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Crude, Cash and Culture Change: The Huaorani of Amazonian Ecuador

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Abstract

In the Ecuadorian Amazon, the Huaorani are the indigenous group most recently assimilated into the country's social, political, and economic order. With vast reserves of oil located under Huaorani land, this Native Amazonian population has quickly become integrated into national and international markets. The focus of this study is on one Huaorani community, Gareno, which is located along an oil road a few hours from the town of Tena, the capital of Napo Province. Community members were interviewed in order to better understand why they lived along the oil road and how they felt it impacted their daily lives. Responses showed that the residents have chosen to live and stay in Gareno specifically because of the health and education opportunities the road provides. The fact that they have chosen these benefits and economic opportunity over a pristine forest refutes the idea of the "noble savage," which has been ingrained into Western society ever since Europeans first stepped on New World soil in the 15th century. The image of the noble savage portrays indigenous people living in a so called "wilderness" as romanticized innocents in ecological harmony, isolated from the outside world, and uncorrupted by civilization. This view is inappropriate for groups like the Huaorani because it places them on an ecological pedestal and distorts their true condition. Rather than perpetuating this romanticized Western view of indigenous peoples, studies need to be conducted to better understand their contemporary challenges, responses, and opinions. As the people of Gareno look to further improve their quality of life through development, it is important to consider sustainable methods by which this can be completed as well as how national and international non-governmental organizations can facilitate such progress.

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Keywords: oil development, market involvement, Huaorani, Amazon, Ecuador

1. Background

Ecuador's economic, political, and social structure dramatically changed in 1967 when a Texaco/Gulf consortium discovered huge oil reserves in "the Oriente," the nation's Amazon region. Within the oil industry there has been a major lack of responsible environmental regulation and financial accountability. While this has caused great environmental destruction and financial loss through direct oil spills, development has also increased.ⁱ Oil has brought the expansion of roads throughout the Oriente as well as colonists, mining, and logging.ⁱⁱ The concurrent destruction of the rainforest has had detrimental effects on the people who live there by devastating their resources.ⁱⁱⁱ As the most recently assimilated indigenous group, the Huaorani have experienced dramatic changes to their way of life.

The Huaorani, before contact, were a small group of roughly 500 hunter-gatherer-horticulturalists.^{iv} They were able to keep logging and oil exploration out of much of their territory for roughly 30 years^v by violently attacking outsiders whenever they tried to penetrate their ancestral lands. Throughout the 1960s and 1970s, the Huaorani way of life changed drastically from one of constant movement and violence to a more peaceful, sedentary lifestyle. The territory that they had previously protected became much smaller with 80 percent of the population living in only 10 percent of their traditional lands.^{vi} With this new lifestyle, the environment around the Huaorani was also affected.

The Huaorani's semi-nomadic patterns before missionary contact allowed for a great range of hunting locations that dispersed hunting pressure. The animals commonly hunted included spider and woolly monkeys, killed using blowguns, and peccaries and tapirs, which were killed with spears. However, with sedentarization and adoption of firearms, animal populations have become depleted around Huaorani communities, especially spider monkey populations. In addition, hunters now have easier access to a greater amount of forest as a result of oil roads, which ultimately increases their harvest.^{vii}

Conversely, with the decrease of hunting in some communities, people have become more dependent on food products from the market such as rice and sugar. The relationship between oil companies and the Huaorani has caused the Huaorani to expect these companies to provide services such as health and education. There is an imbalance seen across the Amazon between indigenous communities' expectations of services and goods in return for access to their land, and what oil companies are willing to give.^{viii} With the presence of oil, urbanization has markedly increased, as well as domestic violence, sexual abuse, and alcoholism (Rival 1993).^{ix} It is important to note that different communities and people have varied views on the presence of oil in their territories. In addition, there is a varied range of interactions with the oil companies in different locations across Huaorani territory. The focus of this study is in a community, Gareno, located along an oil road in a concession until recently operated by the company Perenco.

