

## Transboundary Dimensions of Petroleum Development in Ecuador and Peru

*Edward Korzetz*

### Introduction

As the recent flaring of hostilities amply shows, the Ecuador-Peru boundary remains highly contested. Though not an immediate catalyst of recent tensions, petroleum potential in the highly contested Cenepa watershed astride the border is contributing to nationalist feeling in both countries (New York Times, 1995; Christian Science Monitor, 1995. See News Section for analysis of recent conflict). Moreover, petroleum development has exacted an increasingly stiff toll on social and environmental conditions in the transfrontier region, with indigenous groups among the most affected. Battle lines have thus been drawn between advocates of ecosystem preservation and defenders to indigenous homelands versus proponents of national economic growth in the form of Amazonian crude.

There is a substantial amount of literature exploring the issue of petroleum development in the Amazonian regions of Ecuador and Peru. This literature, in most cases, employs a country-by-country approach that largely neglects transboundary features of the present dispute.

This article aims to correct this deficiency. Its purpose is not to challenge extant treatments of the subject so much as it is to promote greater awareness of the political and environmental ramifications of petroleum development in a fragile Amazonian ecosystem that is neither defined nor constrained by state boundaries.

### Petroleum Development

Ever since the early 1900s, petroleum extraction has occurred in Ecuador and Peru. However, in the past three decades, both countries have aggressively promoted the expansion of their petroleum industries. In fact, with recent moves to privatise their petroleum sectors, both

countries' petroleum development is expected to dramatically increase throughout the 1990s.

Exploration and extraction activities centre in their respective Amazonian regions. In Ecuador, there is a high concentration of petroleum activities in the western region of its Amazon basin, better known as the *Oriente*. With its recent seventh international exploration bidding round, indeed, these activities are expected to dramatically increase within the region. Similarly, Peru's northern jungles are the principal location for its petroleum activities. The environmental and cultural implications of current development are alarming in their own right and exacerbated by proximity to the border.

### Petroleum Development in Ecuador

Even though Ecuador has been producing oil for export since 1911, the petroleum industry did not actively pursue petroleum development in its Amazon basin until 1967 when Texaco and Gulf Oil opened up the Lago Agrio oil field. Since then, approximately 1.5 billion barrels of oil have been extracted from the Oriente.

Today, oil production activities encompass almost 1 million hectares in the Oriente and produce approximately 282,000 barrels of crude per day (b/d) (Kimerling, 1991). Furthermore, there is no sign of a slow down in the country's ambitious petroleum agenda. In fact, Ecuador recently has opened up its petroleum sector to greater foreign participation in hopes to double its oil production by 1998 ('Ecuador's..', 1994).

Clearly, petroleum development has become a major factor in Ecuador's economy. In 1988, petroleum revenues accounted for 40.3% of the national budget. In addition, the export of petroleum and its derivatives accounted for 48.7% of the country's export earnings in 1989 (Kimerling, 1991).

In sum, it appears that Ecuador is quickly developing a dependent economy based solely on petroleum production. It is not surprising that the extreme economic pressures driving the Ecuadorian government to exploit oil reserves in the Oriente threaten to overwhelm demands for the protection and preservation of the fragile ecosystem and the traditional indigenous communities living within it.

### Ecuador's Seventh Exploration Bid

After twenty-seven years of petroleum production, Ecuador still remains dependent on foreign companies to provide capital investment and technology for petroleum exploration and production (E & P). In August 1991, for instance, 24 oil companies were operating in an extraction and/or exploration capacity in the *Oriente* (Rainforest Action Network, 1991). However, "inflexible contract terms, protracted negotiations following contract awards, and administrative inefficiency" had resulted in a decline in foreign participation ('Ecuador's..', 1994). In 1990, for instance, Texaco shut down all of its operations in Ecuador. In addition, in 1991, Conoco also decided to suspend all of its petroleum exploration and exploitation activities.

Yet, with the growing need for foreign participation to attract even greater foreign investment, the Ecuadorian government has rapidly altered its political and economic environment to attract even greater foreign investment. In 1992, Ecuador withdrew from OPEC. In addition, in late 1993 the Ecuadorian government approved measures to reform its 1974 Hydrocarbon law in order to end Petroecuador's domination of Ecuadorian petroleum development and to attract greater private investment ('Ecuador's..', 1994; '1990s Bright..', 1993).

