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Environmental Refugees, Hidden costs of Development and Ecological Terrorism in Ecuador

[Monsur Khan]



Professor Chapman
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Research Project



Environmental Refugees, Hidden costs of Development and Ecological Terrorism in Ecuador

“Poisoned is the earth that inters or deters us. There is no air, only despair; no breeze, only sleaze. No rain, except acid rain. No parks, just parking lots. No partners, only partnerships. Companies instead of nations. Consumers instead of citizens. Agglomerations instead of cities. No people, only audiences. No relations, except public relations. No visions, just televisions. To praise a flower, say: “It looks plastic...”

-- “View of Dusk at the End of the Century, Eduardo Galeano, 1998

The natural environments and people of Latin America have suffered from centuries of blatant exploitation at the hands of foreign and internal imperialists, and this still continues today. The South continues to be raped and pillaged by the North in the name of progress and development. In the name of maximum production, minimum costs, open markets and high profits. It is no longer the white European Spaniard, Dutchman, Portuguese or Englishman doing the raping and pillaging, or motivation for tobacco and slaves. It is the white businessman in a suit from the North, from the United States and Europe doing the raping and pillaging for the oil fields using slave wages.

The organization of industries in the developing nations can have profound negative effects on members of society and the environment. Foreign investment can provide jobs for the local population and spur economic development it can cause new social problems and develop environmental hazards for the population as well as the species that inhabit the country. A perfect example of this is the environmental hazards in

Ecuador associated with the dumping of oil by Texaco. The main purpose of this paper is to evaluate the cost of development in Ecuador associated with dumping of oil. I will approach the economic, social, political, and environmental implications of the oil industry in Ecuador so that the readers will attain a more thorough understanding of the situation in Ecuador.

It is also crucial to take into account and recognize the innocent populations who are displaced by such actions stemming not only from natural environmental disasters but also human produced environmental calamities thereby leading to a grave new catastrophe, environmental refugees. Environmental refugees are populations forced to abandon their homelands because of environmental destruction, (all in the name of “progress and economic development”) such as desertification, deforestation, etc, which fall under the sponsorship of Texaco and similar corporations all over the world.

Diversity in Ecuador

Ecuador is a small country compared to other Latin American country; it is 283,560 sq. km and located in the tropical Andes of South America. Its territory can be divided into four distinct regions: the Amazon, the Andes, the Pacific Coast, and the Galapagos Islands. It contains within its boundaries fourteen indigenous nationalities. The eastern half of Ecuador contain the earth’s largest and most biodiverse rainforest and watershed; the Amazon basin. Further Northwest is the southern part of the Chocophytogeographic region that even though smaller than the Amazon contains similar species. The Galapagos Islands are famous because this is where Darwin formulated his famous theory and for its unique biology and inherent beauty. The Humboldt Current

that runs off Ecuador's Pacific Coast helps to generate one of the world's most biologically productive ecosystems. The North-South direction of the Ecuadorian Andes two parallel ranges cuts through the tropics helping to create different climates. It varies by altitude and ranges from tropical, subtropical, temperate, and arctic alpine. This intertwining results in a variety of habitats that explain its concentration of species. The two places where the Andes Mountains physically separate the Amazon and Choco floristic regions are considered to be the two of the world's most biodiverse areas. Even though Ecuador occupies only .2 percent of the Earth's land surface it contains 10% of known plant species. This is the greatest number per unit area of any country on this planet. Ecuador ranks also third in the number of amphibian species, fourth in birds, fifth in monkeys, fourth in reptiles, and sixth in the number of mammals.

Demographics of Ecuador

Ecuador's demographics are "typical" of other Latin American nations; Ecuador is a very diverse country containing Mestizos, which make up over 60% of the population, Amerindians, which make up over 25% of the population with the Creoles which make up 7%. The remaining 3% constitutes the small minority of Afro-Ecuadorians, including Zambos and Mulattos. Ecuador's population as of July 2003 is 13,710,234. Its per capita income is an estimated \$4,300. The main languages spoken in Ecuador are Spanish and many types of Amerindian languages such as Quechua. Ecuador's main religion is Roman Catholic. One of the most important criteria and necessity of any developing country is the education of its people. Unfortunately, Ecuador falls behind on this. According to Ecuadorian law, each child is permitted nine years of required education, but most only attend 6 out of those 9 years. In the sierra

(populated mostly by indigenous people) the drop out rate in primary education is high and not many students move on to secondary schooling. This is due to the poverty surrounding many indigenous families, the cost of registration, uniforms and school materials that are too costly. The same can be said for the Afro-Ecuadorian population, according to UNICEF, “Poverty and a lack of universal coverage in education services in Ecuador have led to a stagnating level of education and early child development. There is little access to organized early childhood development services: government-assisted ECD programs cover only 8.4 per cent of eligible children, and others are often left in the care of siblings and neighbors. From 1990 to 2001, the net primary school enrollment rate stagnated at around 90 per cent. Boys and girls have equal access to education, but indigenous and Afro-Ecuadorian children do not; 90 per cent of them live in poverty and only 39 per cent complete primary school (compared to 76 per cent of children from other groups).”¹ Today, Ecuador spends only 3% of its GDP towards education.²

Ecuador’s infant mortality rate is a regrettable 25 deaths per 1,000 births. This stems from the huge gap between classes in Ecuador, which is the same throughout all of Latin America. The disparity between rich and poor is reflective in Ecuador’s healthcare. Most of doctors and hospitals are located in major cities such as Quito and Guayaquil. In the two biggest cities of Ecuador, private doctors are common as in the inland; Sierra, Amazonia, Oriente. State hospitals are commonly found but lack doctors, medical

¹ http://www.unicef.org/ecuador/01_2_2_1i.html, “*PROGRAMME 1: Intercultural Education for All Programme*”

² hdr.undp.org/statistics/data/cty/cty_f_ECU.html, “*United Nations Human Development Report, 2004*”

supplies and potable water. The life expectancy rate in Ecuador for the total population is 72 years.

