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A Line in the Equatorial Forests: Chinese Investment and the Environmental and Social Impacts of Extractive Industries in Ecuador

WORKING GROUP ON DEVELOPMENT AND ENVIRONMENT IN THE AMERICAS

Rebecca Ray and Adam Chimienti

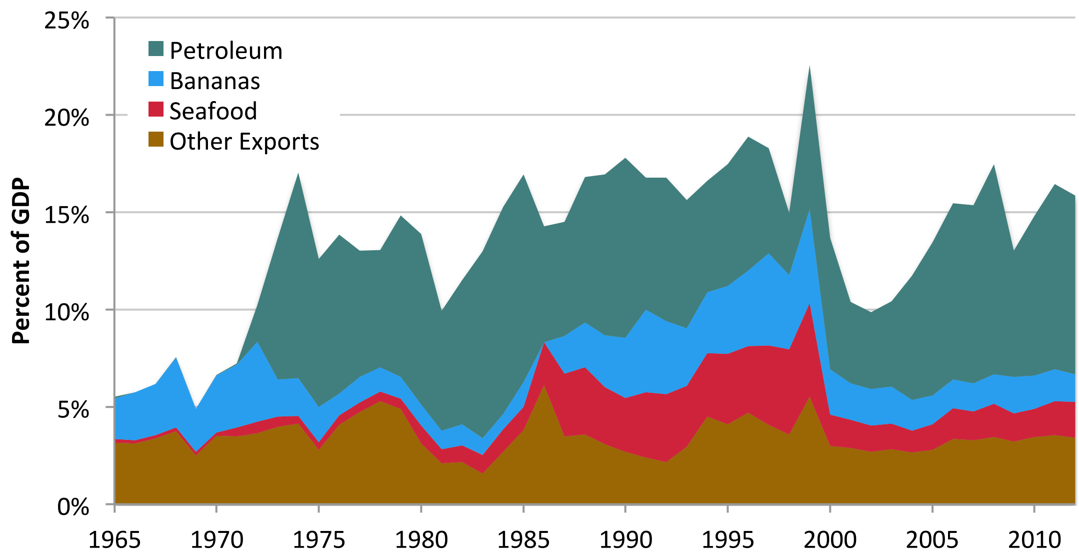
Ecuador's "China boom" encompasses investment, finance, and trade, and is overwhelmingly concentrated in the oil sector. Ecuador has established a top-level legal framework to limit the social, environmental, and economic risks associated with this sector though this framework is facing increasing pressure from a diverse array of interests. After an examination of the Ecuadoran economy and its general engagement with China, this paper performs a case study on the experiences of Chinese state-owned Andes Petroleum and PetroOriental, in order to draw lessons for future Chinese investments for the upcoming expansion of Andes Petroleum's concessions into the Ecuadoran Amazon that may test both Ecuador's legal framework and Andes' corporate goodwill.

We find that the record of Andes Petroleum and PetroOriental have had relatively positive experiences in Ecuador to date when compared to other domestic and foreign-owned firms in the sector. However, the social and environmental landscapes in the new concession zones are vastly different from where these firms are currently located. Furthermore, this expansion is the first new concession under Ecuador's recent law on prior consultation, and problems have already arisen in how the law has been applied. How the government, Andes Petroleum, and civil society handle this situation will determine whether the Ecuador-China relationship becomes a model of responsible oil production or whether it will betray the vision behind the country's impressive legal framework. Special attention should be paid to transparency and public accountability for all actors involved: government, civil society, and the oil companies themselves.

1. INTRODUCTION: ECUADOR, OIL, AND THE CHALLENGE OF DIVERSIFICATION

Oil has been paramount in Ecuador's economy since its discovery there in the 1970s. It quickly displaced bananas as the country's most important export, as Figure 1 shows, and has dominated exports ever since. In 2012, petroleum exports represented nearly 60 percent of all exports and over 10 percent of national GDP.

