below will explore how third parties have thus far used the intervenor status petition as a tool for protecting the Hudson River in the Indian Point relicensing process.

b. “Third Parties” Participation in the Indian Point License Renewal Process

Environmental governance in the nuclear context is complicated by the fact that the regulating agencies, particularly the NRC, have effectively reduced the scope of public participation—whether by third parties, such as non-governmental organizations, or individual members of the public.²⁷⁶ As such, in regard to nuclear power plant licensing, there is an inherent conflict between the public’s interest in participating meaningfully in the process, and the Nuclear Regulatory Commission’s interest in maintaining greater control over the proceedings and the end result.

For example, the NRC often objects to having laypersons attend public hearings and submit comments on the grounds that they generally may lack technical knowledge regarding nuclear power and thus could serve only to delay proceedings without contributing any significant input particularly as relevant to the safety of the plants.²⁷⁷ In addition, the NRC has complicated the

275. See 10 C.F.R. § 2.309 (2013).

276. Anthony Z. Roisman, Erin P. Honaker, & Ethan Spaner, *Regulating Nuclear Power in the New Millennium (The Role of the Public)*, 26 PACE ENVTL. L. REV. 317, 318 (2009).

277. *Id.* at 322. However, note that these delays are not caused by the length of the hearings themselves, but by the length of time it takes the license

procedural requirements for the hearings themselves, which can further impede public participation.²⁷⁸ Collectively, these barriers to public participation in the licensing process highlight the importance of knowledgeable third parties, such as nongovernmental organizations and state entities. These parties include the New York State Department of State or the New York State Department of Environmental Conservation, which generally have greater technical and legal resources to surmount such hurdles.

While several nongovernmental organizations petitioned for intervenor status in the Indian Point license renewal hearings, only two NGO organizations and one New York State entity were granted such status – the New York State Department of State (DOS), acting as a representative of the State’s interests in the matter, Riverkeeper, and Hudson River Sloop Clearwater, both NGOs. Although state agencies and NGOs do not always take the same position on environmental issues, in the present case, the DOS, Riverkeeper, and Clearwater all generally opposed the continued operation of Indian Point for a variety of reasons, including safety and environmental concerns.²⁷⁹

The importance of third parties to the environmental governance process cannot be sufficiently emphasized. By participating in license renewal hearings as intervenors, third parties are able to bring issues to light that members of the general public, especially those persons who would potentially be impacted by the agency’s final decision would not be able to uncover or challenge on their own due to lack of resources and sometimes lack of technical knowledge. In addition, because the nuclear power enterprises applying for relicensing do not always

applicants to submit all required license application materials and for the NRC to review the documents.

278. *Id.* at 345.

279. The following organizations petitioned to intervene in December 2007: Westchester Citizen’s Awareness Network, the Rockland County Conservation Association, Public Health and Sustainable Energy, Sierra Club – Atlantic Chapter, and New York State Assemblyman Richard Brodsky. Their petitions were denied by the NRC in December 2008. *See* Entergy Nuclear Operations, Inc., Docket Nos. 50-247-LR, 50-286-LR, NRC CLI-08-29 (Dec. 9, 2008), available at <http://www.nrc.gov/reading-rm/doc-collections/commission/orders/2008/2008-29cli.pdf>.

submit all of the documents or information necessary for the NRC to make a truly informed decision, third parties have the power to compel the applicants to submit—and the NRC to consider—additional information not part of the original application. In so doing, it is somewhat more likely that the environment will be adequately protected.²⁸⁰

c. Other Forms of “Third Party” Participation

In addition to the direct participation of interveners, other third parties may attempt to influence proceedings through public outreach. As examples of the importance of such participation by third parties in the Indian Point proceedings, the Department of State (DOS) took issue with Entergy’s failure to comply with certain safety provisions in NRC regulations. More specifically, the DOS alleged in its petition to intervene that Entergy did not update its final safety analysis reports (FSAR) as required, which made it impossible to determine the safety of the plant.²⁸¹ Following up on this information, Riverkeeper and Clearwater filed a joint challenge to Entergy’s report on the environmental harms associated with spent fuel pool leaks, alleging that the report failed to adequately consider the environmental harms because, among other reasons, “Entergy and the NRC [had] failed to visually inspect nearly half the surface of the pool liner.”²⁸²

Non-intervener third parties also provide public education. For example, although not an intervener, the New York State Department of Environmental Conservation (NYSDEC) publicly expressed its opposition to relicensing, focusing on ensuring that

280. Roisman et al., *supra* note 276, at 322.

281. New York State Notice of Intention to Participate and Petition to Intervene and Supporting Declarations and Exhibits, Docket Nos. 50-247-LR, 50-286-LR, at 13 NRC (Nov. 30, 2007), *available at* <http://pbadupws.nrc.gov/docs/ML0734/ML073400205.pdf>.