Half of Ecuador's 13 million citizens are of mestizo descendants. The mestizos live in villages on the Andes and are called chagras or "cowboys." On the coast of Ecuador, "la costa," Afro-Ecuadorians make up a strong part of the costal population. They are descendants of slaves who were brought to Ecuador in the beginning of the 18th century to work the in the plantations in the coastal area. Most slaves were typical used in the gold mines and utilized also as domestic servants. The majority of the black population in Ecuador is still tied to their "owners" by a system of dependency. Today, Afro-Ecuadorians make up about 1 million of the population and their quality of life is horrible.

Environmental Consequences Attributed to Development

Today, developing nations face a serious dilemma, which may affect the future generations of their respective country. In an effort to catch up with the modern world, developing nations and their governments have pursued economic development through unsustainable practices. The exploitation of the environment has caused serious ecological damages that developing nations may never recover from. This destruction of the natural world has resulted in the loss of biodiversity and habitat for wildlife. Five years after the Rio Summit (1992), the United Nations called for another meeting to evaluate the impact of the summit. In those five years, a total of 250,000 plants and animals have vanished of the face of this earth, 1.3 billion people lack food or proper homes, and 25,000 people die daily from drinking contaminated water thanks to chemical poisons and industrial waste.

The landowning system in Ecuador based upon the monopolizing of land was created in the Andean region at the end of the 18th century. This system created by landowners who removed the indigenous population and forced them into agricultural labor. The organization of production under this system continued until the middle of the present century at which the landowners introduced some modernization innovations and techniques. The reform process that was established during the 1960's and 1970's created new capitalistic relations that were based on the continued control of the most fertile and productive lands. Large farms that were larger than 200 hectares made up only 2 percent of the agricultural sector but controlled 38 percent of the cultivated land. Farms of less than 5 hectares made up 66 percent of the agricultural sector and occupied only 6 percent of the cultivated land. Agricultural reforms in Ecuador redistributed only marginal lands to the peasants. The reforms main goal was to evict the population that had been sustained on the farms before capitalist forms of production began. As a result peasant's loss access to resources such as forests, pastures, and irrigation water that were now under the control of the large farms.³

Small farmers were forced to overexploit the marginal lands in the high and irregular topographical zones and use primitive agricultural technology which was further distorted by the introduction of some modern technology such as machinery, pesticides, fertilizers and GMO's. Fifty percent of the land in the Andean region became seriously eroded as a result of this exploitation of marginal land. Agricultural production in the

³ Roos, William and Omer van Renterghem, Ecuador. New York: Interlink Books, 2000.

coastal region had certain characteristics because of the export orientation imposed by the international standard of division of labor. The Guayas River valley was placed under a plantation system and specialized production of crops began on land, which was controlled by a few landowners. This stimulated the expansion of the agricultural frontier but extensive zones of tropical rainforest and great biological diversity were lost as a result. Agricultural modernization aimed at the exploitation of resources faster than the natural ecosystem can restore it led to grave negative implications.

Biodiversity became modified causing the alteration of nutrients circulating in the ecosystems. The cost of agricultural production as a result increased, diminished profitability, and its surplus were transferred to industry. Agricultural producers lost control of their farms and come to rely on new technologies that became too complex for them to control. For example the use of pesticides, measures were taken to control pesticides in 1985. Twenty-five of the most toxic chemicals were prohibited; however pressures from transnational corporations and local groups resulted in the restriction to be eased. An increase in 500 percent of imported pesticides resulted according to the Ministry of Finance. Pesticide residues have been found in hydrographic basins and in food that exceeded the maximum amount permitted. This caused serious health problems for the people of Ecuador and its wild life.⁴

⁴ Shafik, Nemat. "Economic Development and Environmental Quality",

Oxford Economic Papers, 1994, 46, pp. 757-773.

Industrial modernization in Ecuador dates back to the 1970's when it was stimulated by an increase in revenue from petroleum and an aim of import substitution. Industrial modernization employed an obsolete and polluting technology in two areas, the capital Quito and Ecuador's largest city of Guayaquil. The consequences were it did not successfully replace imports, absorb the labor force that was displaced by changes in agriculture, and it did not successfully compete in the international markets. Industrial development was undertaken without any regard for its possible effects on the environment and public health. There was no interest in establishing mechanisms to prevent, monitor, or control toxins. Air pollution attributed to industrial growth and increased use of automobiles reached dangerous levels. Air contaminated by sulfur dioxide, lead, and air-born particulates has exceeded official standards. Industrial development in Ecuador created the illusion that it would create high levels of employment.

Rapid migration took place from rural to urban areas causing the urban population to grow from 28 percent in 1950 to 55 percent in 1990. The process of industrialization and urbanization has increased spatial and social inequalities, affected services and infrastructure, and contributed to increased impoverishment and deterioration of living standards for a great percentage of the population. During the petroleum "bonanza" of the 1970s some investment occurred in the construction of roads and basic sanitation but during the 1980's and 1990's investment has lagged behind population growth. The proportion of the population with access to potable water increased from 47.3 percent in 1981 to 54.5 percent in 1990 but the proportion with access to sewers declined from 47.3

percent to 30.3 percent during the same period. It is reported that in 1990 only 36 percent of the rural population had access to potable water and only 13 percent had access to sewer systems.

The population without access to public potable water in 1990 reached 36 percent in Guayaquil, 16 percent in Quito, and 11 percent in Portoviejo. The inadequate facilities for the storage of water in poor neighborhoods created optimum conditions for the development and reproduction of pathogens such as viruses, bacteria, fungi, parasites, and mosquitoes that transmit disease. Over 90 percent of the hydrographic basins of the country demonstrate high bacteriological contamination, 50 percent show clear physical deterioration, and 30 percent reveal high organic contamination. This aggravated poverty and reduced the supply of basic necessities for life. Continued migration to urban areas and population increases will only increase sanitation and health problems.⁵

Environmental Racism

The disregard of Ecuador's own citizens to accommodate foreign markets and tourism is something that practically all third world nations are guilty of, especially when it comes to the environment. There is a major problem of internal colonialism and white racism not only in Ecuador but all over Latin America (I can even go as far as to say all over the world). The history of racism is well grounded in the historical roots as institutional racism has shaped the political, economic, and ecological landscape, and reinforced the total exploitation of people and land. This method or structure has allowed communities of color in Ecuador (native indigenous populations) to exist as internal

⁵ Smil, Vaclav. Global Ecology. London: Routledge, 1993.

colonies forcing them to be dependent towards the white-European plutocracy of Ecuador and the foreign companies that exploit the native land. It is quite a simple concept to understand, the dominant whites exploit developing nations and harm indigenous groups receive many benefits from displacing indigenous groups or polluting their land. They gain profits, while people of color bear most if not all the cost.