2. Study Population

Gareno consists of approximately 16 households, totaling 93 people, and was founded approximately eight years ago. Many of the current residents moved to the village from deep in the rainforest, mainly from along the Shiripuno River. It is dominated by Huaorani individuals; however, there are two Kichwa families living there, and some of the Huaorani have intermarried with the Kichwa. Fifty percent of the population is under the age of 15, showing that the community is experiencing rapid population growth. The languages spoken in Gareno include *huao tededo* (the Huaorani language, a linguistic isolate) and Spanish. Of the 70 residents above the age of 12, roughly 83 percent speak both Spanish and *huao tededo*, 14 percent only speak Spanish and/or another indigenous language, and 3 percent only speak *huao tededo* (i.e. the oldest couple residing in the community). The sex ratio is approximately 50:50. A majority (68 percent) of the community over the age of 6 has some primary education, 24 percent of the community has some secondary education, 4 percent has attended technical school, and 4 percent has no formal education.

Gareno is located along an oil road, and the residents are provided with weekly transportation to a market (formerly by the French company Perenco and currently by Petroamazonas, a subsidiary of the national oil company, Petroecuador) along the Napo River, locally referred to as the *feria*. Six of ten Gareno residents said that they buy food between once a week and once every two weeks. The majority of the men in Gareno (78 percent) have worked for petroleum companies, typically occupying multiple positions with different companies over the course of their lives. 9 percent have worked in ecotourism, and a few have had jobs in education, construction, or agriculture.

3. Methodology

This paper draws from two periods of fieldwork: from October to November, data were collected as part of a National Science Foundation project co-led by the second and third authors. Methodologies included semi-structured interviews, anthropometric measurements, and time allocation and household economic diaries. Here we limit the discussion to some of the demographic census (used above to describe the study population), the World Health Organization's Quality of Life survey, and semi-structured interviews.

Demographic Census: A census was implemented with all 16 households in Gareno and 15 households in Quehueiri-ono ascertaining variables such as age, sex, education, residence, languages spoken, and religious affiliation.

WHOQOL: The World Health Organization's Quality of Life Survey (WHOQOL) was used to assess how people perceived their health. The numerical answers given in the WHOQOL were used in statistical analysis in order to determine statistical significance. 31 QOL interviews were taken in Quehueiri-ono, and 30 were conducted in Gareno.

Semi-structured interviews: Three semi-structured interview protocols were implemented for both communities ascertaining economic, ecological, and demographic topics. To investigate household economics, interviews were conducted to ascertain wage labor history and participation in the market economy. Informants were asked about involvement in wage labor, sale of crops, sale of animals (both meat and live), and the making and sale of handicrafts. The interviews also dealt with resource use (i.e., hunting, fishing, and gathering). The ecological questionnaire asked about the following: dietary intake, hunting patterns and technologies, fishing methods and yields, foraging of timber and non-timber forest products and their use, agricultural production and labor, and conservation perceptions and threats. In Quehueiri-ono, about 15 questionnaires of each type were completed with household heads; in Garenó, 14 were completed.

In mid-December 2009, the first and second authors returned to the community for about a week to conduct fieldwork for the first author's senior thesis, which forms the basis of the results described here. This latter visit used the following methods:

Pile Sort: the pile sort method from cultural domain analysis^x was used to assess informant perceptions of differences in animals, plants, weather patterns, and emotions between different settlements. Participants were asked to sort the cards with the location that they encountered more of these attributes: Garenó (their current community), their previous community, or equivalent. Five pile sorts were completed.

Semi-structured interviews: five semi-structured interviews were conducted with adults asking residents about their decision to move from their previous village and their perceptions of flora, fauna, as well as weather differences between Garenó and their previous community.