FIGURE 1: Ecuador Exports as a Share of GDP, by Commodity



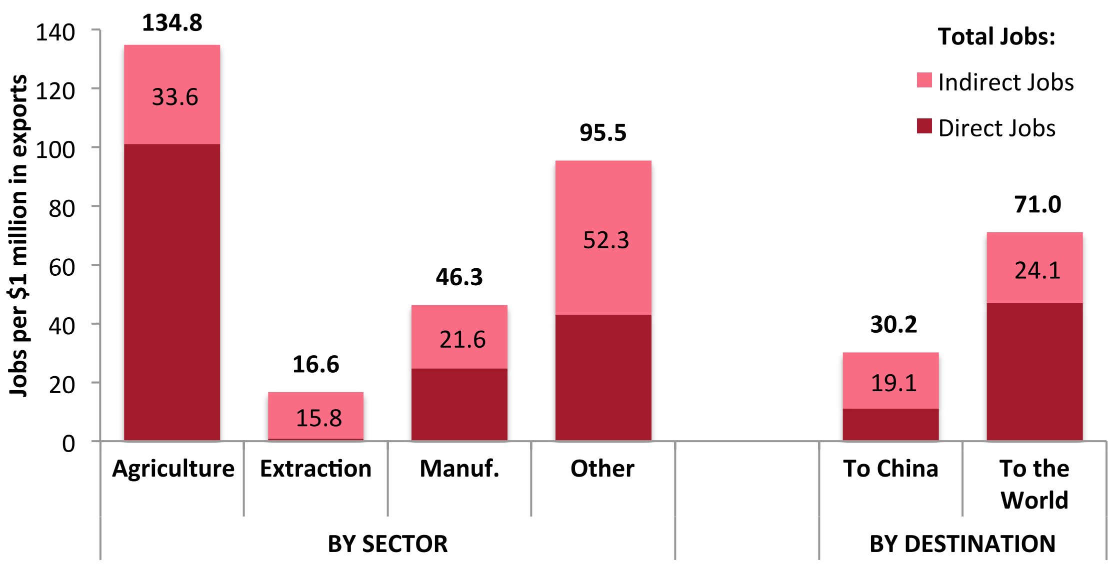
Source: Authors' analysis based on COMTRADE (SITC Rev.1). Note: seafood includes fish and crustaceans; petroleum includes crude petroleum and petroleum products.

The government of Ecuador has acknowledged publically that basing the economy on petroleum is not sustainable environmentally, socially, or economically, and it has made diversification a major long-term policy priority. The national development plan, published early in President Rafael Correa's administration, states that "the existence of oil camps brings opportunities to generate income … However, the socio-environmental impacts of this extraction are very high, such as settling protected lands, deforestation, and the resulting habitat degradation, loss of biodiversity, contamination of soils and water sources, and others" (SENPLADES 2013, 460-461, authors' translation).[1]

[1] An additional important drawback to Ecuador's dependence on oil is the country's predisposition to earthquakes. For example, in March 1987, two major earthquakes damaged the trans-Andean/Ecuadorian pipeline, severely disrupting the national economy.

Socially, oil dependence is problematic for several reasons. First, it is significantly less labor-intensive than other tradable sectors, so every $1 million in extractive exports supports far fewer jobs than the same amount of agricultural or manufacturing exports. Figure 2 compares the labor intensity of Ecuador's exports, by sector and destination. Based on the Central Bank's most recent input-output tables, it shows both the direct employment and indirect employment (in upstream industries) supported by each $1 million in exports. Extraction supports less than one direct job, and fewer than 20 indirect jobs, for every $1 million in exports. By contrast, manufacturing supports about 25 direct and over 20 indirect jobs, and agriculture supports over 100 direct and over 30 indirect jobs, for the same value of exports. Ecuador's exports to China are heavily concentrated in extraction—much more so than its exports to the rest of the world (more on this below). Consequently, exports to China support roughly 30 jobs per $1 million, far fewer jobs than exports to the rest of the world.

FIGURE 2: Labor Intensity of Ecuadorean Exports, 2008-2012, by Sector and Destination



Source: Authors' analysis based on BCE and UN COMTRADE data. Note: Direct jobs are within a given sector, and indirect jobs are in upstream sectors.

The government acknowledged the difficulty that this employment differential creates for the national job market in the *Plan Nacional.* Since petroleum creates so few jobs, employment has to come from other sectors, and the *Plan* states that, "slow growth in non-petroleum exports shows the scarcity of options for the creation of good jobs, which has contributed to the deterioration of standards of living, via unemployment, underemployment, precarious employment, and falling real wages (76)." It specifically calls for diversifying national production away from oil, by developing local value chains in other sectors such as renewable energy, biotechnology, pharmaceuticals, vehicles, transportation, and others (Ibid. 393).