282. Consolidated Contention of Petitioners Riverkeeper, Inc. (EC-3) and Hudson River Clearwater Sloop, Inc. (EC-1)- Spent Fuel Pool Leaks, Docket Nos. 50-247-LR, 50-286-LR, at 2 NRC (Aug. 21, 2008), *available at* <http://www.clearwater.org/wp-content/uploads/2011/12/Consolidated-Contention-on-Spent-Pool-Leaks-at-Indian-Point.pdf>.

certain critical issues not currently part of the relicensing process be considered, including:

- Two points on human safety: (a) Evacuation plans for the greater New York City metropolitan area, and (b) securing spent fuel against potential terrorist threats (incredibly excluded);
- Groundwater pollution and related health and safety concerns;
- Three points on harm to wildlife: (a) “Entrainment” of fish (a process by which fish are caught in the screens used to filter water from the Hudson River pumped into the plant for cooling and down), (b) heat shock to fish when heated cooling water is pumped back out into the river, and (c) threat to the short nose sturgeon, which is an endangered species found in the Hudson River.²⁸³

Furthermore, regulatory agencies may be involved in protecting the Hudson River in proceedings unrelated to relicensing. As noted above, nuclear power plants must comply with U.S. environmental regulations, such as those pertaining to waste disposal and air and water protection laws. The EPA and NYSDEC are both involved in ensuring that Indian Point complies with the permitting requirements of the various environmental laws. Acting in this capacity, the agencies play the role of regulators, and once again, nongovernmental organization third parties play a critical role in ensuring effective environmental governance. For example, Riverkeeper, Scenic Hudson, and the Natural Resources Defense Council were collectively granted full party status to a Clean Water Act permit hearing for Indian Point Units two and three.²⁸⁴ They also intervened in support of the NYSDEC’s denial of Entergy’s

283. *DEC Position on Indian Point Relicensing*, NY DEP’T ENVTL. CONSERVATION, <http://www.dec.ny.gov/permits/40237.html> (last visited Oct. 3, 2013).

284. Ruling on Proposed Issues for Adjudication and Petitions for Party Status, DEC Application Nos. 3-5522-00011/00030 (IP2), 3-5522-00105/00031 (IP3) NYSDEC (Dec. 13, 2010), *available at* http://www.dec.ny.gov/docs/legal_protection_pdf/indianir.pdf.

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application for a Clean Water Act Section 401 water quality certification.²⁸⁵

Finally, other federal agencies may be indirectly involved in relicensing through publication of their advisory opinions and reports. Most notably, the federal Government Accountability Office (GAO), which is responsible for “ensuring the accountability of the federal government,” recently published a report critical of the evacuation plans for nuclear power plants across the United States.²⁸⁶ More specifically, the report found that, while plant operators have evacuation plans in place for the areas immediately adjacent to their facilities, these plans generally do not take into account the problems that may arise if residents living just beyond these zones choose to flee the area and thus disrupt the planned evacuation process.²⁸⁷ The Nuclear Regulatory Commission disagreed with the GAO’s findings²⁸⁸ and Entergy has also stated that current evacuation plans are adequate.²⁸⁹ It remains to be seen whether the GAO’s report will be taken into consideration in the NRD’s final relicensing decision.

d. The Role of Economic Enterprise in Nuclear Power Plant License Renewals

Much has been said about the role of the regulating agencies and third parties in the nuclear power plant license renewal process, but the discussion of environmental governance of the Indian Point Energy Plant would be incomplete without a look at

285. Riverkeeper, Natural Resources Defense Council, and Scenic Hudson Petition for Full Party Status and Adjudicatory Hearing, DEC Application Nos. 3-5522-00011/00030 (IP2), 3-5522-00105/00031 (IP3) NYSDEC (July 10, 2010), *available at* <http://www.riverkeeper.org/wp-content/uploads/2010/07/RK-NRDC-SH-Petition-for-Full-Party-Status-Indian-Point-401-WQC-scanned.pdf>.