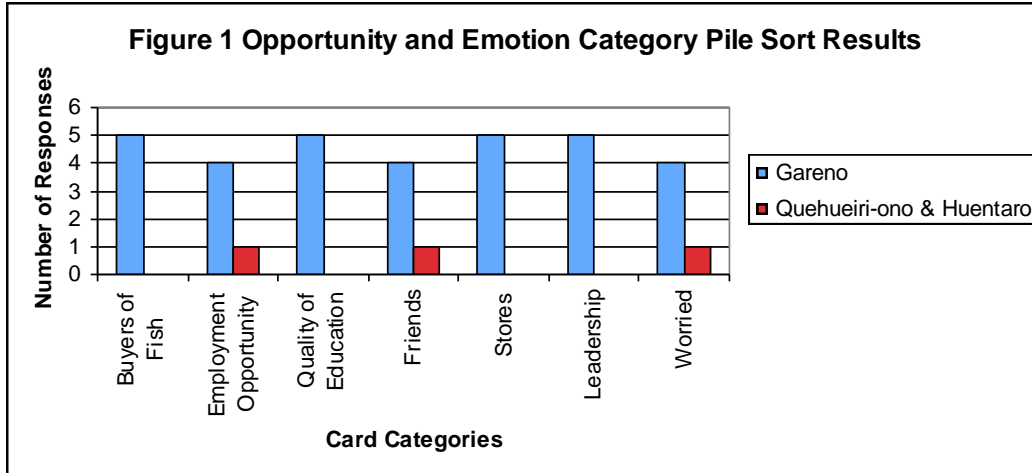
Participant observation: Finally, perhaps the most important source of data came from participant observation, the opportunity to just be present among the people of Garenó and partake in their daily lives (e.g., cooking meals, making crafts, traveling to market, or playing with children).

In the findings, the pile sort data will be presented first, followed by the December interview data, then the participant observation, and finally the October through November interviews with the WHOQOL survey responses.

4. Findings

4.1 Pile Sorts

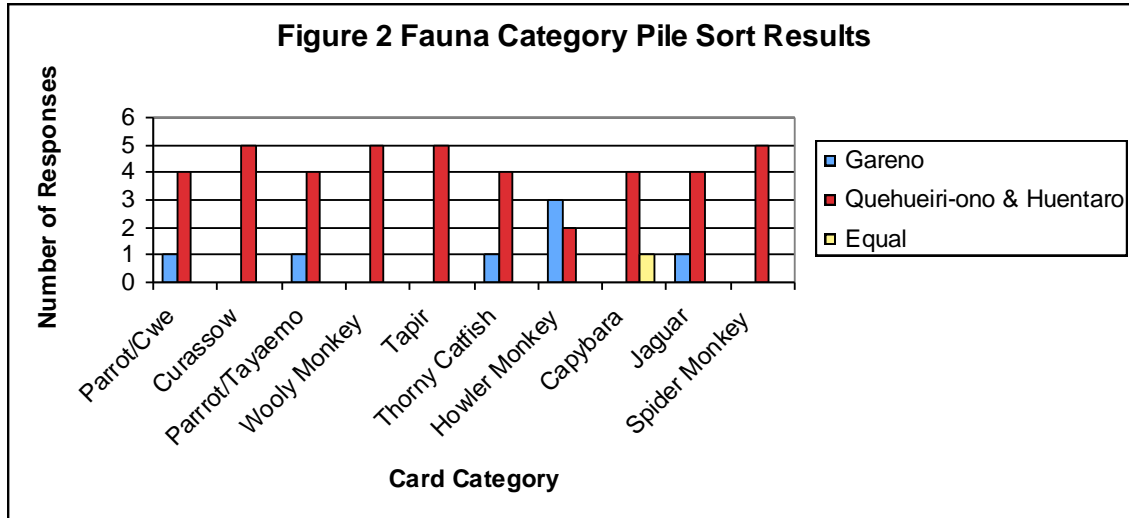
The pile sort consisted of 60 cards with words in Spanish and *huao tededo* as well as some pictures depicting emotions, climate, flora, and fauna. Informants were shown a card and asked where they encountered or felt more of that organism, emotion or weather pattern: in their current community of Garenó, in their previous community,



or equal. The categories that had no clear directionality (i.e., those with less than 80 percent agreement) were left out of the results. In addition, the communities that had been previously inhabited, Quehueiri-Ono and Huentaro, were combined, since both are communities farther in the forest along the Shiripuno River.