The Seventh International exploration bidding round was the most recent and important step towards expanding new E & P in the *Oriente*. Overall, the bidding round offered production sharing contracts for tracts covering 8 million acres ('Ecuador's..', 1994). As illustrated on Figure 1, most of this acreage designated for petroleum exploration is found in Ecuador's Amazon basin. Of the 13 blocks in total, ten of them are onshore blocks located in the *Oriente*

region. Some of these blocks are approximately 494,200 acres in size ('Ecuador's..', 1994).

At the end of the round, Ecuador granted new Amazon oil concessions to six US firms (Amoco, Mobil, Oryx, Santa Fe Minerals, Triton Energy and Clapson), one British company (City) and one Ecuadorian company (Tripetrol) (Switkes, 1994). As a result, the *Oriente* is rapidly becoming a completed jigsaw puzzle of mapped out petroleum concessions that will directly affect the fragile ecosystem and traditional indigenous homelands.

### Petroleum Development in Peru

Petroleum extraction began in Peru in the 1800s. Ever since, the future of Peru's petroleum industry has been a roller coaster ride. In 1968, the Peruvian government successfully expropriated the US based International Petroleum Company, which symbolised over a half of century of foreign monopolistic exploitation. However, since the nationalisation of the Peruvian petroleum industry, the state-owned company, Petroperu, has had little success in developing and expanding production.

As a result, Peru has rapidly moved to privatise its petroleum sector. First, the government plans to auction off many of Petroperu's oil concessions. In addition, it will also put up for sale approximately 60% interest in its refining and oil production operations. Finally, the operating concession for the Northern Peruvian pipeline (200,000 b/d capacity) is scheduled to be sold while full ownership of the pipeline will remain in the hands of the Peruvian government. At this time, according to Petroperu Chairman Emilio Zuniga, approximately 20 foreign companies have expressed interest in the country's privatisation activities ('Peru's petroleum privatisation..', 1995).

Such privatisation measures are curbing the decline in oil production. In the first nine months of 1994, production rose 3.5% over the previous year. In October 1994, for instance, production reached 128,000 b/d compared to 126,170 b/d in October 1993 ('Peru's petroleum privatisation..', 1995).

The greatest share of petroleum production comes from the Peruvian jungles. Last October, 80,700

