

Ecuador is a truly fascinating place when it comes to studying environmental issues. The area is very unique when an individual looks at it from both a political view and a biocentric point of view. Not only is the country petroleum rich, but it also contains a lot of different geological profiles. The country has four main regions which consist of the coast, the Andes, the Galapagos Islands, and the Amazon. These varying environments mean that there can be more biodiversity in this country due to the range of possible habitats as well as a greater quantity of endemic species in these regions. The coast of Ecuador runs into problems when it comes to the different boats used in the water. Not only does the oil and the emissions from the boat negatively impact the environment, but the disturbances that the boats in motion cause will create an unsettling feeling in nearby animals. In the Andes, it is a mountain range so there could be possible problems when it comes to needing to rely on different plants and animals to survive when compared to the rest of the area. The Amazon runs into problems when companies encroach on the area and harvest materials. This would lead to a loss of habitat for species or it could possibly just lead to a further competition among individuals of the same species to survive. The Galapagos runs into problems with tourism primarily. The Galapagos has the potential to run into less problems considering that the area is heavily monitored and controlled in a way that only a certain amount of people let in for a specific time.

A biodiversity hotspot is defined by Myer as having two meet two criteria: exceptional concentration of species with exceptional levels of endemism and areas that face exceptional degrees of threat. When conducting further research, Conservation International provided a more specific set of guidelines to be classified as a biodiversity hotspot. These would be having at minimum one-thousand-five-hundred endemic vascular plants and having thirty percent or less of its natural vegetation.

Ecuador has many exports that they rely on for financial gain. While petroleum seems to be the most beneficial when it comes to monetary value, it lacks in other areas. The author brought up some other of the exports that Ecuador has and with research, the different exports can be analyzed through an environmental, political, and socioeconomic perspective.

The unique challenges posed by oil is that it is highly desirable, but the oil allows for a greater amount of biodiversity. There tends to be a lot of political rallying in regard to fracking for oil, with support from either side. This means that no matter the decision, one party is going to be upset. Oil is Ecuador's top export, meaning that they receive over 50% of income from the petroleum since it is in such high demand. Though, the cost to frack as well as the cost to repair the environment needs to also be analyzed. Since oil does not replenish at high rates, itself is not very sustainable. Once they start fracking for oil, it most likely will not stop until all of the oil is gone from that source.

In the article, "Controversial Ecuador oil deal lets China stake an \$80-million claim to pristine Amazon rainforest," written by Jonathan Kaiman discusses the controversy around exporting oil. Since Ecuador's government had decided to sell a portion of the Amazon rainforest to a foreign entity, some of the indigenous groups had become nervous that this foot in the door would lead to the destruction of the Amazon. Similarly, experts and activists believe that letting China have a share in the Amazon would lead to a destruction of the ecosystem of the rainforest and threaten endangered cultures of the indigenous tribes. Kaiman explained that at one point the indigenous people gathered in a protest in their traditional garb carrying signs that said "Chinese firms, get off of my land!" as well as "Don't sacrifice the Amazon to petroleum companies!" During an interview, Jorge Herrera, the president of the Confederation of the

Indigenous Nationalities of Ecuador, had preemptively put the blame on the Ecuadorian government for any potential perils that might influence the different villages as well as claiming that the project is illegitimate and illegal. The author of the article also brings up the monetary aspect of the project. He notes that Ecuador produces approximately 540,000 barrels of crude oil daily, but oil prices keep falling which pushes Ecuador into taking loans from China.

The next export that Tammy L. Lewis brings up in her book would be bananas. Bananas are one of the main exports of Ecuador, though the income received from bananas is nowhere near that of petroleum. The book gives a figure of 16% when comparing the revenue from bananas to the revenue from oil. In other words, 2,077,351 thousands of dollars is the revenue from bananas, whereas oil makes 12,711,229. Bananas are a more sustainable export due to the fact that the damage to the land is minimal when considering that the fruit will deplete the soil of some nutrients, but this can be fixed with crop rotation or other agricultural means. In addition, the exporting of bananas is less controversial than petroleum, so it is a more moderate political move than fracking and exporting oil. On the other hand, many could argue that the oil makes too much money for Ecuador to stop exporting it (considering that it is approximately six times more profitable than bananas).