286. *About GAO*, GAO <http://www.gao.gov/about/index.html> (last visited Oct. 3, 2013).

287. GAO, EMERGENCY PREPAREDNESS: NRC NEEDS TO BETTER UNDERSTAND LIKELY PUBLIC RESPONSE TO RADIOLOGICAL INCIDENTS AT NUCLEAR POWER PLANTS 27 (2013), *available at* <http://www.gao.gov/products/GAO-13-243>.

288. *Id.*

289. Indian Point: Federal Report Says Fear May Clog Streets in Evacuation, Memorandum from Comm. on Appointments to the Board of Legislators (Apr. 15, 2013) (on file with the Westchester County Board of Legislators).

the role of Entergy Corporation as owner and operator of the plant. Perhaps the most important role played by private enterprise parties in licensing and relicensing processes is through the influence that they may bear on the regulating agencies. The NRC in particular has come under heavy criticism for permitting the nuclear industry to hold sway over its decision-making.²⁹⁰

Emphasis on the problems of such relations comes from the former chairman of the Nuclear Regulatory Commission, Dr. Gregory B. Jaczko. Dr. Jaczko resigned from his post in 2012 making public statements regarding the inadequacy of NRC's consideration of safety issues present at all nuclear power plants currently operating in the United States. Dr. Jaczko recommended that all reactors ultimately be phased out, citing serious safety concerns for plants operating for more than sixty years, and that some plants would not be able to safely operate even for that amount of time.²⁹¹ Notably, Dr. Jaczko came into the chairmanship *not* as a former industry insider, but from the fields of nuclear physics and policy, which led many industry members to view him "with skepticism and mistrust."²⁹² In fact, as the *New York Times* noted, "the nuclear industry had implicitly or explicitly supported every nomination to the commission until Gregory B. Jaczko's in 2005."²⁹³

Given the pressures applied to the Nuclear Regulatory Commission by the nuclear power industry, third parties are vital for ensuring proper environmental governance of natural resources such as the Hudson River. It is important to note that in the present case it may take years for the NRC to make a final decision regarding the relicensing of Indian Point Units two and

290. Tom Zeller, Jr., *Nuclear Agency Is Criticized as Too Close to Its Industry*, N.Y. TIMES (May 7, 2011), available at <http://www.nytimes.com/2011/05/08/business/energy-environment/08nrc.html?pagewanted=all>.

291. Matthew L. Wald, *Ex-Regulator Says Reactors are Flawed*, N.Y. TIMES (Apr. 8, 2013), available at http://www.nytimes.com/2013/04/09/us/ex-regulator-says-nuclear-reactors-in-united-states-are-flawed.html?_r=0.

292. John M. Broder, *Chairman of N.R.C. to Resign Under Fire*, N.Y. TIMES (May 21, 2012), available at <http://www.nytimes.com/2012/05/22/us/gregory-jaczko-to-resign-as-nrc-chairman-after-stormy-tenure.html>.

293. Zeller, Jr., *supra* note 290.

three.²⁹⁴ As such, the success of the third parties in blocking the company's license renewal application remains to be determined. It is uncertain in light of the industry's influence over the NRC, the deference that courts have paid to NRC decisions in particular and regulatory agency decisions in general, and the U.S. Supreme Court's apparent bias in favor of industry over the public interest in health, safety, and environmental protection.

The Indian Point controversy is an example of a regulator and an economic enterprise being so closely aligned in interest—keeping the power plants operating—that, with the influence of judicial deference to agency decisions, the “Third Parties” may have no effective legal recourse to secure the protection for the environment despite protections in law. Rather than order measures to better protect the environment, such as limiting fish mortality by ordering the use of recycled of cooling waters and putting an end to relying upon “once-through” cooling waters, the NRC defers to Entergy and “business as usual.” The legal process here is too weak and, as the IPPEP analysis would indicate, the environmental harm continues. Moreover, the amount of time and effort devoted to the controversy itself has wasted very large amounts of public resources.

Finally, the Indian Point case study is an example of an instance in which the third parties have not succeeded in protecting the public and the river so far and may not be able to do so at all.