Figure 1

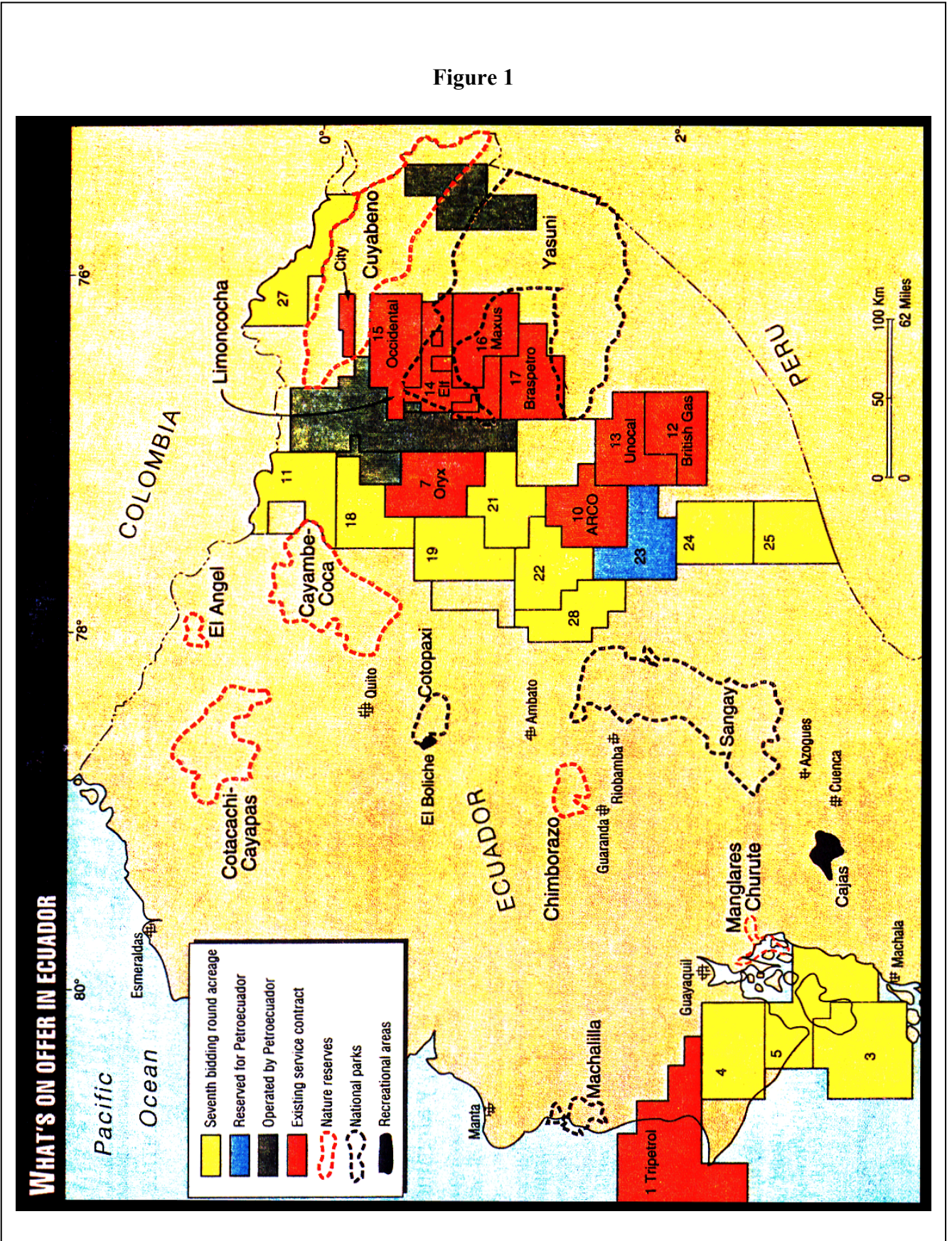
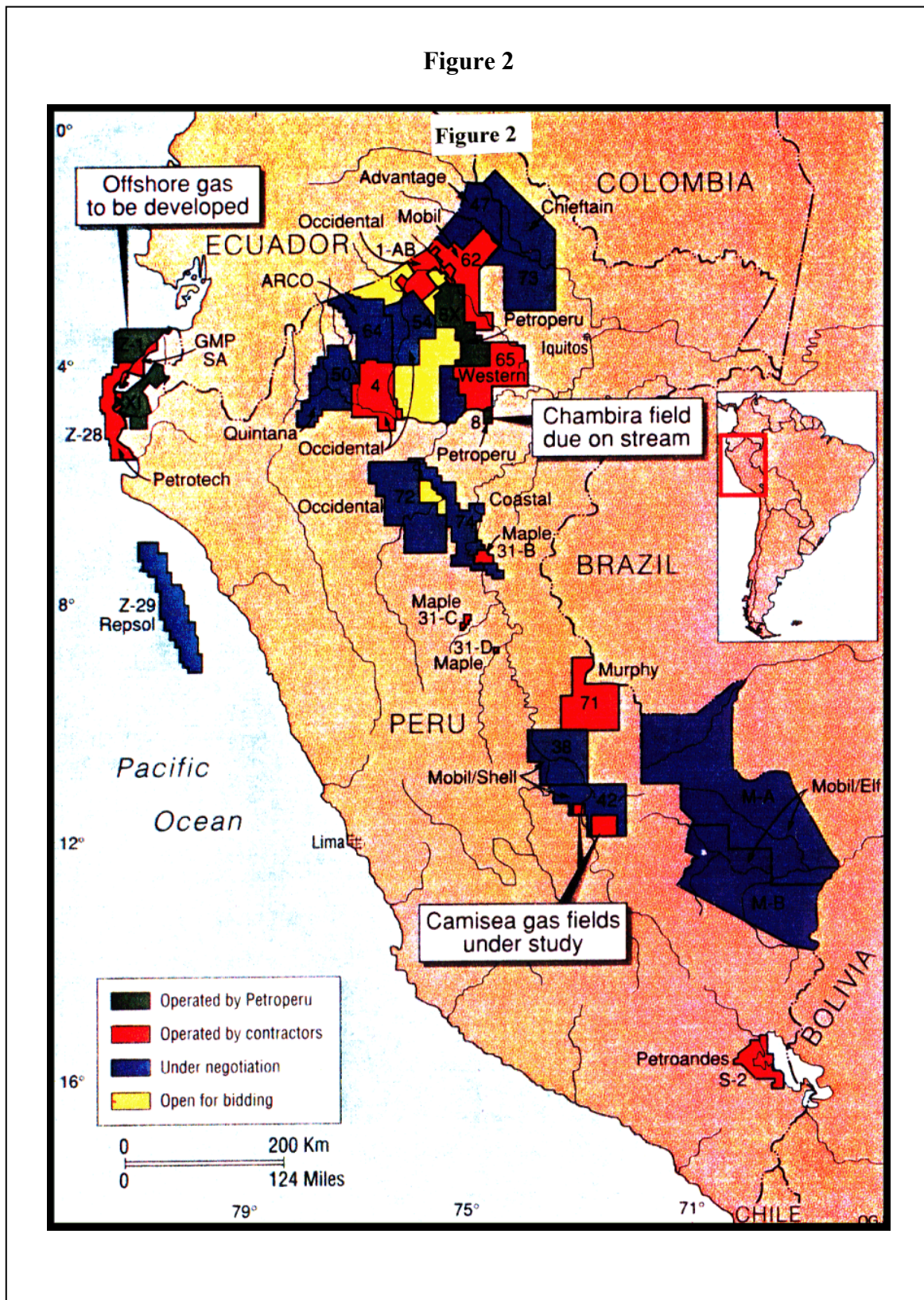