Another important obstacle to sustainable oil production in Ecuador is the location of most oil deposits: in the Amazon rainforest, under traditional indigenous lands. The Ecuadorean Amazon is one of the world's most biodiverse areas (more on this below), but it is heavily threatened. From 2005 to 2010, Ecuador's forest cover shrank by 1.9% per year, the fastest rate of deforestation in South America and the 12th highest rate worldwide. Worse, Ecuador's deforestation has been accelerating, from 1.7% per year from 2000 to 2005 and just 1.5% per year from 1990 to 2000 (FAO, 2010). Moreover, despite its small size, Ecuador is home to the highest number of endangered species of any country on Earth (Berlington, 2010). Not all of the deforestation has been due exclusively to oil fields, but ecological research by Fearnside et Al. (2013) and Lovejoy (2014) have concluded that the construction of access roads and railways for these extraction projects are the most important drivers of deforestation. They interrupt animal migration patterns and open the forest to human settlement, large-scale agriculture, and logging, which Ecuadorian biologist Hugo Navarrete characterized as "completely unsustainable from every point of view" (*El Comercio,* 2013).

According to the *Plan Nacional*, indigenous communities comprise a large share of the population in the Amazonian provinces, including half of all children in those provinces (SENPLADES, 143). But oil drilling threatens their access to traditional hunting, fishing, and gathering grounds (usually village-adjacent forests, which are not deeded to them and therefore open to exploration). Moreover, contamination from oil spills can make these traditional livelihoods unsafe, poisoning aquifers and downstream waterways. This chapter's case study, below, explains how this contamination has drastically reduced the possibilities for farming and fishing in the northern region of Tarapoa. The consequences can be dire even for the oil companies themselves, which have often faced large-scale protests. As the *Plan Nacional* states, "the growing problems from environmental degradation – the accelerated loss of natural spaces, constant occupation of indigenous land, and the unequal distribution of the benefits of economic development – have been accompanied by socio-environmental conflicts since the 1970s" (221).

Since the *Plan Nacional* was published, a series of reforms has mitigated the negative impacts of oil. The largest of these reforms is the new Constitution of 2008, the first to recognize the rights of nature itself. In practice, these rights mean that parties can bring legal action on behalf of nature to stop harm to the environment, even if the natural resources at stake are not their private property. The 2010 Citizens Participation Law requires the government to seek communities' free, prior, and informed consent before allowing new oil and mining projects; though projects may still advance in the face of local opposition, they must meet higher environmental and social standards if they do. Moreover, Ecuador is a signatory to ILO Convention 169, which commits the government to consider indigenous nations' claim to their traditional lands when planning new extraction projects. Further reforms in 2003 and 2007 require environmental impact assessments (EIAs) for new projects (including plans for prevention, remediation, and compensation of contamination) and earmark large shares of oil revenues for local governments in areas affected by the oil industry, to fund public investment projects approved by the central government. Nonetheless, despite these reforms, oil remains the most important export, and the goal of diversification remains an important priority.

Diversification away from reliance on petroleum exports has proven difficult for several reasons. First, Ecuador's use of the US dollar as its national currency means that in practice, its currency faces long-term pressure to become overvalued.[2] As a result, Ecuador's exports are more expensive on the world market than they would otherwise be, which hurts the competitiveness of non-petroleum industries. The *Plan Nacional* (66) calls the deterioration of competitiveness the "Achilles Heel" of dollarization. Compounding this problem is the "Dutch disease" phenomenon:

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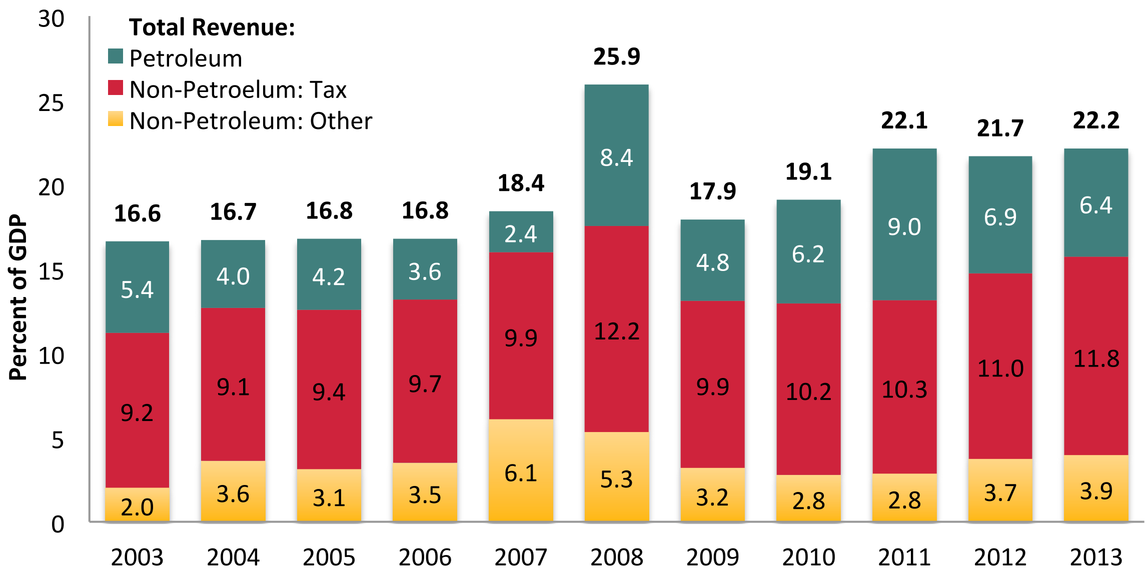
[2] Dollarization raises the risk of an overvalued exchange rate because the value of the US dollar is based on the US economy, not the Ecuadorean economy. Currency overvaluation, in turn, can undermine the manufacturing sector and prevent growth or recovery, as had occurred in the US in the 2000s and Japan in the 1990s. For more on dollarization and an overvalued exchange rate, see Vernengo and Bradbury 2011. For more on the effects of an overvalued currency on the manufacturing sector, see Palley 2003.

nations that primarily export raw commodities tend to have overvalued currencies because their exports' prices are determined by the world market rather than by manufacturing costs. The resulting fall in competitiveness in other industries makes it difficult to escape dependence on those commodities, creating a vicious cycle. As the *Plan Nacional* states, in an economy "based on … extraction and export of commodities, long-term economic growth revolves around external market dynamics, especially the price of oil, and neglects internal demand … to the detriment of national production and employment" (SENPLADES, 331, authors' translation). Any effort Ecuador makes to spur investment in non-petroleum sectors is at a significant disadvantage because of this context.

Another obstacle to diversification is that oil represents a significant portion of public revenue. As Figure 3 shows, petroleum revenues have represented approximately 30% of central government revenues for most of the past decade.

Figure 3: Ecuador Central Government Revenue by Source, 2005-2013 (% of GDP)



Source: Banco Central del Ecuador (2014).

A series of reforms has also boosted devolution of oil revenues to sub-national governments, the Gobiernos Autónomos Decentralizados (GADs) at the province, canton, and parish level. In 2003, the Fondo para el Ecodesarrollo was established, which dedicates $1 per barrel of oil for public investment in the Amazon, under the care of the GADs and the Instituto para el Ecodesarrollo Regional Amazónico

(ECORAE). Over the decade since the fund was established, Ecuador has produced nearly 2 billion barrels of oil, distributing the resulting funds to municipalities (58%), provinces (28%), parishes (5%), and the ECORAE (9%). The funds come with restrictions: at least 80% must be spent on conservation and transportation projects, and the rest is to be spent on public investments approved by the Secretary of Hydrocarbons. More recently, the 2010 oil reform law re-directed 12% of oil profits (which previously went to the central government) to the GADs in the regions where the drilling takes place, to be used for health and education projects as approved by the appropriate ministry (Asemblea Nacional del Ecuador 2010b, Art. 94). Because of these devolution schemes, any fall-off in oil production can represent a major disruption in local government finance. So divestment efforts can really only focus on boosting non-petroleum industries in addition to petroleum, rather than shifting resources from one sector to another.