Racism does play a very key role in environmental decision-making and planning and it is also, unfortunately reinforced by government, political, economic, legal and military institutions. After all, what is the real reason why the United States decided to place a military base in Manta, Ecuador? The base was created in Ecuador the same year Ecuador “dollarized.” If that is not the building of an empire then what is? This is surely not to fight “the war on drugs,” as the drug trade (underground economy) fuels the economy of the United States. Just as “Plan Colombia,” is not to fight “the war on drugs” but “Plan Colombia” is purely military aid given to the right-wing paramilitary trained by U.S. marines to keep the Marxist Guerillas from blowing up BP’s pipelines to protect BP’s profits and the consumption by the developed nations. Just to make a brief correlation to the United States, look towards the Native-American reservations, they face some of the worst environmental devastation in our nation. The most polluted urban communities are those with crumbling infrastructure, ongoing economic disinvestment, deteriorating housing, inadequate schools, chronic unemployment, a high poverty rate, and an overloaded health-care system. Riot-torn South Central Los Angeles typifies this urban neglect. It is not surprising that the “dirtiest” zip code in California belongs to the

mostly African-American and Latino neighborhood in that part of the city.⁶ I make this correlation to the United States because in order to understand the global ecological crisis, it is very key and important to understand that the poisoning of African-Americans in South Central L.A. and the Mexicans in border sweatshops, “maquiladoras”. They all are connected in the roots of the same system of economic exploitation, racial oppression, and devaluation of human life. Today more than 1,900 maquiladoras, assembly plants operated by American and Japanese, and other countries are located along the 2,000-mile U.S.-Mexico border.⁷

These plants use cheap Mexican labor to assemble products from imported components and raw materials, and then ship them back to the United States.⁸ Nearly half a million Mexicans work in the maquiladoras earn an average of \$3.75 a day. While these plants bring jobs, albeit low-paying ones, they exacerbate local pollution by overcrowding the border towns, straining sewage and water systems, and reducing air quality. All this compromises the health of workers and nearby community residents. The Mexican environmental regulatory agency is understaffed and ill equipped to adequately enforce the country’s laws.⁹ The practice of targeting poor communities of color in developing nations for waste disposal and the introduction of risky technologies from the

⁶ Kay, Jane. 1991. “*Fighting Toxic Racism: L.A.’s Minority Neighborhood is the “dirtiest” in the state.*” San Francisco Examiner (7 April: A1)

⁷ Center for Investigative Reporting. 1990. *Global Dumping Grounds: The International Trade in Hazardous Waste.* Washington, D.C.: Seven Locks Press.

⁸ Witt, Matthew. 1991. “*An injury to One is an Gravio a Todo: The Need for a Mexico-U.S. Health and Safety Movement.*” New Solutions, A Journal of Environment and Occupational Health Policy 1 (March):28-33

⁹ Working Group on Canada-Mexico Free Trade. 1991. “*Que Pasa? A Canada-Mexico Free Trade Deal.*” New Solutions, A Journal of Environment and Occupational Health Policy 2 (January):10-25

industrialized countries are a form of “toxic colonialism,” what some activists have dubbed the “subjugation of people to an ecologically destructive economic order by entities over which people have no control.”¹⁰ Third World dumping policy was also made public by the release of an internal, December 12, 1991, memo authored by Lawrence Summers, chief economist of the World Bank (now President of Harvard University). This is all connected to the destruction of environments in the underdeveloped world. Instead we say oil companies drilling in Alaska (anytime now with the current administration) or anywhere else in the U.S. is immoral. However, if the companies go to Ecuador or any other third world nation to drill then it is completely accepted. That is something that many “environmentalist” groups or movements are also guilty of. As long as it is “not in my back yard” then, go right ahead. Evaluation of our accepted practices in the developing world must be reconsidered.

Deforestation

Even though Ecuador contains some of the worlds most biodiverse species it also has one of the world’s highest rates of deforestation at over 300,000 hectares per year. For example in the Interandean basin vegetation has been practically eliminated since colonial times. Crops, pastures, towns, and exotic trees replaced the native vegetation. Only 1-2% of the original forests cover remains, which only exist in high altitudes that are above 3400 meters elevation. The forests of the coastal region have been mostly destroyed due to logging, monocultures and colonization. The province of Esmeraldas the last unprotected old growth forest is being destroyed by timber companies and is

¹⁰ Greenpeace, 1992. “*The ‘Logic’ Behind Hazardous Waste Export.*” Greenpeace Waste Trade Update (First Quarter): 1-2

cleared for huge plantations. Seventy percent of the coastal mangroves have been eliminated to make way for the shrimp industry. This threatens the Esmeraldas region that contains the world's tallest mangrove ecosystem. Traditional fishing communities depend on the mangrove ecosystems for their subsistence. Since the 1970's about 30% of the Ecuadorian Amazon has been deforested and polluted. Indigenous cultural groups such as the Cofan and the Huaorani have been endangered as a result of the oil industries. Colonists and land traffickers are destroying the diverse forests of the Andean slopes and large-scale mining is planned along these areas. Development will continue to threaten the diverse habitats that are unique to Ecuador. Efforts must be taken to preserve the fragile ecosystems or they will be lost forever.¹¹