Figure 1 below shows the results of the opportunity and emotion categories. The results indicate that the residents of Gareno have more opportunities for employment, a higher quality of education, and a greater access to market activities than in their previous community. The road and transportation provided by the oil company increases the Gareno residents’ contact with these opportunities. At the same time, the residents of Gareno experience more anxiety. This can be attributed to the more challenging aspects that are connected to market integration such as the necessity for money and job security.

In Figure 2, different animals are listed that are present in the region. Higher abundances of every species except for howler monkeys were reported in Quehueiri-ono/Huentaro than Gareno. In semi-structured interviews, 80 percent of respondents in Gareno answered that there are not large numbers of animals because of the noise, the road, and high human population density, all of which are partly the result of the presence of the oil industry. However, as Figure 1 shows, residents believe there are more economic and educational opportunities.



4.2 December Interviews

While in Gareno, five semi-structured interviews were conducted with a mother and community health promoter; the president of Gareno; a man who has a store in his home; another man in the community; and a Kichwa man in the community. Three themes that were discussed by all participants included (1) decision-making regarding settlement and mobility, (2) the presence of contamination, and (3) interactions with the *feria*.

(1) Before coming to Gareno, we expected that people moved because of the oil company and their handouts. On the contrary, people came for various reasons. The female respondent said that the first people to come here moved because Perenco was giving food and supplies, but that is no longer the reason for the migration, as Perenco has stopped providing such benefits. Indeed, her family moved to Gareno because of social conflicts (e.g., infighting, theft) and the opportunity for her children to attend school. The other male Huaorani respondents echoed this desire for better educational opportunities in Gareno (including the proximity of a high school), but included other reasons as well, including ancestral ties to the land, proximity to the market, defense of territory, and presence of many family and friends. These answers show that living in Gareno did not merely stem from a desire to receive oil company handouts. People felt connected to their land and kin and shared a desire for better education. Even though many of the residents of Gareno did not move to the location because of the services provided, they eventually took advantage of the services after relocating.

(2) Everyone agreed that there was contamination present in Gareno. Chlorine from the petroleum activities killed plant life and all of the fish and forced people to drink rainwater instead of the river water. The Kichwa resident said that the company contaminated the forest and air with noise and cars, causing a decrease in fish and animals. The storeowner related much the same thing when he asserted that there is nothing to hunt, leading him to buy manufactured food. He also said he missed

BOX 1: Description of Huaorani Interactions at the Market

On a Friday morning, market day, people excitedly waited along the road for the company-owned truck. A couple sat in the cab with the driver but the majority of people (numbering almost 30 people) stood on the flatbed, bracing themselves for the bumps during the roughly 45 minute trip. When we arrived at the *feria*, a Kichwa woman came up to the truck and asked for bushmeat from the Huaorani men, who did not have any. The people quickly dispersed to various stands mostly selling cheap products from China, such as aluminum pots and tennis shoes. One man sold fish from his truck from which emanated the putrid scent of old fish. The bars and restaurants consisted of wooden floors and open seating areas with a square window cut into a boarded room representing the kitchen. One side of the market was the Napo River while the other was trampled forest. There was a constant stream of new people as trucks and cars continued to drop people off at the end of the *feria*. The single dirt road surrounded by at least 25 stalls took only 3 minutes to walk from one end to the other.

The oldest man from Gareno instantly goes to get a beer from the bar. He had made money earlier in the week by selling a blowgun to some tourists that passed his house. He stops passing cars in Gareno with his bamboo gate and demands payment or purchase for passage. Only once something is given will he lift his gate and let cars pass. His imposing demeanor, strong physique, distended earlobes, and reputation, stemming from a history of spearing attacks, encourages outsiders to give what he asks. Many of the men of Gareno frequent the *feria* precisely to drink alcohol, and they return home on the last truck in the late afternoon drunk and sometimes hostile. Saturday in Gareno is tense with men hung over and unpredictable. Women sometimes try to avoid being at home during this time and will go to be with their parents if possible.