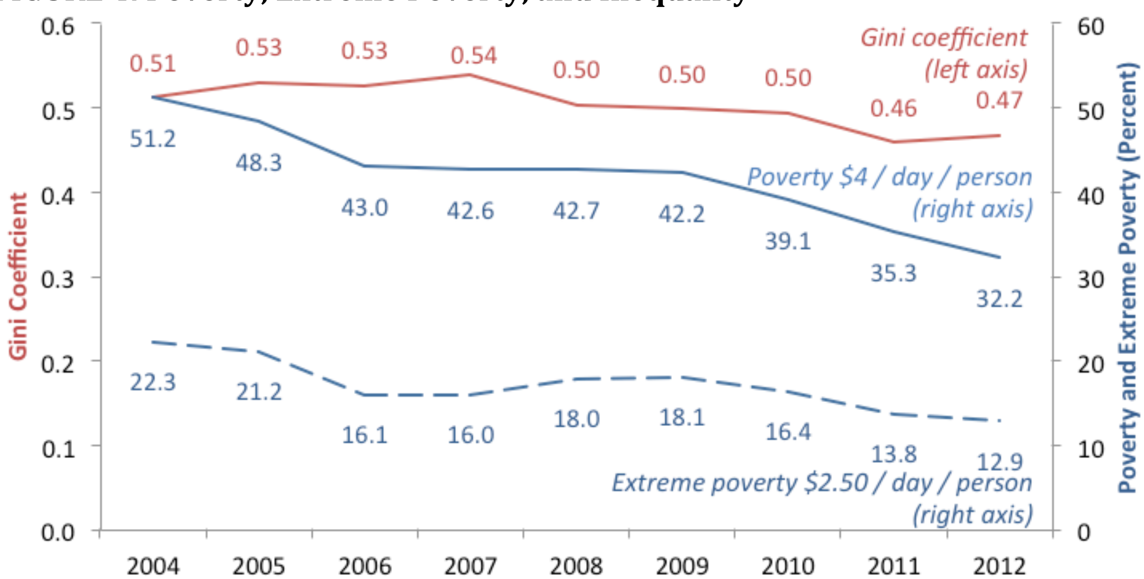
Divestment efforts to date have included microloans with preferential terms, with special attention to the non-petroleum sectors that the government committed to boosting in the Development Plan. From 2007 to 2012, the National Development Bank and the Ministry of Economic and Social Inclusion have issued more than a million small loans totaling nearly $3 billion (about 0.4% of GDP) to individuals and small businesses. (BNF 2010-2012). Furthermore, the infrastructure and education projects mentioned above provide support for businesses of all sectors, and can help support competitiveness in non-traditional industries. As beneficial as these programs may prove to be in the long term, however, they have not proven sufficient to reduce Ecuador's dependence on oil.

Ecuador's attempts to diversify are further complicated by the petroleum-centered relationship between Ecuador and China. Over the last decade China has become an important trading partner and source of investment and finance. However, every aspect of this economic relationship – trade, finance, and investment – ties Ecuador more tightly to oil and further complicates the goal of diversification.

2. ECUADOR'S BURGEONING RELATIONSHIP WITH CHINA

Since his election in 2007, President Rafael Correa has facilitated a new type of international engagement for the country. Throughout its history, Ecuador's economy was primarily dependent on the United States as a source of exports and imports, as well as a primary destination for migrants whose remittances made up a significant portion of GDP. This traditional dependence on the US has long been a contentious issue for Ecuadorean groups unhappy with perceptions of diminished sovereignty. Lightning rods for this issue have included overwhelming reliance on the US as an export market, the adoption of the US dollar as official currency, and most recently a US military base on the Ecuadorian coast. After assuming power, Correa employed several strategies to buffer Ecuador against the volatility of depending on one external partner. These strategies appear to be bearing fruit, as Figure 4 shows: Ecuadorean poverty and inequality did not rise during the US' recent recession, and since then they have fallen significantly, even as the US remains mired in a sluggish recovery.

FIGURE 4: Poverty, Extreme Poverty, and Inequality



Source: SEDLAC.

Part of Correa's strategy has involved moving his country away from the US and toward China. The Ecuadorian leader explained the shift in a speech delivered in 2011 about the two nations' complementarity: "In 2006, 75 percent of our oil was going to the United States ...this year, 50 percent has been committed to China, in exchange for billions of dollars" (*El Telegrafo*, authors' translation). In another example, when Correa's government refused to extend the controversial lease of an Ecuadorean Air Force base to the US military, they turned to China as a potential partner for re-developing the site. The government made attempts, which ultimately proved unsuccessful, to lease the base to a Chinese firm and to revamp a series of projects related to a transport corridor from Manta to the Brazilian Amazonas capital city of Manaus, with Chinese financing (Narins, 2012). In light of that project's ultimate infeasibility, Chinese interests became more focused in the oil and mining sectors (Bonilla, 2010). In addition, in the last few years China and Ecuador have signed three major treaties, including:

- Treaty on Economic and Technological Cooperation, including a RMB 20 million (about $3 million USD) in Chinese aid to Ecuador,

- Executive Plan of Cooperation in Science and Technology;

- Cooperation document on oil trade finance between PRC Export-Import Bank and PetroEcuador.