F. A summary of IPPEP in the Five Case Studies of Hudson River Conservation

The following chart summarizes the interactions among the major parties in the five case studies.

²⁹⁴ Joseph de Avila, *Indian Point Hearings End*, WALL ST. J. (Dec. 14, 2012), *available at* <http://online.wsj.com/article/SB10001424127887324296604578179481637707850.html>.

**Major Parties and Their Roles
in Hudson River Conservation**

	Regulators	Enterprises	The Third Parties
Scenic Hudson Case	Federal Power Commission Inactive*	Consolidated Edison Company of New York Inactive	<ul style="list-style-type: none"> • Citizen Groups (i.e. Scenic Hudson) • News Media • The Court Active*
Hudson River Expressway Case	<ul style="list-style-type: none"> • U.S. Environmental Protection Agency • U.S. Army Corps • U.S. Department of Interior • The government of New York State Inactive	N/A	<ul style="list-style-type: none"> • Citizen Groups (i.e. Scenic Hudson) • The Court • The Congress Active
Westway Case	<ul style="list-style-type: none"> • The government of New York City • U.S. Army Corps Inactive	N/A	<ul style="list-style-type: none"> • Citizen Groups (i.e. the Sierra Club) • The Court • News Media Active Inactive

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<p>The PCB Contamination Case</p>	<ul style="list-style-type: none"> • U.S. Environmental Protection Agency • New York State Department of Environmental Conservation • U.S. Department of Interior • U.S. Department of Commerce <p>Active</p>	<p>General Electric Co.</p> <p>Inactive</p>	<ul style="list-style-type: none"> • Citizen Groups • News Media • The Court <p>Active</p>
<p>Indian Point Nuclear Power Plants Case</p>	<ul style="list-style-type: none"> • Nuclear Regulatory Commission (Inactive) • The New York State Department of State (Active) 	<p>Entergy Corporation</p> <p>Inactive</p>	<ul style="list-style-type: none"> • Citizen Group • News Media <p>Active</p>

*"Inactive" means inactive in environmental protection.
 "Active" means active in environmental protection.²⁹⁵

1. Post Script

The fight to protect the Hudson River continues.

On August 9, 2013, a New Jersey judge rejected lawsuit assertions by "Third Party" NGOs challenging Englewood Cliffs' variance allowing a 143-foot-high building in a zone with a 35-foot height limit. The court issued a ruling in favor of the international electronics manufacturer (LG), which plans to build its new headquarters tower over the historic Palisades Park. Scenic Hudson and the other public interest litigants have stated that they will appeal the decision stating that they remain

295. Wang Pianpian, Pace University (July 2013) (unpublished).

determined to persuade LG to bring the height of its building below the tree line.²⁹⁶

Two important newspapers, *The New Jersey Star Ledger* and the *New York Daily News*, have called for LG to lower the height of their proposed building, notwithstanding the court ruling. N.Y.S. Sen. Jeff Klein, U.S. Rep. Eliot Engel, and other elected officials joined Scenic Hudson and fellow members of *Protect the Palisades* at a press conference held in Riverdale, N.Y. to raise awareness about LG's plan and urge the company to revise the design of the building so that it doesn't mar the iconic Palisades landscape.²⁹⁷

The final result remains to be determined, but the struggle to preserve the Hudson goes on.

IV. THE FUNCTIONS OF IPPEP MODEL INDICATED BY THE CASE STUDIES²⁹⁸

The five case studies on Hudson River conservation indicate that the IPPEP Model can be a useful tool for understanding, assessing, and predicting environmental governance from a small community to a larger administrative region such as a county, a state or province, a country, or even globally.

A. Understanding Environmental Governance

Environmental law lawyers and scholars must understand and be able to describe correctly the process of environmental governance. As a conceptual and visual reflection of the process, the IPPEP Model, as its name (**I**nteractions of **P**arties in the

296. See Robin Pogrebin, *E.P.A. Backs Out of Role in Palisades LG Headquarters*, N.Y. TIMES (June 14, 2013), http://www.nytimes.com/2013/06/15/arts/epa-backs-out-of-role-in-palisades-project.html?_r=0.