Figure 2



b/d were produced from the jungles compared to only 19,270 b/d offshore and 23,800 b/d from the north coast ('Peru's petroleum privatisation..', 1995). The oil fields in the northern jungle are now the most productive concessions in the country.

Not surprisingly, promising negotiations are under way to expand exploration and development activities in the northern region. As illustrated on Figure 2, many of the concessions under negotiation and/or open for bidding are found clustered together with several operating blocks near the Ecuador-Peruvian border. Table 1 lists the operating blocks and the blocks under negotiation in the northern jungles.

Similar to its Ecuadorian counterpart, the northern jungles of Peru are rapidly becoming congested with numerous petroleum concession blocks that may very well threaten several indigenous communities as well as the regional ecosystem. Clearly, the rapid expansion of petroleum activities in Ecuador and Peru raise alarming concerns in both countries.

TABLE 1.

**Operating Blocks and Blocks Under Negotiations  
in the Northern Jungles of Peru**

Operating Blocks:

* Block 1-AB	Occidental Petroleum Corp.
* Block 4	Occidental Petroleum Corp.
* Block 62	Mobil Exploration & Producing Peru, as operating partner with Advantage Resources International
* Block 65	Western Geophysical Services
* Block 8	Petroperu

Blocks Under Negotiation:

* Block 64	ARCO Oil & Gas Co.
* Block 54	Occidental Petroleum Corp.
* Block 47	Advantage
* Block 73	Chieftain International Bermuda
* Block 50	Quitana Minerals Corp. and YPF SA

SOURCE: 'Peru's Petroleum Privatisation to Gather Momentum in 1995', *Oil and Gas Journal*, 16, January 1995, 93: 3 14-18.

**The Environmental and Socio-cultural Consequences**

Regional environmental preservation is seriously jeopardised by both countries' aggressive policies to promote national economic growth in the form of Amazon crude. Recent evidence suggests that the development of petroleum sectors in Ecuador and Peru's Amazonian regions has had a negative impact upon the ecosystem and the welfare of the indigenous people living within it. The environmental and socio-cultural degradation comes in the form of oil spills, discharge waste, faulty pipelines and storage pits, and rampant colonisation related to the petroleum sector.