Ecuador and Texaco

The Ecuadorian Amazon is a lightly populated region that contains half of the territory in Ecuador. Between 1964 and 1992 a unit of the U.S. oil company Texaco exploited and virtually devastated the town of Lago Agrio for oil. The multinational corporation spilled over 18.5 billion gallons of highly toxic waste into 600 open, unlined pits over 2,000 square miles among the indigenous community of 30,000, pumping over 1.5 billion barrels of oil out of Ecuador. What was left behind was an ecosystem on the brink of collapse. The soil was left unmanageable and the loss of wild life was tremendous. Cancer rates for men were 40% higher than normal and 60 % above normal for women in the years after the toxic dumping began. Women experience spontaneous abortions and children were born with birth defects. A 1987 earthquake ruptured the 25-

¹¹ Mecham, Jefferson, *Causes and Consequences of Deforestation in Ecuador*, Centro de Investigacion de los Bosques Tropicales – CIBT, Ecuador, May 2001

mile of TransEcuadorean pipeline running along the Amazon's indigenous communities. This pipeline has ruptured 27 times by 1989 spilling 16.8 million gallons of crude oil compared to 10.8 million gallons spilled by the Exxon Valdez accident. 88 people representing a community of 30,000 brought a lawsuit against Texaco in 1993.

This lawsuit is an unprecedented lawsuit and is closely connected to the people of Ecuador. The 1993 Lawsuit estimated that it would cost about 1 billion dollars for the cleanup and 10 years to undo the decade long damage. After several studies conducted of the affected land and people the true clean up cost is ranged between five billion to six billion dollars. ChevronTexaco, which invests 4 billion dollars annual in all of Latin America, is trying to shift its blame to PetroEcuador, which is currently the government oil company that took over after ChevronTexaco left in 1992. Litigation still continues as Texaco continues to use loopholes in international law to dodge the lawsuit.¹²

Misleading Claims of Texaco and the Health Effects of Their Actions in Ecuador

Chevron Texaco adamantly claims that it has done nothing ethically or morally wrong in Ecuador. It claims that it follows its pledge of "to conduct business in a socially responsible and ethical manner to protect the environment, and the communities where we work." However, in the Ecuadorian Amazon, Chevron Texaco created one of the world's worst ecological disasters in recorded history. Their negligence has resulted in the death of hundreds of people and harmed five indigenous tribes. The ecological disaster in Ecuador was the result of planned deliberate dumping of toxic water into open

¹² <http://www.amazonwatch.org/amazon/EC/toxico/>

pits, swamps and river. Worst of all Chevron Texaco refuses to disclose public documents to its shareholders on their liability. It spent millions of dollars for lawyers and public relation specialists to suppress information on their actions in Ecuador. This money could have been used to provide medical relief to the thousands of innocent children who have cancer and other illnesses because of the toxic waste. Some of the deceiving claims of Texaco include:

1. Our dumping of wastewater in Ecuador is not responsible for the contamination.

It is impossible to assert that the dumping of approximately 18 billion gallons of waste water in a pristine rainforest could have no negative consequences for the people who inhabit the area and the biodiversity of the rainforest. Cancer rates have soared in the areas of Ecuador where the toxic water is present. Hundreds of innocent people have died of cancer and many more are in risk of getting sick. A study by the International Journal of Occupation and Environmental Health found cancer rates abnormally higher than the normal rate of cancer. Another study concluded that rates of child cancer four times higher than in other parts of Ecuador. It also reported 91 cases of leukemia among children in the exposed area. Soil samples taken where the company claims it cleaned up its contamination found harmful and illegal levels of carcinogens. Some samples showed levels of carcinogen 1,000 times higher than the legally allowed levels in Ecuador.

2. Evidence that came out of the trial in Ecuador was more favorable to us.

Eleven scientific reports from six parties from Texaco and five from scientists cooperating with the affected provinces have reported illegal levels of toxic contamination in its old drilling sites. This has left legal observers puzzled over the

strategy Texaco is using and left its shareholders angry. The trial itself is defeating for Texaco because it is the first time that multinational oil giant had been subject to jurisdiction in a court outside of the U.S. A comprehensive assessment of the clean up has been placed at \$6 billion dollars or higher. This amount is just for the clean up of the oil contamination and not the damages of the affected people.

3. Our actions in Ecuador are more ethically responsible than Tobacco Companies.

Comparing itself to another company that creates cancer among people is not much of an improvement. Tobacco companies at least provide a warning on their products of its harmful effects. The people of Ecuador were not given a choice and Texaco never provided a warning of the effects that the dumping could have on the people. Chevron Texaco still to this day covers up its actions and does not cooperate with the local indigenous people. It covers up reports based on the laboratory results of high carcinogen levels. However plaintiffs in the court case have been able to recover copies of these files in Ecuador's state oil companies.

4. The chemicals dumped in the Amazon do not threaten the public health.

This assertion is completely false because more than 50 prominent scientists from 17 countries have published studies that contradict the statements from Chevron Texaco's consultants. Scientific research spanning decades have concluded links between oil contamination and an increased risk of cancer among children and adults. The drilling practices used by Texaco were used during the early part of the last century and the process of dumping wastewater into open pits is banned in the United States. The wastewater left behind contain some of the most harmful carcinogens known to man such

as benzene, mercury, and chromium, lead. To conclude that these chemicals are not harmful to plants, animals, and human beings is ridiculous and untrue.

5. Our operations in Ecuador were compliant with Ecuadorian Law.

Ecuadorian Law permits TPHs (a family of carcinogen), which is derived from petroleum at 1,000 PPM. This standard is much more lenient and is ten to twenty times more admissible than some states in the United States. Samples taken in one site known as Sacha-53 found it over the maximum admissible limit. Another sample was 15 times higher than the limit and another was 19 times higher. Carcinogens such as lead, cadmium, and phenol were also found above the admissible limit. Chevron Texaco violated the Ecuadorian law that dictates all companies respect the environment and operate in a careful manner.