297. Jeffrey D. Klein, *Standing Together for the Palisades: U.S. Congressman Eliot Engel, Senators Klein, Espaillat and Assemblyman Dinowitz Join NY and NJ Environmental Groups in Call for LG Electronics to Lower Planned Height of Building Headquarters in Englewood Cliffs, NJ*, N.Y. STATE SENATOR JEFFERY D. KLEIN (Aug. 16, 2013), <http://www.nysenate.gov/press-release/standing-together-palisades-us-congressman-eliot-engel-senators-klein-espaillat-and-as>.

298. The principle authors of this section are Professor Wang Xi, Professor Nicolas A. Robinson and Professor Richard L. Ottinger.

Process of Environmental Protection) suggests, is an important tool.

First, the model helps to identify the major parties or players in the political and legal process of environmental governance. Usually the first task in the process of environmental governance is identifying the major parties or players in the process. Only when the major parties are identified can the interactions among them be understood. In the case studies, as reported above, the authors use the triangle model to identify the major parties in order to gain a thorough and in-depth understanding of the political and legal process.

For example, in the Scenic Hudson Case, the authors identified the following parties:

- Consolidated Edison Company of New York (enterprise),
- Federal Power Commission (federal government),
- Scenic Hudson Preservation Conference and its allies (“Third Parties,” including Sierra Club, Audubon Society, Hudson River Fisherman’s Association, New York Citizens for Clean Air, Putnam County Historic Society, and New York State Attorney General Department of the Interior),
- U.S. Court of Appeals for the Second Circuit (one of the “Third Parties”),
- New York State Court and United State District Court for the Southern District of New York, and
- News media such as The New York Times, The New York Herald Tribune, and Life Magazine.

Similar roles are played by the parties in the other cases cited, except that in the Hudson Expressway and Westway cases, it was the governments that were the sponsors of the environmentally challenged projects rather than Enterprises. However, third parties, NGOs, and the courts played as vital a role as in the other cases.

As the case studies indicate, once the major parties or players in the political and legal process of Hudson River conservation are identified, a researcher usually connects and compares the major parties with their legitimate roles in the process to see how they play their roles.

For regulatory agencies, the researcher will examine how environmental law is implemented and enforced. In the Scenic Hudson Case, the Federal Power Commission (FPC) is the regulator. An environmental law researcher will examine how the FPC exercises its regulatory power with enough attention being given to the environmental value of the Hudson River. In the Indian Point case, the Nuclear Regulatory Commission is a very unreliable regulator but still is obliged by law to observe relevant environmental statutes.

For enterprises, the researcher will examine if they are under rigorous environmental regulation as required by law. In the Scenic Hudson Case, Consolidated Edison Company of New York is a powerful regulatee. This is similar to General Electric Company in the PCB case and the N.Y. State Governor in the Hudson Expressway case.

The Scenic Hudson case is a particularly strong example of how environmental governance is achieved through the interplay of the parties as indicated in the IPPEP model. It set the standards for the role of the courts in protection of the environment and the ability of environmental advocates to utilize the courts merely as users of environmental assets without having to demonstrate economic loss.

For the “Third Parties,” the researcher will exam how each of the “Third Parties,” such as Congress, citizens and environmental NGOs, courts, etc. play their roles at various levels. In the Scenic Hudson Case, the main “Third Parties” include Scenic Hudson Preservation Conference and supporting “Third Parties” (news media such as The New York Times, The New York Herald Tribune, and Life Magazine, the U.S. Department of Interior, and federal and state courts). As the case studies indicate, when all the “Third Parties” unite, they can be powerful too. They become a powerful force to supervise and correct the misconduct of both the governmental agencies and enterprises. It is interesting to see that in the Hudson River Expressway Case, where Congress could play a positive key role in protecting Hudson River.

In each case, it was the legislative authorization of citizen suits permitting NGOs to have access to the courts, the initiative of the “Third Parties” to hold Regulators and Enterprises responsible for compliance with environmental laws, and the

ability of an independent judiciary to hold polluters and regulators accountable, that were crucial to the environmental successes that were achieved.

Second, the IPPEP Model visually guides researchers to explore the political and legal relationships among the three major parties in the process. As the model indicates, the three sides of the triangle represent three legal relationships respectively.

Let us start from the bottom side of the triangle. It represents a relationship between regulators and regulatees. The relationship is environmental regulation. Taking the Scenic Hudson Case as an example, where the relationship is between FPC and Consolidated Edison Company, the FPC was supposed to be regulating Consolidated Edison Company (but failed to do so). In the Nuclear Power Plant case, the NRC was supposed to be regulating the Entergy enterprise (but failed to do so), etc.