In most cases, standards for petroleum exploration and extraction are significantly lower in Ecuador and Peru than in the industrialised countries. In Ecuador, for instance, more than 4.3 million gallons of toxic waste, including produced water and drilling mud, are produced every day from oil production activities. Most of this toxic waste seeps into the Amazon ecosystem from numerous unlined open storage pits (Kimerling, 1991a; 1991b). Faulty construction and inadequate maintenance also have led to additional environmental contamination (Southgate, 1994).

In addition, the environmental security of petroleum activities is greatly jeopardised by a history of natural disasters such as earthquakes and landslides. The World Bank, for instance, reported that 5.9 million gallons of oil spilled into the Ecuadorian watersheds of the Quijos, Coca, Aguarico, and Napo rivers as a result from a SOTE rupture caused by a major earthquake in March 1987 (Kimerling, 1991a; 1991b). The Ecuadorian watersystem, directly upstream of the ecosystems of Peru and Brazil, ran black with oil for hundreds of miles.

Since 1973, the Ecuadorian government has reported approximately thirty major spills from the Trans-Ecuadorian Pipeline (SOTE) totalling more

than 16.8 million gallons of oil spilled into the Amazon basin. By comparison, the infamous Exxon Valdez oil spill in Alaska's Prince William Sound totalled approximately 10.8 million gallons (Kimerling, 1991a; 1991b). In addition, spills from the secondary pipeline system have further contributed to the environmental degradation of the Amazonian ecosystem.

The Peruvian ecosystem also has experienced environmental degradation as a result of petroleum activities. On lot 50, for instance, the Aguaruna and Huambisa communities are extremely concerned about the oil activities of Quitana Minerals Corp. In addition to concerns over the oil well themselves, the indigenous peoples have voiced strong opposition to the potential construction of a pipeline and accompanying road that would encourage rampant colonisation. Similar fears have emerged among Peruvian environmental groups and the Achuar people who live in the jungles of lot 54 recently acquired by Occidental Petroleum Corp.

However, in addition to domestic petroleum activities, Peru's Amazonian ecosystem also is effected by toxic contamination originating across the border upstream in Ecuadorian territory. This transboundary degradation only increases the negative environmental and socio-cultural consequences in Peru.

As a result of numerous natural and man-made disasters, there is growing concern that the pristine Amazonian ecosystem is quickly becoming a toxic wasteland. The negative effects not only include the contamination of numerous watersystems but also the destruction of an untold sum of aquatic, animal, and plant life.

In addition, the region has experienced adverse social and cultural impacts. Several health organisations and environmental groups report that the petroleum industry is directly responsible for a dramatic increase in boom towns, uncontrolled colonisation, extensive contamination of drinking water, health problems, failing crops and fisheries, and severe poverty. Malnutrition rates, for instance, which were previously considered non-existent in indigenous communities found in the Ecuadorian *Oriente*, are currently estimated between 65-98% (Kimerling, 1990). There have also been numerous reports of

skin rashes, nausea, cancers, and neurological and reproductive problems.

### **The Texaco Dilemma: The First Transboundary Case**

In 1972, the Ecuadorian government granted Texaco a 20-year contract in petroleum concessions. For the next 20 years, Texaco virtually dominated over Ecuador's petroleum industry (Switkes, 1994).

The original terms of the agreement between the Ecuadorian government and Texaco paved the way for a foreign company's exploitation of Third World natural resources while leaving behind an environmental and social disaster. Originally, Texaco and its partners were guaranteed 93% of the profits from their exploration and production activities (Switkes, 1994). In addition, the company in 1972 began the construction of the Trans-Ecuadorian pipeline (SOTE) which transports crude oil from the *Oriente* over the Andes mountains to coastal refineries.

At the time Ecuador had no environmental laws concerning petroleum development. It was not until the enactment of the 1971 Hydrocarbons Laws that petroleum companies were required to comply with then recently established environmental regulations. Yet, in reality, these regulations were never enforced (Switkes, 1994).