We also observed how the vendors treated the Huaorani. Everywhere we viewed transactions occurring, we saw the Huaorani disrespected as vendors spoke to them in depreciating tones prices also seemed very high, from \$4 a gallon for gasoline in a country that extracts its own oil, to \$5 for a few pounds of rice. The bartering tactic does not work at the *feria*, nor does walking away. We tried this at a shoe stall, and the vendor said that he could not reduce the price because President Correa was putting very high taxes on imported goods from China. This is to increase Ecuador's own manufacturing sector. Overall, the Huaorani were treated unfairly yet still looked forward to the *feria* and depended specifically on the fuel bought to run their stoves, generators, and outboard motors.

food from the forest. Due to conflicts between Perenco and Ecuador's President, the company has withdrawn from this concession and PetroAmazonas (the state oil company) is taking over. Gareno's president said that there are fewer cars and less noise now that Perenco has left, which is good for the plants and animals. However,

he also declared that his manioc and plantains died due to contamination along with many fish.

(3) With all of these contamination problems, the people of Gareno have still chosen to live in that location, but are increasingly reliant on the market. This is a continuation of the changes from their traditional culture that have been evolving since missionary contact in 1958. The interviewees said that with the departure of Perenco and the arrival of the state oil company, they no longer receive food and supplies, but transportation is still provided. The people of Gareno have adjusted to the reduction of food, services, and local game by increasing their consumption of purchased goods. Only time will tell how Gareno residents will fare if transportation to the market is no longer provided.

At the *feria*, called San Pedro, people buy products such as rice, produce, sugar, pots, clothes, and fuel (for cooking as well as generators) and sometimes sell hunted game,

handicrafts, and agricultural produce (although prices paid are considered low). The president of Gareno said that he likes the food from the *feria*, and that the *feria* provides a chance to talk with a variety of people. He does not, however, sell meat at the *feria* because he feels it is for the family and community to consume. One Huaorani resident has taken advantage of the *feria* by buying things there and then selling them in Gareno for a profit.

In addition to discussing the *feria* in the interviews, we traveled there to observe the interactions occurring between the Huaorani and vendors (Box 1).

4.3 October-November Interview Data on Wage Labor Histories

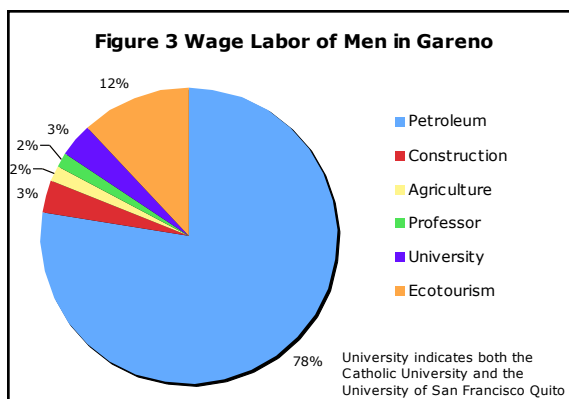


Figure 3 shows the percentages of jobs held by 12 men in Gareno. The majority of the men in Gareno have worked for petroleum companies, occupying multiple positions with different companies over the course of their lives. For example, Wepe, a man who lives in Gareno, has worked six wage labor jobs in his life so far, and all six jobs have been with petroleum companies including Perenco,

Repsol, CGG, Grant, Petrochina, and Seiscomdelta. All of his positions were with drilling operations and working along the oil pipeline in activities such as digging the trenches and putting the tubes together. While this data does not indicate how the men felt about the various positions, it does show that petroleum related labor is the most common form of earning a wage.

Question	P-Value	Gareno Average	Quehueiri-Ono Average
1: How would you rate your quality of life?	0.0051*	3.33	3.97
5: How much do you enjoy life?	0.8833	3.44	3.48
6: To what extent do you feel your life to be meaningful	0.2226	3.83	3.42
8: How safe do you feel in your daily life?	0.0437*	3.55	3.00
9: How healthy is your physical environment?	0.0176*	3.28	3.87
12: Have you enough money to meet your needs?	0.4649	2.00	2.16
13: How available to you is the information that you need in your day-to-day life?	0.0240*	2.68	3.48
14: To what extent do you have opportunity for leisure activities?	0.3814	3.59	3.35
22: How satisfied are you with the support you get from your friends?	0.0231*	2.72	3.42
23: How satisfied are you with the conditions of your living place?	0.4289	3.78	3.58
24: How satisfied are you with your access to health services?	0.0111*	3.11	2.26
25: How satisfied are you with your transport?	0.0311*	3.00	2.35

* indicates statistical significance at an alpha of 0.05.