The left side of the triangle represents a relation between the “Third Parties” (Supervisor) and the Government (Regulator and Regulatee). As the “Third Parties” have the right (for citizens and the environmental NGOs) and the power (for Congress and the Courts) to supervise the environmental regulation conducted by government, this relation can be called a relation of supervision. Usually, the “Third Parties” force government to rigorously implement and enforce environmental law against enterprises. In the Scenic Hudson Case, the “Third Parties” (including environmental NGOs, governmental agencies other than FPC, New Media and courts) were so powerful that they were able to force the FPC to respect environmental values and to take part in a mediation process. In the Expressway and Westway cases, it was the ability of “Third Parties” to force the government agencies to observe the laws.

The right side of the triangle represents a relationship between the “Third Parties” and Regulatee (Enterprise). It is another “supervisory relationship.” This supervision usually is conducted through news media and court proceedings. In the Scenic Hudson Case, the Scenic Hudson Preservation Conference and its allies struggled for a long time against FPC and Consolidated Edison Company through both news media and

court proceedings. In the PCB case, it was the “Third parties” against the powerful General Electric Company.

It is important to note that the relationship represented by the three sides of the triangle are mutually influencing. The IPPEP Model is an equilateral triangle, with each side the same length. A good IPPEP relationship will be achieved when all the three parties properly play their legitimate role in the environmental protection process. When all the parties are strictly in compliance with environmental law and all the related laws, they reach a balance in their rights and duties in environmental matters. At this moment, their relationship is just like the equilateral triangle, with all the three sides having the same length. This is the so-called “good IPPEP.”

The Westway Case can be taken as an example of the effective operation of the IPPEP relationships. As the case study report says in Part III.C.2 of this article, Westway was a project proposed by the government, supported by enterprise parties and opposed successfully by NGOs through legal action in the court.²⁹⁹ It is interesting to see that when the various governmental reviews and consultations (for example, a review by Secretary of the Army and consultation with FWS, NMFS and EPA) failed, it was the “Third Parties,” particularly the NGOs through the court proceedings, that stopped the project. Using the language of the IPPEP triangle, it is the strong left side (supervision relationship) that helped to strengthen the weakness of the bottom side (regulatory relationship).

Thirdly, the model helps a researcher to identify the legal framework under which the parties interact. The five case studies indicated that there are many environmental laws and related laws both at federal and state level involved in the political and legal process for Hudson River conservation. The federal environmental laws involved in the process are the National Environmental Policy Act (NEPA)³⁰⁰, the Clean Water Act,³⁰¹ the Marine Mammal Protection Act³⁰² and the Magnuson-Stevens Fishery Conservation and Management Reauthorization

299. See *supra* text Part III.C.2.

300. See NEPA, *supra* note 70.

301. See CWA, *supra* note 71.

302. See MMPA, *supra* note 72.

Act of 2006³⁰³, the Safe Drinking Water Act of 1974³⁰⁴, and the Atomic Energy Act of 1954.³⁰⁵ Similar New York State laws are involved in the process too.

Many related laws are involved in the process. The five case studies indicate that, in addition to the U.S. Constitution, The Federal Power Act of 1935, the federal Administrative Procedure Law, and other related state laws were involved in the process. All the related laws provide a legal foundation for their implementation to effectuate them for protection of the environment. Without the support of those laws, protection of the environment cannot operate properly. But without the action of the “Third Parties” in enforcing these laws, they would fail in their mission.

In the IPPEP Model, law is an inevitable background factor, although it is not explicitly shown in the triangle. It guides the relationships of the parties. As indicated by the five case studies, all the major parties in the Hudson River conservation process acted within a certain legal framework formed by the relevant laws. Law provides a legal framework for the process.

The IPPEP Model helps a researcher to observe the legal framework for environmental protection. For example, in the Scenic Hudson Case, the issue of standing was a key issue in the related litigation. This litigation resulted in progressive development of the rule on standing and made it more adapted to the need of contemporary environmental public interest litigation. It is interesting to see that in almost all of the five case studies, federal permits and related laws are at the center of the controversies.

Most importantly, the IPPEP model can help a researcher to identify loopholes in environmental laws and related laws. Such analyses and conclusions may help legislative bodies to improve environmental and related laws. As the interactions among the major parties in the five case studies show, almost all of the remedies reveal loopholes or problems in the legal framework.