In the 1964 article, "Ecuador's Exports At Record Levels, Thanks to Bananas" the exportation of bananas is discussed. At this point in time, Ecuador was the leading exporting country for bananas with a per capita income of \$167 a year. The article also goes into discussing that if there is just one crop that Ecuador exports, that this can be damaging for their environment and economy. Since there was no policy for the diversification of crops, this can negatively impact the crop due to the fact that eventually they will not grow as well because the soil would get depleted of key nutrients. At this point in time, the article also says that Ecuador is one of the model countries in Latin America in terms of their economy, and it was predicted that the pace of the economy's growth would be maintained unless the sustainability of this practice were to change current conditions.

After explaining the export of bananas, Lewis talks about shrimp. Shrimp is a more controversial of an export than bananas due to the fact that they live in mangroves and the fact that they require a lot to make them profitable. Shrimp accounts for 1,279,653 thousands of dollars in revenue, which is a nice amount of money, but shrimp is not in as high of a demand as petroleum or bananas. It could be a sustainable practice, depending on how it is done. If it is in a controlled environment and the individuals only take the extra shrimp that are born to sell, then that works, but if they are taking nearly all of the recently born shrimp and exporting them, then it would be more difficult for the shrimp population to reproduce enough to remain stable.

Canned fish can also be a controversial practice depending on how this is being practiced to determine whether or not it is being done so sustainably. For example, if they are going out in the water and bringing in mass supplies of fish from the nets and such, the fish might not be able to reproduce as fast as they are taking them. Since canned fish accounts for 1,116,059 thousands of dollars, we can see that it is not as much profitable as shrimp is.

Flowers can be valued for their visual appeal, but they do not keep for very long. Having this as an export seems to be less beneficial than all of the other exports. Not only could foreign insects or seeds be stowing away in the flowers, but since they do not keep for long and they have a low cost, they cannot be sold for high values of money.

Considering that cacao is able to be processed into a delicious chocolate bar, I would say that the export of this material is valuable. Cacao would take certain nutrients out of the soil, but

there are resolutions to this problem. Recently, there was found to be an issue regarding the regulations around cocoa. In the article, “Ecuador’s Exports At Record Levels, Thanks to Bananas,” written by Oliver Nieburg brings up a current event that the EU had introduced a maximum level of cadmium that can be in the chocolate that is exported. Some scientists believe that the cadmium levels are higher in Latin American countries due to the fact that there is more volcanic activity. The author of the article claims that the revenue of this export would decline greatly and that this will also decrease the extra efforts that are put in to make the cocoa export much more attractive to the buyers.

Coffee is also one of the exports of Ecuador. The production of coffee requires certain nutrients from the soil, so if an excess of coffee beans were to be grown, then the soil will be depleted of only a few key nutrients. Coffee is a very popular beverage and flavor among many countries, so this proves to be a valuable export.

Tourism is increasing annually. This can be both a good and bad thing depending on how it is handled. When considering what it takes to travel, the disturbance of the waters, the extra fuel to transport more people, and the airplanes which are taking passengers to Ecuador, we can understand that these factors cannot be that beneficial to the local ecosystems. While it is nice to have people interested in coming to your land, it can also prove to be damaging to the local ecosystem if not done properly. In moderation, the people coming to Ecuador could be great for the economy and also not overly detrimental to the ecosystem.

After reading this chapter, I found it difficult to take a stand on whether it was more or less beneficial to Ecuador to drill and export the oil. When looking at it from different perspectives as well as comparing it to the other exports, I do not really see a viable way for Ecuador to have sustained itself to the current capacity without removing the oil and selling it. It may not be the best for the environment in most cases, but the decision was definitely overall more beneficial to the citizens of Ecuador.

#### Resources

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