4.4 WHOQOL

One way in which we deduced how the people of Gareno felt about their lifestyle (as compared to Huaorani residents of Quehueiri-ono, a more remote village) was by implementing the World Health Organization's Quality of Life Survey (WHOQOL). The survey was conducted during the NSF study. The WHOQOL survey asks questions ranging from physical pain to satisfaction with local services. Of the 26 questions asked, 12 were chosen as a focus for this study. The WHOQOL uses a Likert scale from one to five, with one representing "Very Poor" and five indicating "Very Good." The questions and their corresponding probabilities are listed in Table 1 below.

These questions were chosen for their relation to each community's connection to place with regard to emotions and satisfaction. Of these responses, Gareno had a

higher average for questions 6, 8, 14, 23, 24, and 25, which refer to themes such as satisfaction with infrastructure and services. Quehueiri-ono had a higher average for questions 1, 5, 9, 12, 13, and 22, which touch upon life satisfaction, environmental quality and social relationships. In Question 1, which ascertained the overall quality of life, the difference between Gareno and Quehueiri-ono was highly statistically significant with a probability of less than 1 percent. Quehueiri-ono is close to four, which indicates a good quality of life, whereas Gareno is closer to three, indicating neither poor nor good. This shows that Quehueiri-ono residents overall felt that they had a higher quality of life than Gareno residents. Furthermore, the results to Question 9 show that Gareno residents feel that their physical environment is less healthy than what the Quehueiri-ono residents feel about their environment's health. However, questions 24 and 25 show that Gareno residents are more satisfied with the access to transport and health services than Quehueiri-ono residents. Both the semi-structured interviews and the results from the WHOQOL survey show that the residents of Gareno balance the positives and negatives of living in a damaged environment by benefiting from transportation and other services. Despite the challenges of living next to an oil road and leading a different type of life to previous communities, the responses to question 5 show that Gareno residents do enjoy the quality and kind of lifestyle they live.

4.5 October-November Interview Data on Perceptions of Development

Questions about development, quality of life, and the advantages and disadvantages of the road were asked in the NSF study. To understand how the people in Gareno evaluated the changes in their lifestyle, they were asked what the word "development" meant to them. Responses included statements that development was forward progress in education, health and the economy, growth in the population, more money and jobs, and the acquisition of more knowledge. There was also a general understanding that development is good, especially the money that it brings. With this understanding of development, changes in the community that would be considered development include greater access to higher education and health services, as indicated in the pile sort, as well as increased job availability due to the accessibility to oil industry positions. The people of Gareno are looking toward development in their community as something that will improve the quality of their lives rather than actions that will hurt their surrounding environment. During the interviews, they did mention disadvantages of development, namely problems associated with the road such as noise, alcoholism, and health issues. And when asked about what a good life meant to them, the consensus was that it was a life without problems. So while development is likely causing a lot of their existing difficulties they also see it as a solution to many of their existing problems.

5. Conclusion

The people of Gareno have chosen to live in a community that runs along the oil road and have adapted their lives to fit what living next to an oil road requires. The

community president said that the closeness to the market, medical care, and ease of transportation were the most important reasons why he lived in Gareno, a sentiment echoed by others in the pile sorts. However, in the pile sorts and interviews, community members noted the reduced environmental viability, especially hunting success, of the forest in Gareno. This is especially important since the Huaorani place a high cultural value on hunting.^{xi} Apparently, the desire for consumer goods is just as powerful, and it has led some Huaorani to walk the narrow line between the traditional culture of generalized reciprocity and generosity versus making a profit. While the pile sorts and interviews demonstrated the advantages of being in Gareno such as health services and educational opportunities, observing the community showed the disadvantages, including violence as a result of increased alcohol intake and more pressure to have money in order to buy consumer goods. The wage labor data showed that many of the men turn to the oil companies to gain money through oil related work. Even with these stresses and disadvantages, the WHOQOL survey results showed that Gareno residents report higher satisfaction in certain lifestyle categories than the residents of the more traditional community Quehueiri-ono, namely access to health and transport. However, Quehueiri-ono residents report high overall quality of life, health of the environment, and social support.