6. Our drilling practices were compliant with industrial standard.

Before Texaco arrived in Ecuador the standard in the oil industry for disposal of toxic wastewater was to re-inject the wastewater into the ground to prevent above ground contamination. The state of Texas banned the unloading of waster water above ground in 1919. Louisiana followed by banning this practice also in 1953. Chevron Texaco has not been able to provide an example of it dumping wastewater in this matter anywhere else in the world besides Ecuador.

7. We have cleaned up the environmental damage we caused in Ecuador.

During the mid 1990's Texaco paid the Ecuadorian government 40 million dollars (less than 1% of the estimated cost of clean up). This was intentionally done so that a government official can provide a release; coincidentally this government official has

been a paid consultant to Chevron Texaco. This “clean up” effort consisting of burying dirt over some oil pits without removing the contaminated water. In 2005 the Ecuador Attorney General agreed that the agreement was invalid because the clean up efforts were inadequate and that Texaco did not comply with Ecuadorian law. The executive in charge who negotiated this agreement Richard Reis Vega is the senior vice president at Chevron Texaco who oversees the Ecuadorian trial. This is clearly a conflict of interest and another example of the company engaging in immoral and illegal practices. The mere fact that Texaco paid this amount of money clearly states that it is aware of the contamination it left in Ecuador.

8. We were only a minor party in Ecuador.

Texaco designed, constructed, and operated each of the wells, stations, and pipelines. The decision made by the U.S. base executives led to the excessive profits of approximately \$4.5 billion dollars because it saved money by not installing the technology used to re-inject the wastewater. Since they were the ones responsible for the construction of these pits they are one hundred percent responsible. Any pollution caused by PetroEcuador the state run Oil Company exists now because of the faulty system created by Texaco. If Texaco followed standard environmental regulations regarding the disposal of waste water then this environmental disaster could have been averted.¹³

Environmental Assessment of Damages

An assessment by Global Environmental Operations was created in order to calculate the cost of the clean up. This assessment centered on Texaco Concession in

¹³ Texaco in Ecuador, Chevron’s misleading claims, <http://www.cheverontoxico.com/article.php?id=45>

Northern Ecuador particularly Lago Agrio. The costs associated with the clean up are enormous due to the extent of contamination. Texaco did not choose to look at the ground water contamination in its efforts at remediation because they did not want to consider its effects. The president of Global Environmental Operations David Russell visited 45 pits and addressed several issues in his company's assessment. The areas, which he included, were:

1. Waste oil pits and open productions- contain intentionally dumped waste oils, and other fluids. These fluids can catch fire and may contain 5 to 40 percentages of free oils. The oil stations contain oil pits of various sizes include some which are tremendously large.
2. Open Drill Pits- some contain mud, drilling fluids, and other materials. These pits can be several meters deep and contain substances such as free oil, drilling fluids, petroleum residuals, and barium sulfate.
3. Open Drill Pits with vegetative cover- these pits contain plants, which may partially or fully covering the pits. They can be 15 to 30 cm thick and float on a layer of water and oil.
4. Closed Pits- these pits have been closed by bulldozing soil on it. Materials in this soil include drilling fluids, mud, salts, and oils.
5. Aquatic environments (Swamps, Rivers and low places) - The swamps, pits and low places have a combination of mud and water. The depths of some of these places vary from 2 to 3 m. The oils are free floating and mix in with the mud at the bottom.

I-Remediation Techniques

The remediation techniques that may be applied almost all include a form of material handling. This includes heavy equipment that will be used to pump out liquids, dig out and process the soil, and return the soil back to the site. Access by equipment to these areas is another issue. It may require the creation of infrastructure that includes roads, fuel stations and other items needed to operate the equipment. The infrastructure will consist of other items such as trucks, bulldozers to carry equipment and trucks, fuel supplies and cleanup equipment. Thermal desorption is the method most appropriate for the treatment of soils and mud. Bulldozers and floating dredges including other equipment are necessary for the clean up under water. The cost of this may be significantly large. Ground water needs to be treated in order to remove the contamination. The cost associated with this treatment may run as high as \$160 per cubic meter. It must be completely removed in order to prevent contamination of other areas.

Water treatment for pond and station water: estimates for treatment are approximately \$.61 per gallon or \$160 per cubic meter for highly contaminated water. This would include centrifuges, filtration, sedimentation, chemical treatment and other means of disposal of water. It is assumed that the contaminated area is twice the area of the pits or stations that cause it.

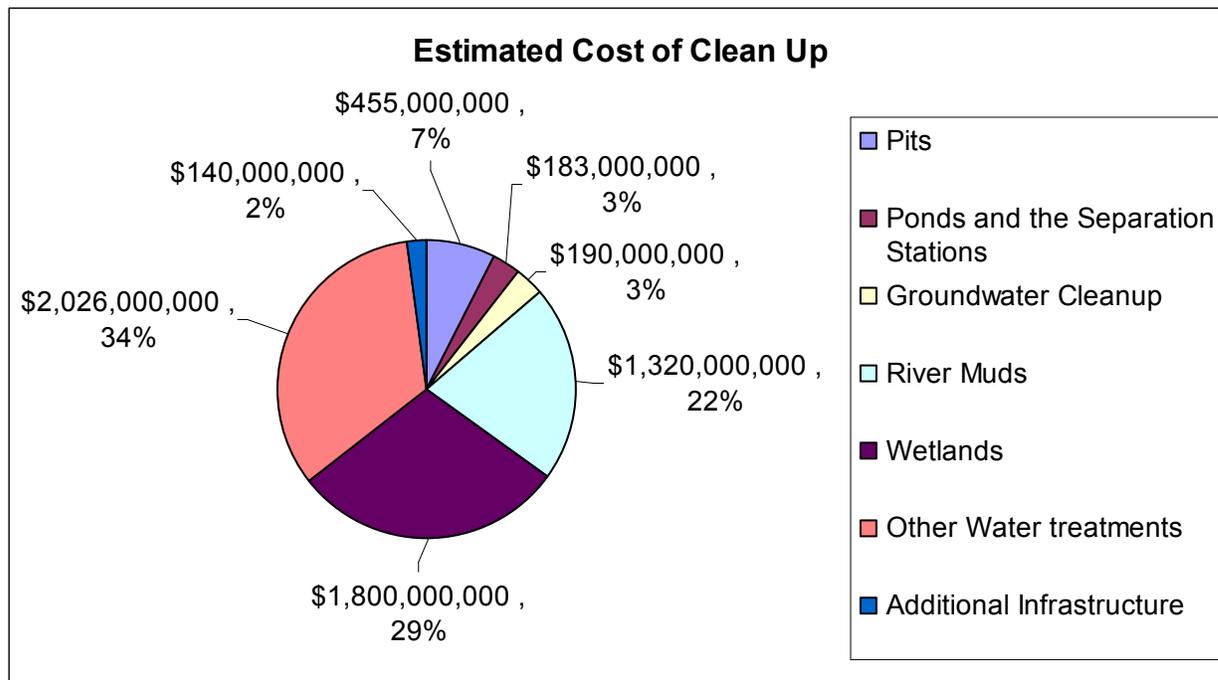
Groundwater Treatment: the estimates for the pits are approximately \$55,000 and \$300,000. It is unclear to what extent the contamination exists and further studies are necessary on the groundwater contamination. It will be necessary for the residents of the