303. See Magnuson-Stevens, *supra* note 73.

304. See SDWA, *supra* note 74.

305. See Atomic Energy Act, *supra* note 76.

Thus, legislative action is likely necessary in most, if not all, similar situations.

B. Assessing and Predicting Environmental Governance

The five case studies indicate that the IPPEP Model is useful for assessing and predicting environmental governance.

The IPPEP Model can be used to assess the soundness of environmental governance. To understand this function, based upon the five case studies, the authors developed a set of formula expressions of the IPPEP Model as seen in the following.³⁰⁶

$(-R) + (-E) + (NGO + J, \text{changing } R) = Q$ In the Storm King Case, the FPC (appears as “-R”) was obligated to consider recreational concerns and scenic beauty in deciding whether or not issue a license under the Federal Power Act, but it had failed to comply with its obligations. The NGO in this case is Scenic Hudson. It filed a lawsuit to the court to challenge the FPC’s decision and was upheld by the court. The significance of the Storm King decision lies in that it opened the courts to citizen suits to protect the environment. With a strong participation of environmental NGOs and a court decision in favor of environmental value, the regulator was forced to respect the environmental value.

$(-R) + (-E) + (NGO + C, \text{changing } R) = Q$ In the Hudson River Expressway Case, the Corps, as the primary representative of the government role (appears as “-R”), issued the dredge and fill permit to New York State in violation of the 1899 Rivers and Harbors Act. The Sierra Club and other citizen groups challenged the decision through a lawsuit. The federal district court ruled in favor of the plaintiffs and further expanded the scope of third-party standing that was previously established in the Storm King case.

306. The meanings of the capital letters in the formulae are the following: R: Strong environmental regulator; - R: Weak environmental regulator; - E: Polluting enterprise; J: Court in favor of environment; - J: Court not in favor of environment; - NGO: Ineffective NGO participation or no NGOs at all; G: Good environmental governance; - G: Poor environmental governance; C: Congressional action.

$R + (-E) + NGO + J = Q$ In the PCB Contamination Case, both the government and the “Third Parties” had shown concerns regarding environmental protection.

$(-R) + (-E) + (-NGO) = -Q$ In the Indian Point Nuclear Power Plant Case, the NRC (appears as a “-R”) has closely aligned with the nuclear power plant entity in interest and defers to “business as usual” rather than order measures to better protect the environment. Further, the NRC has complicated procedural requirements for the hearings to further impede public participation. As a result, only two NGO organizations and one New York State entity were granted such status for license renewal hearings. Also, inadequate legal resources and professional knowledge (particularly on the nuclear power plant) have limited the citizen groups’ overall participation (appears as “-NGO”).

$(-R) + (-E) + (NGO + J, \text{changing } R) = Q$ In the West Side Highway Case, the Corps (appears as “-R”) issued the permit without abiding by some administrative requirements. The Sierra Club, as the representative of citizen groups, invoked the judicial procedure and its challenge was upheld by the court. The Westway Project was stopped.

It is noted from the five case studies that federal and state regulatory agencies are often ineffective because the regulators appointed have not infrequently come from the industries being regulated or will return to be employed by those economic enterprises, often at high salaries after they leave government. This “revolving” door compromises the integrity of decision-making by regulators. For example, the Nuclear Regulatory Commission never has required that a nuclear power plant be shut down despite egregious safety problems.

“Third Parties” play a key role in safeguarding good environmental governance. The environmental NGOs and those they represent, together with their access to scientific information about environmental problems, or their direct experience with pollution or other environmental degradation, prompt them to demand effective compliance with environmental laws and regulations. The NGOs, such as Scenic Hudson, can petition legislatures to hold public hearings investigating environmental problems. In addition, NGOs can bring lawsuits

to the courts to invoke judicial oversight. These actions prompt or force appropriate action. They can require the regulator to do its assigned job and break the de facto control that economic enterprises exercise over the regulators. Often local governments, such as towns or villages, can provide needed resources to help protect their residents and the local environment, much like an NGO. However, sometimes they will take parochial views such as at Indian Point where the village of Buchanan wishes to keep jobs for local power plant workers.