In 1990, Texaco shut down all of its Ecuadorian operations. In most part, Texaco terminated its operations due to increasingly unfavourable and inconsistent policies on the part of the Ecuadorian government. At the time of Texaco's pullout, the company was only allowed to retain 37.5% of the oil it extracted while the Ecuadorian government kept the rest (Switkes, 1994).

In the end, Texaco, over a 20 year period, extracted approximately 1.2 billion barrels of crude oil from the *Oriente* while despoiling the environment. As previously mentioned, approximately 16.8 million gallons of oil have spilled in the Ecuadorian Amazon basin as a result of 30 major spills from the Trans-Ecuadorian pipeline. Texaco discharged 20 billion gallons of toxic production waters and four million barrels of untreated drilling mud (Switkes, 1994). It left behind 1,000 uncovered waste pits and over 300

miles of roads open to colonisation that led to rampant deforestation of more than two million acres of pristine rainforest (Switkes, 1994).

In addition to the alarming environmental consequences, recent studies indicate that Texaco's operations have had a significant impact upon social conditions. An independent report by the Centre for Economic and Social Rights (CESR), carried out by a team of doctors, scientists and lawyers, found that there was "*an increased risk of serious and non-reversible health effects such as cancers and neurological and reproductive problems*" as a result of contaminated water supplies. This social calamity is not confined to indigenous communities. In most cases, the public health crisis and growing poverty is equally, if not more, severe for colonists. To date, an estimated 30,000 people have been affected by unsafe petroleum extraction (Switkes, 1994).

#### **Ecuadorian Indigenous Peoples' Class-action Lawsuit**

Since Texaco terminated its operations in Ecuador, environmentalists and indigenous organisations have joined forces to hold Texaco liable for damages resulting from years of irresponsible petroleum production practices. The *Campana Amazonia por la Vida* (Amazon for Life Campaign), a coalition of environmental and indigenous activists, has called for an international boycott of Texaco products.

In November 1993, a class-action suit was filed against Texaco on the behalf of Ecuadorian indigenous peoples in New York Federal Court. The suit seeks US\$1.5 billion in damages from Texaco to be invested in clean-up operations. It charges that Texaco knowingly caused damages to the ecosystem and the local Amazonian communities.

Texaco and the Ecuadorian government argued that New York Federal Court was an inappropriate legal venue that violated Ecuador's sovereignty. Therefore, the case should be heard in an Ecuadorian court. The plaintiff's legal team, on the other hand, contended that the Ecuadorian legal system was ineffective with a general prejudice against indigenous peoples. Surprisingly, in April 1994, Judge Vincent

Broderick ruled that the federal court would hear the case if internal corporate documentation clearly demonstrates that decisions made in Texaco's US offices affected the management of its Ecuadorian operations (Switkes, 1994).

To date, Texaco has denied the charges brought against it. However, on 3 August 1994, the Ecuadorian government reached an "*informal*" agreement with Texaco to clean up the environmental damage resulting from the company's past operations. Environmental and indigenous organisations immediately denounced the agreement because it does not specify "*costs, a time frame, or forms of reparation*" (Switkes, 1994).

To further muddy the legal waters, in an attempt to avoid financial responsibilities, Texaco recently contended that it was bankrupt when the damages occurred. This new position clearly contradicts Texaco's previous commitments established in accord with the Ecuadorian government in August 1994. At present, judicial action on the class-action suit remains pending.

#### **Peruvian Indigenous Peoples' Class-action Lawsuit**

On 29 December 1994, a class-action lawsuit was filed against Texaco in New York Federal Court on the behalf of 25,000 Peruvian indigenous peoples living around the Napo River in the northeastern part of Peru ('Texaco..', 1995). The suit alleges that Texaco's operations upstream in Ecuador have caused severe ecology damage to Peru's northern jungles. It charges that "*Texaco deliberately ignored reasonable and safe practices and treated the pristine Amazon rain forest..and its people as a toxic waste dump.*"

As a result of unsafe extraction practices and numerous oil spills, pollutants flowed across Ecuadorian borders into Peru. Similar to the Ecuadorian class-action suit, the Peruvian suit cites severe environmental and social damage. Again, Texaco vehemently denies all charges.