area to have access to a clean source of water and electricity for running pumps from groundwater that is not contaminated.

II-Rough Estimates of Total Costs

Category	Cost in Dollars
Pits	\$455,000,000
Ponds and the Separation Stations	\$183,000,000
Groundwater Cleanup	\$190,000,000
River Mud	\$1,320,000,000
Wetlands	\$1,800,000,000
Other Water treatments	\$2,026,000,000
Additional Infrastructure	\$140,000,000
*Total Estimated Cost	\$6,114,000,000

** Rough estimate of total cost involved in the cleanup*



The costs estimated above are rough estimates; there are various factors that can affect the true price of clean up. Before any action can be taken there must be further assessment on the work necessary for the remedial efforts. This will require a broader and definitive study of the true contaminant levels. The study must include a substantial amount of sampling and identification of contaminants, which will last approximately six and nine months. A quality control analysis must be a part of this study as well as studies on the best methods for treatment of the various soils. Careful consideration must also be made in how to conduct the cleanup so that the wetlands and the soils can be restored to the most productive manner. Different techniques from biological remediation to incineration may be applied not just one type. Restoration of

the ecosystem will include replanting, reforestation and other techniques that will help the damaged ecosystem to slowly recover.¹⁴

Ecuador, “Dollarization” and the Environment

In 1998, Ecuador’s debt reached \$15.1 billion, 82% of their GNP thereby making it one of the most brutally indebted countries in Latin America, a country of barely 13.5 million people. Ecuador was the first country ever to default on its bond payment to private creditors. This was also the first time the IMF decided not to bail out private creditors. In 1999, Ecuador’s economy was decimated with over 20% unemployment and 60% inflation. The IMF finally decided to “bail out” Ecuador after the new president took over from a coup brought on by many social and indigenous groups. The IMF bailed out Ecuador under certain circumstances of course, it forced Ecuador to “dollarize” their economy and abide by new IMF structural adjustment policies. In 2000, Ecuador became the first Latin American nation to eliminate their currency for the American dollar. “After dollarization, a partial recovery took place from mid-2000 to 2001, but later flattened out. Poverty receded by 8%. Urban unemployment bounced back to 10% and real wages almost returned to their pre-crisis values. Poverty and extreme poverty however remain above their pre-crisis values and the reduction in unemployment was mainly due to a massive spur in emigration. At least 800,000 Ecuadorians emigrated between 1998 and 2003 to Spain, the United States and Italy, and foreign remittances have become a chief recovery factor. No clear sign of job expansion appear.”¹⁵

¹⁴ Russell, L, David, Global Environmental Operations, inc, *Remediation in Ecuador*, http://www.cheverontoxico.com/downloads/Russell_assessment_english.pdf

¹⁵ Larrea, Carlos, “*Ecuador’s Dollar Doldrums*” http://www.nacla.org/art_display_printable.php?art=2503

Has the adoption of a new monetary system, as it has happened in Ecuador solved the crisis of high unemployment, mass poverty, social inequalities and environmental degradation? This section will begin by acknowledging that the neo-liberal model of development has led to perpetual indebtedness, stolen wealth deposited in Northern banks, and Southern dependency on international financial markets such as the International Monetary Fund and the World Bank.

This neo-liberal model of economics, the “laissez-faire” capitalism of today; has led to everything I stated above regarding high unemployment, mass poverty, etc. is characterized by free trade, free flow of capital across borders with no tariffs, deregulation, unfettered foreign investments, privatization of state-owned enterprises, broadening the tax base, and environmental destruction in the name of progress and prosperity. Is there a new development strategy? Or is the neo-liberal model the only way out to cure the 70% of Latin Americans living under the poverty line? What are the local, regional and global alternatives to privatization, structural adjustments programs, external markets and free trade that have led to Ecuador adopting the dollar as their new currency, otherwise known as the process of “dollarization”?

After Ecuador “dollarized” in 2000, Ecuador was “broke” because of the implosion of its commercial banks, mass corruption, external debts and IMF pressures. In 1983 the IMF forced the Ecuadorian government to take over private debts owed by Ecuador’s elites to foreign banks. Ecuador borrowed \$2.5 billion to cover the debt of the

elite. In order for repayment, the IMF dictated price hikes for electricity and other necessities. When that didn't drain off enough cash, another "assistance plan" required the state to eliminate 150,000 jobs. To meet the huge amounts of IMF obligations, Ecuador foolishly "liberalized" its small financial market, cutting local banks loose from government controls and letting private debt and interests rates explode.