It should be pointed out that the courts are not uniformly in favor of protecting the environment. The courts, instead, are focused on ensuring that regulators and economic enterprises obey the law. Their role is to ensure that the rule of law is followed. Thus, when NGOs show that the laws to protect the environment are being violated, the courts may enforce the laws. This results in the environment being protected, as in the case of the Hudson River Expressway and Westway projects. However, when the law leaves discretion to the regulator, and clear violations of the law are hard to identify, the courts are likely to defer to the decisions of the regulator. This occurs even when the regulator and the economic enterprise appear to be closely aligned, as in the case of the Indian Point Power Plant controversy. Similarly, even though governments and GE sought to overturn the EPA decision requiring clean-up of the PCB contamination in the upper Hudson River, the courts deferred to the EPA decision, which resulted in the upholding of environmental protection.

The legislative body, in particular Congress, often can play a key role, whether positive or negative, in the political and legal processes of environmental protection. For example, Congress can use its investigatory powers to require the disclosure of scientific information and to overcome the deficiencies of the regulatory authorities or the misconduct by economic enterprises, as in the Hudson River Expressway case. Such legislative oversight either may stimulate the regulators to act with integrity to enforce environmental law, or stimulate Congress itself to act to amend environmental statutes to either strengthen or weaken their environmental protection provisions in ways that the regulator and economic enterprise must obey. The power is

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significant, and includes making it easier or harder for NGOs to go to the courts to seek judicial enforcement.

V. CONCLUSIONS³⁰⁷

Based upon the Hudson River case studies, the authors developed the following general formula expression of the IPPEP Model.³⁰⁸ It provides environmental law scholars with a well-reasoned tool with which to assess environmental governance in a given part of the world.

A Formula Expression of the IPPEP Model

1. $(R) + (-E) = G$	R: Strong environmental regulator
2. $(-R) + (-E) = (-G)$	- R: Weak environmental regulator
3. $(-R) + (-E) + (NGO, \text{changing } R) = G$	- E: Polluting enterprise
4. $(-R) + (-E) + (NGO + J, \text{changing } R) = G$	J: Court in favor of environment
5. $(-R) + (-E) + (-NGO) + (-J) = -G$	- J: Court not in favor of environment
6. $(-R) + (-E) + NGO + C (\text{changing } R \text{ or law}) = G$	- NGO: Ineffective NGO participation or no NGOs at all
	G: Good environmental governance
	- G: Poor environmental governance
	C: Environmental Congress

In closing, it may be asked whether the Hudson is exceptional and not really characteristic. Will IPPEP work in other settings as well, to explain and help predict the outcomes of environmental protection controversies?

However important the Hudson may be in inspiring the conservation movement in the United States and the roots of

307. The principal author of this section is Professor Nicholas A. Robinson.

308. These formulas were jointly designed by Nicholas Robinson (Pace U., USA), Wang Xi (SJTU, CN), Richard Ottinger (Pace U., USA), and Wang Pianpian (Pace U., USA) in July 2013.

environmental sensibilities, ethics, and law, it is evident that the IPPEP Model can work in any geographic setting where humans and nature interact. It is also an analytic tool that works at all scales, from small governments to large ones, from central governments to a federal one, and without regard for the political form of government. IPPEP is a tool to study how human society organizes itself to protect nature, to prevent the exploitation of nature to benefit a few at the expense of the many who may rely on nature. The Hudson River offers much to help test IPPEP because it has a long history of well-documented environmental controversies upon which to draw. The Bibliography below will enable scholars to study the Hudson in greater detail.

What does the IPPEP Model and these case studies tell us about how to better secure compliance with environmental law? An orderly economy and peaceful society requires that humans maintain a fair and equitable balance between their socio-economic behavior and the ecological systems of the natural world. Acting to the contrary, however, can have profound and potentially irreversible consequences. The International Union for the Conservation of Nature (IUCN) expressed this vision as a “just world that values and conserves nature.”³⁰⁹ The IPPEP Model and the formulae describing its application can be employed to give analytic rigor to assessing whether a local place is attaining the IUCN vision, or if it is failing to do so. Over time, IPPEP will doubtless be refined and enhanced, but as an early application of this analytic tool, New York’s Hudson River Valley case studies offer ample examples of how IPPEP can effectively assess very different sorts of environmental issues.

309. *About*, IUCN (July 10, 2013), <https://www.iucn.org/about/>.