#### **Conclusion**

In the last three decades, both Ecuador and Peru have actively promoted their individual petroleum

agendas. The majority of their exploration and extraction activities are presently conducted in the western region of Ecuador and in the northern jungles of Peru. These activities adversely impact this pristine transboundary ecosystem, rich in biodiversity. Indeed, there is growing evidence supporting claims of extensive environmental and socio-cultural degradation in both countries.

The ecological and social ramifications are even more evident when Ecuador and Peru's Amazon petroleum activities are examined in transboundary perspective. As shown in Figures 1 and 2, the general area of future oil extraction activities in both countries is located in a local ecosystem whose boundaries cannot be defined by political borders. As a result, the negative effects originating within a given country may very well affect an entire regional ecosystem.

The two class-action lawsuits filed against Texaco signal the transboundary implications of petroleum development. Even though Texaco vehemently denies all charges, its past operations in Ecuador appear to have had a negative impact upon the Peruvian environment and its indigenous communities as well.

With expanding petroleum activities in both countries' Amazonian regions, the Texaco issue should not be considered a deviant case. In order to reduce future negative regional impacts, both Ecuador and Peru must seek greater cooperation and coordination over the management of this fragile ecosystem. However, as recent events indicate, the two countries have moved in the opposite direction, resorting to force to promote territorial claims of sovereignty (see News Section).

Clearly, the Amazonian region still is considered to be an urgent national security issue by both Ecuador and Peru. As a result, it is highly probable that the two countries will continue to promote rapid colonisation and development in the region to support their respective territorial claims. In fact, even though the region's rich abundance of natural resources (i.e. petroleum, gold and uranium) is not the principal instigating factor promoting conflict, it may very well contribute to future tensions between the two countries.

In a recent plea, the *Confederacion de Nacionalidades Indigenas del Ecuador* (CONAIE) called for both governments to "respect and guarantee the life and territory" which its communities occupy (Macas, 1995). To the indigenous peoples living in the Amazon basin of Ecuador and Peru, this recent conflict is only another political event diverting attention away from the underlying environmental and social crisis threatening the region. The conflict pitting environmental and cultural preservation versus national petroleum led growth will continue to wage on long after the present military hostilities are concluded.

---

## References

- '1990s Bright For Post-OPEC Ecuador', *Oil and Gas Journal*, 1 March 1993, 91: 9, 56-61.
- 'A Little War Chills South America's Hopes.', *Christian Science Monitor*, 24 February 1995: 7.
- 'Ecuador's 7th Exploration Bid Round Under Way', *Oil and Gas Journal*, 7 February 1994, 92: 6, 38-40.
- Kimerling, J. (1991a) *Amazon Crude*, Washington: Natural Resources Defence Council.
- Kimerling, J. (1991b) 'Disregarding Environmental Law: Petroleum Development in Protected Natural Areas and Indigenous Homelands in the Ecuadorian Amazon', *Hastings International and Comparative Law Review*, 14: 4, 849-903.
- Kimerling, J. (1990) 'Poisoning Ecuador's Oriente', *Hemisphere* 3: 1, 6-7.
- Macas, L. 'CONAIE Calls for a Cease Fire', Electronic Mail Communication: *Confederacion de Nacionalidades Indigenas del Ecuador*, INTERNET (ccc@conaie.ec), 31 January 1995.
- 'Fighting Intensifies Along the Peru-Ecuador Border', *New York Times*, 3 February 1995: A7.
- 'Oil in the Ecuadorian Amazon', *Rainforest Action Network*, 19-26 October, 1991, 9-10.
- 'Peru's Petroleum Privatisation to Gather Momentum in 1995', *Oil and Gas Journal*, 16 January 1995, 93: 3, 14-18.
- Southgate, D. and M. Whitaker (1994) *Economic Progress and the Environment: One Developing Country's Policy Crisis*, New York: Oxford University Press.
- Switkes, G. (1994) 'Ecuador: The People vs. Texaco', *NACLA Report on the Americas*, 28: 2, 6-10.
- 'Texaco Rejects Claims in Environmental Lawsuit by Peruvian Indians', *Oil and Gas Journal*, 16 January 1995, 93: 3, 17.

---

Edward Korzetz, Department of Political Science,  
Colorado State University, USA.