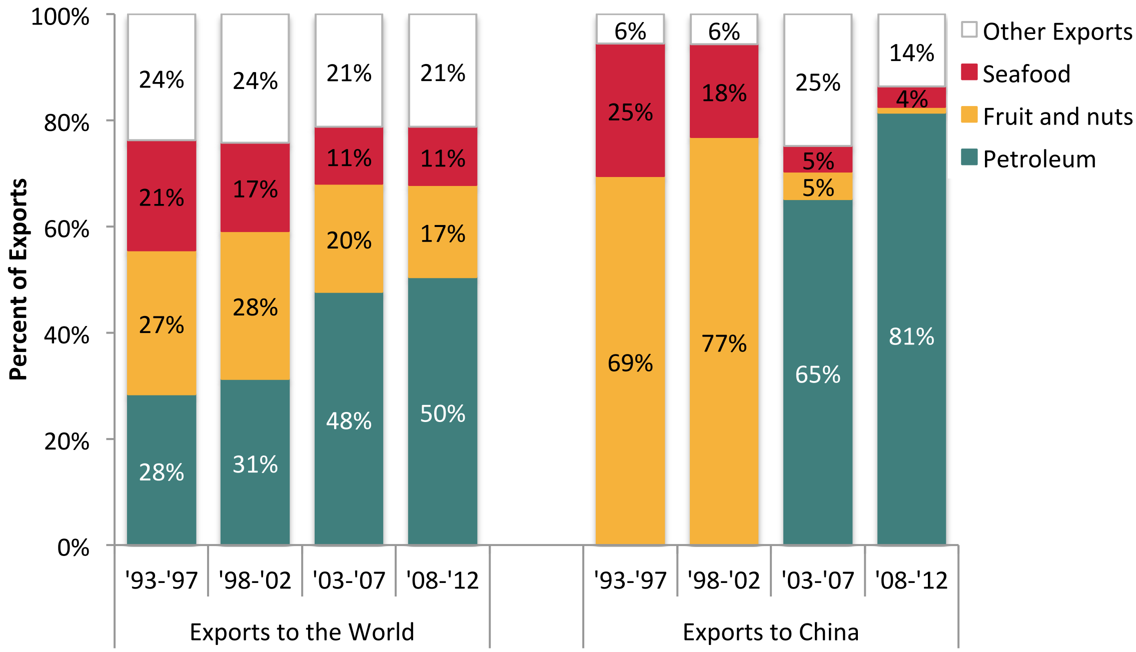
(For more on these deals, see ADB, IADB, and ADBI, 2012).

In many ways, China has become an invaluable economic ally for Ecuador. Ecuador's burgeoning relationship with China has guaranteed it access to financial markets, an investor willing to develop oil fields in a way that benefits Ecuador as well as China, and a partner in generating value added through the Pacífico Refinery. However, each of these aspects of the China-Ecuador relationship further ties Ecuador to oil and limits its ability to diversify production and protect its ecosystems.

2.1 China as a Trading Partner

China plays only a minor role in Ecuador's export market, buying just 3.5% of Ecuador's exports from 2008 to 2012. However, as Figure 5 shows, Ecuador's exports to China are much more concentrated in petroleum than Ecuador's exports overall. China did not begin importing petroleum from Ecuador until 2003, but since then petroleum has played an increasingly important role, averaging over 80% of Ecuador's exports to China from 2008 to 2012. Although China is a relatively small trading partner for Ecuador currently, it is growing in importance and as it does so, it is increasing petroleum's importance in Ecuador's overall export basket.