Five years have passed since Ecuador converted to the dollar and the many who have benefited from the crisis of the dollarization process are the elite, the bankers and individuals with big debts. As for the rest of the population such as the poor, middle class (if there is a middle class) and the blue-collar workers, there has been an extreme increase and deterioration of their livelihoods. The dollarization was originally conceived as a political solution to resolve the profound economic, social, and political crisis caused by the neo-liberal model. The official dollarization became a desperate alternative to destroy a hastening of inflation.¹⁶ This was an action to display the inability of the elites to push for the rational monetary policies needed to stabilize the economy. Two decades of difficult and senseless adjustments, monitored by the IMF, resulted in a high social cost that has doubled the poverty level and the inequality of distribution. However, the measures adopted by Ecuador brought a benefit to the productive sector. The establishment of a fixed exchange rate of 25,000 sucres/dollar gave a wide yield margin to the Ecuadorian exports.¹⁷

¹⁶ Leon Camacho, Patricio; *La dolarizacion: mas alla del optimismo inicial, un dificil trayecto*, mimeo, diciembre 2001

¹⁷ Paredes, P. Lucio "El libro de la dolarizacion." Second edition. Libri mundi. Quito-Ecuador 2000

In the labor market, Ecuador faces a complex situation in which wages are extremely low. Persistent inflation is still looming even though inflation should have been eliminated with dollarization; it has reduced the real wages with its purchasing power. Imports have grown but only to fulfill the needs of a minority with high-income levels. Dollarization in Ecuador has stabilized the economy and lowered inflation but the poverty level and unemployment rate have increased more since the dollarization process was implemented. The dollarization forces Ecuadorian producers to compete with the rest of the world in terms of productivity. Devaluation in other countries means an automatic loss to the price of the Ecuadorian products in the international market. Ecuador's problems worsen because of its low technological level that causes its industry to produce poorly. Ecuador also contains a low level of capacity and training of its labor force. It seems probable that Ecuador was not ready for such a dramatic change at the time when it occurred. Regardless, dollarization as any other monetary system is oriented to the short-term economic solution. If the potential positive results are not implemented within reforms to bring democratic players in the economic situation than it seems that the dollarization system will ultimately fail.¹⁸

Through dollarization, Ecuador renounces its sovereignty over its monetary policy; freezing all its possibilities to the dollar and transferring any surplus to those who hold dollars and finally to the economy of the United States. This means that Ecuador renounced its economic and national sovereignty creating itself into a dollar colony, similar to present day Puerto Rico or "pre-economic collapse Argentina." It has also

¹⁸ Cordeiro, Jose Luis. "*La segunda muerte de Sucre.*" First edition. IEEP. Quito-Ecuador 1999

caused an aggressive increase in the foreign debt that in my opinion should be abolished along with all the nations forced to take out loans. Dollarization forces Ecuador to de-industrialize by the transformation of productive investment into commercial and speculative investment causing mass unemployment which is at 8.1% hence causing the poverty level to be at a disastrous 72%.

If dollarization seems to be working for only a selected minority in Ecuador, then it is obvious that is something that has to change. During the years of dollarization, over 800,000 Ecuadorians have fled to Europe in search of economic and social prosperity. An obstacle that they thought dollarization would offer. Could Ecuador have developed strongly without giving in to international pressures from the tools of the elite (WTO, IMF, World Bank)? In reality these groups exist only to realize capital, not to serve development or to stabilize the global economy. They are incapable of handling economic crises because their policies produce and reproduce instability. The minimum common demand on the part of the majority of Ecuadorians and all of the “LCDs” is that these institutions become radically reformed. The Third World Debt must be cancelled and the structural adjustment programs must be terminated.

Dollarization has also caused a huge impact on the Ecuador’s environment. (Green) Tourism has boomed since Ecuador adopted the U.S. dollar as its currency (sold out to the U.S. currency) in 2000 to end an “economic crisis” that has shattered “consumer buying power.” The abundant flora and fauna of Ecuador, which currently occupies 2% of the world’s land surface, attract Sixty percent of the foreign tourists who

visit Ecuador. Ecuador today is considered as one of the most ecologically diverse nations with its Amazon, Andes and the Galapagos Islands but honestly, at the rate of over 1 million tourists who do visit Ecuador annually, how long can the fragile environment sustain such an influx of tourists? Yes “eco-tourism” does bring money to very “needy” section of Ecuador where over 70% of the population lives below the poverty level. But so does prostitution, it does put money into the hands of the needy girl or child but that is obviously not an acceptable cure towards poverty.

Yes, because of eco-tourism in Ecuador, Ecuador has been trying to comply with international environmental standards, but it is not because the nation is trying to conserve the environment, it is because it wants to attract more foreign tourists. Also, since dollarization, prices have become less competitive with other nearby eco-tourist destinations such as Peru or Costa Rica. The way I see it, “underdeveloped” (“inferior” nations) are rich nations, abundant in resources. Many of these countries have the capacity to feed their starving people but plutocracies, a government run by the rich, and traditionally oppressive European states, force the underdeveloped world into buying over priced unnecessary goods while exporting huge portions of their natural resource.

Environmental Refugees in The Name of Progress

One might say what does economics have to do with environmental refugees? It *has* everything to do with this “new” occurrence. Globally, we are losing 24 billion tons of topsoil each year. Seventy percent of the world’s 5,200 million hectares used for agriculture have already been degraded or are seriously threatened by desertification

processes. Roughly one-fifth of the world's population lives in these affected areas. According to the United Nations' estimates, 135 million people are at risk of being displaced and at least 10 of the world's armed conflicts have been directly caused by fighting over land and natural resources.¹⁹ As every second passes, people, mostly the disenfranchised, poor, indigenous are forced out of their lands by the poisoning of their lakes, rivers, etc. Millions of people are wandering their native countries if not a distant country for a new home. Displacement occurs by logging, petrol companies and fumigations. Granted, people flee often-fatal environmental conditions caused by natural forces but unfortunately humanity's mismanagement of global affairs is causing the rise of artificial (human, not elemental) environmental damage.