The Huaorani of Gareno are not “noble savages.” They do not honor their environment above all else nor do they simply live in “harmony” with their forest as outsiders tend to believe. Their largest concerns are the health of their families and the education of their children. Gareno’s growing population and introduction into a consumer society has encouraged the people in this community to search for ways in which they can build their own human, social, and financial capital. It is unfortunate and untenable that these goals come at an ecological cost concomitant with oil extraction. What are needed are partnerships between communities like Gareno with organizations such as international NGOs that provide livelihood support without ecological degradation. Projects including ecotourism are underway via organizations such as Tropic, but other options include microenterprise-based handicraft production linked with ecological monitoring and stewardship of important floral resources involved in the production of hammocks, bags, and jewelry (e.g., *Astrocaryum chambira*). Various Huaorani communities could work together to establish a fair trade cooperative that assures that handicrafts are made via best practices and that prices do not undercut producers or gouge buyers. Another idea, ripe for the involvement of an environmental education NGO, would be the creation of a study abroad field program in which Huaorani youth and international students work together in learning ecological field methods such that the former can work as research assistants or ecotourism guides and the latter can use these skills for graduate study. A side benefit would be the generation of longitudinal faunal census data to monitor population fluctuations in various parts of Huaorani territory. These programs need to be supported with national and international groups that have the interest of the community at heart. But these partnerships cannot be based on starry-eyed visions of noble savages, where the worth of people stems from their congruence with romanticized notions of ecological exaltedness.

As oil extraction activities, already present in the region, contribute largely to the national economy and affect the way communities are organized, stances that call for the immediate withdrawal of oil companies from the Amazon are not realistic. Communities similar to Gareno are unlikely to go back to subsistence lifestyles with the removal of the oil industry in their region. If all oil company activities are removed from their territory, they will look to other wage labor positions to fill their need for food and money. However, it should be emphasized that what makes oil extraction attractive to residents of Gareno are the services provided by oil companies that the national government fails to offer. Not only should the Ecuadorian government fulfill its duty to provide medical, educational, and economic services to its people, but national policy and programs that educate and provide indigenous peoples with options for other forms of development, such as fair trade farming mentioned above, can help mitigate conflicts between the government and these groups in the future. As initial sustainable development programs are implemented, the oil industry in the country can begin to be disbanded. Most importantly, the Ecuadorian government needs to include indigenous groups in these policy decisions so as to create a mutually beneficial agreement, thus one that will have a long lasting impact.

In Gareno, the people have chosen economic benefits, territorial ties, and reduced social conflict over the ecological resources they used to enjoy in their former residences. They clearly recognize these tradeoffs and see the benefits that oil companies can bring despite the environmental cost. A majority of them understand that oil means air and water pollution, noise, defaunation, trash, and traffic. The community members look towards further development such as increased job availability to solve these issues rather than seeing it as something they should avoid. Their community is an ideal location for sustainable development to expand. They want and need some form of economic growth and also require that growth to nurture their surrounding environment. Researchers, think tanks, governments and non-governmental organizations need to focus on communities that are at this cusp and change a history of destructive development to one that will not only sustain the present generation, but future generations to come.

End Notes

ⁱ Kimerling, 1991.

ⁱⁱ Kimerling, 1996.

ⁱⁱⁱ *Ibid.*

^{iv} Rival, 2002.

^v The 30-year period refers roughly from the first incursions of oil companies (e.g., Shell) in the region in the 1930s to the start of sustained peaceful contact with outsiders beginning in the 1960s.

^{vi} Rival, 2000.

^{vii} Franzen, 2006.

^{viii} Kimerling, 2000; Sawyer, 2004.

^{ix} Rival, 1993.

^x Bernard, 2006.

^{xi} Holt et al., 2004; Lu in press.

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