As the "lesser developed nations" try to adapt new policies under the auspices of the International Monetary Fund (IMF) to further what the North considers "development," people will be left literally in the dust due to toxic spills, desertification, strip mining, soil erosion, hydroelectric plants, etc. As corporations hijack "globalization" there is no liability to environmental refugees. A United Nations report, documents that transnational corporations generate more than half of greenhouse gasses emitted by the industrial sectors with the greatest impact on global warming.²⁰

Corporations have hijacked globalization due to the external debt owed to the IMF by Third World nations. Third World debt is the major force that causes environmental damages thereby causing environmental refugees. It is a vicious cycle that unfortunately seems never ending. Since 1998, Ecuador's debt has climbed to \$15.1

¹⁹ Schwartz, Michelle Leighton, *Human Flight From Mexico's Deteriorating Agricultural Lands*. Natural Heritage Institute, San Francisco

²⁰ Leiderman Stuart M., "Discovering the "New World" of Environmental Refugees", institute for Global Futures Research, July 1999

billion, owed mostly to the IMF and private creditors such as CitiGroup and Chase Bank. The same bank that started United States slave industry now enslaves the poor of the world. As Ecuador suffers to pay back “loans” (I prefer death traps) it must first abide by the IMF’s “structural adjustment policies,” in other words, the privatization of education, water, land, etc. Today, Ecuador produces more oil than it needs for domestic consumption and thus it is one of the country’s leading exports. Therefore, any new drilling for oil is not intended to meet local demand but is intended for export overseas. Fifty percent of Ecuador’s national budget is funded by oil earnings and continued oil exploration and production is thought to be necessary to ensure the countries well being. The country plans to increase production and holds auctions to increase foreign investment.

Dependence on oil has hindered Ecuador’s environmental enforcement, which in turn has caused damaging consequences to indigenous tribes living in the Amazon region and to the environment in the eastern part of the country (Oriente).²¹ The environmental damage in Ecuador is caused by oil and logging exploration in order to pay back an immoral debt. The people most affected are women and indigent people of color. The UN High Commission for Refugees (UNHCR) estimates that 80% of (“recognized”) refugees are women, children, and the elderly. The elixir of profit for corporations is environmental racism, as the institutionalization of environmental hazards disproportionately distresses people of color.²² The Red Cross report also notes that while in 1992 they assisted less than half a million people with natural disasters, 6 years later that figure went up to more than five and a half million, indicating an extremely sharp

²¹ TED Case Studies, Ecuador Oil Exports, <http://www.american.edu/TED/ecuador.htm>

²² Ghanie, Nicole, *From SUVs to Environmental Refugees*

rise in both environmental disasters and environmental refugees. On February 19th 2001, The Intergovernmental Panel on Climate Change (IPCC), which advises the world's governments under the auspices of the UN, estimated that 150 million environmental refugees will exist in the year 2050, due mainly to the effects of coastal flooding, shoreline erosion and agricultural disruption. (150 million means 1.5 percent of 2050's predicted 10 billion world's population.).²³

As you can see, this paper has described the current conditions of a hungry, poor, and tired nation of just over 13 million (mostly indigenous) inhabitants. Foreign companies, foreign pressures (Texaco / IMF) and even internal corruption have literally destroyed the lives of many Ecuadorians not to mention the environment. Foreign oil companies have changed the demographics of Ecuador. There is even a city named "Shell" after the oil company. Today, Shell has American missionaries working out of the city "helping" the indigenous population by forcing them off their own land and teaching them English. Oil exploration and the environmental damage caused by this black poison have caused many people to move out of their own land into the major cities of Ecuador. These environmental refugees are ecological indicators of the many failures of humanity to be one with the earth. This is a clear sign of the (racist) neo-colonialist form of resources management. Innocent people suffer for the lifestyle demanded by the West. The factors, which rest behind people fleeing their homes due to environmental annihilation is a Eurocentric form of colonialism, greed, and exploitation. The colonizers of Latin America are still European/"American." The forced slave labor is not done the

²³ International Red Cross Federation, *"World disasters Report 1999"*, Switzerland, June 1999.

same way (to a certain extent) as it was in 1492. Now, it is forced upon the poor peoples of the South by Western organizations and corporations such as, the World Bank, IMF, WTO, NATO, etc. Feudalism, Mercantilism, and Colonization have never ended. It is now called “globalization.” These Western international organizations finance the environmental policies for their own profit at the cost of the environment and millions of lives. Being able to understand environmental refugees, one must be able to grasp and understand what “fuels” people to leave due to their land, home and lifestyle that are polluted and destroyed.

The truth of the matter is that commodity capitalism is behind this catastrophe along with Third World Debt. The IMF is the perpetrator of Third World Debt and the organization has only aggravated the social and environmental crisis. The debt has caused a “destruction of Latin American economies and it is the main force of social and environmental deterioration.” As long as the Third World is kept into this cycle of “dependency” the crisis can only become worse. Latin America is a huge colony of countries. Third World countries are abundant in resources and have the capacity to be self-sufficient and feed their own people. But plutocracies and oppressive economic organizations such as the IMF force the third world to buy overpriced, unnecessary goods while exporting huge portions of their natural resources. The only way for Latin America (and every third world nation) to survive is to destroy the entire neoliberal capitalist system and place people before commercial interests.

“The dilemma appears to be that of choosing between payment of the foreign debt by Third World countries (thereby perpetuating the current crisis) or the destruction of

the “international economic order” – an order subordinated to the interests and decisions of world financial organizations, transnational banks, and corporations of the advanced capitalist nations... it is the conviction that the foreign debt is economically unpayable, politically unacceptable, ethically immoral, and socially criminal, as well as unjust because of hunger, exploitation, and concentration of wealth it has generated... the decapitalization of Latin American economies has become the main cause of the social deterioration of the last seven or eight years, but we insist, at the same time it is the result of the crisis that the entire capitalist system has experienced.” – Victor M. Bernal Sahagun²⁴

²⁴ Victor M. Bernal Sahagun, Translated by Jacqueline Mosio, *“The Foreign Debt and Beyond: Alternatives to the Latin American Economic Crisis,”* Latin American Perspectives, Issue 60, Vol 16. No. 1, Winter 1989 111-126

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