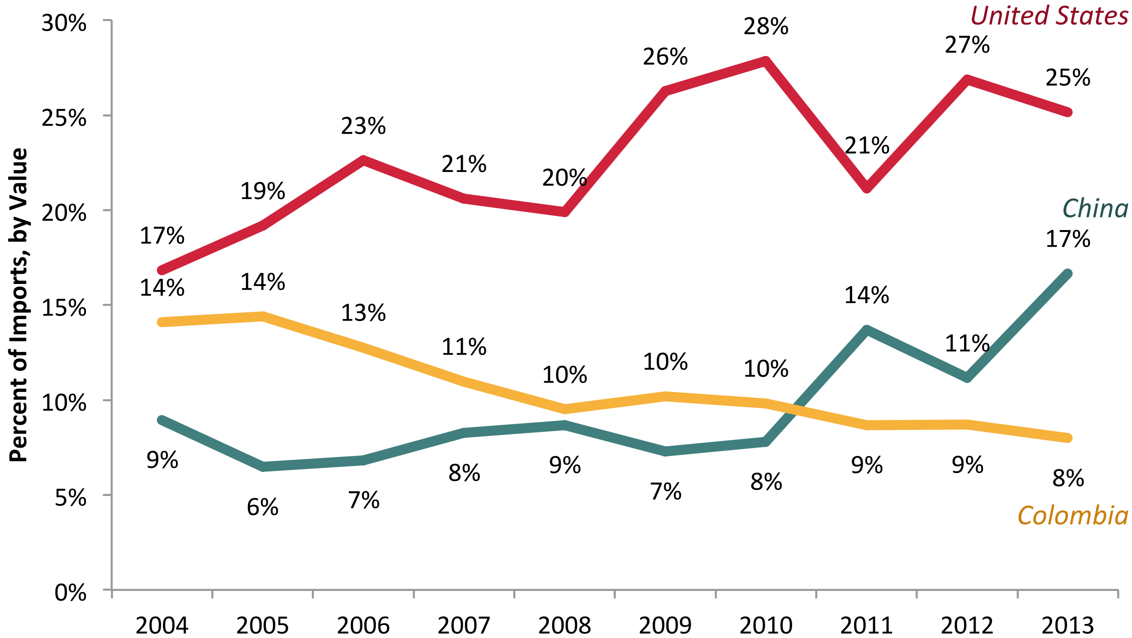
FIGURE 5: Ecuador Export Basket Composition



Source: Authors' analysis based on UN COMTRADE (SITC, Rev. 3). Note: seafood includes fish and crustaceans; fruit and nuts exclude oilseeds; petroleum includes crude petroleum and petroleum products.

Concerning imports, Figure 6 shows that the United States still leads in shipments to Ecuador—25 percent in 2013—but China is the second most important source of imports, at 16.7 percent. Notably, from 2000 to 2009 China's gains in the Ecuadorean market have not taken market share from the US but from smaller, regional partners like Colombia. China has unseated Colombia as the second most important import source, while the US continues to grow in importance.

Figure 6: Ecuador's Imports (Top Three Sources, in Percent of Total)



Source: *Authors' analysis using UN COMTRADE data.*

Finally, Ecuador-China trade shows a significant imbalance in composition. Table 1 shows the sectors that make up each direction of trade. The heavy concentration in natural resources flowing from Ecuador to China is not matched by China's exports to Ecuador. Instead, they are quite diverse. While the top five product categories made up over 90% of Ecuador's exports to China, the top five *imports* from China made up less than one-fourth of the total. In other words, Ecuador's imports from China are diverse and spread over many sectors. Moreover, Ecuador's top five imports from China are all manufactured goods, in contrast with the top exports, which are dominated by natural resources. This imbalance poses two major disadvantages. First, crude petroleum is much more prone to price swings than are manufactured goods, so when oil prices fluctuate worldwide, it will affect one side of this trading relationship much more than the other, creating instability in the trade balance between the two countries. Secondly, the imbalance leaves Ecuador with low value-added exports, which require little technology and support few well-paying jobs.

TABLE 1: Ecuador-China Trade: Top Five Categories Each Direction, 2008-2012

Ecuador's Exports to China		Ecuador's Imports from China	
Item	Percent	Item	Percent
Crude petroleum oil	81.4%	Telecom. equipment and parts	6.4%
Metal scrap	3.5%	Iron and steel tubes and pipes	5.5%
Wood, simply worked	2.4%	Bicycles, motorcycles, etc.	3.8%
Crustaceans, mollusks, etc.	2.3%	Civil engineering equipment	3.6%
Animal feed	2.3%	Rubber tires, tubes, etc.	3.4%
TOTAL, TOP 5	91.9%	TOTAL, TOP 5	22.8%

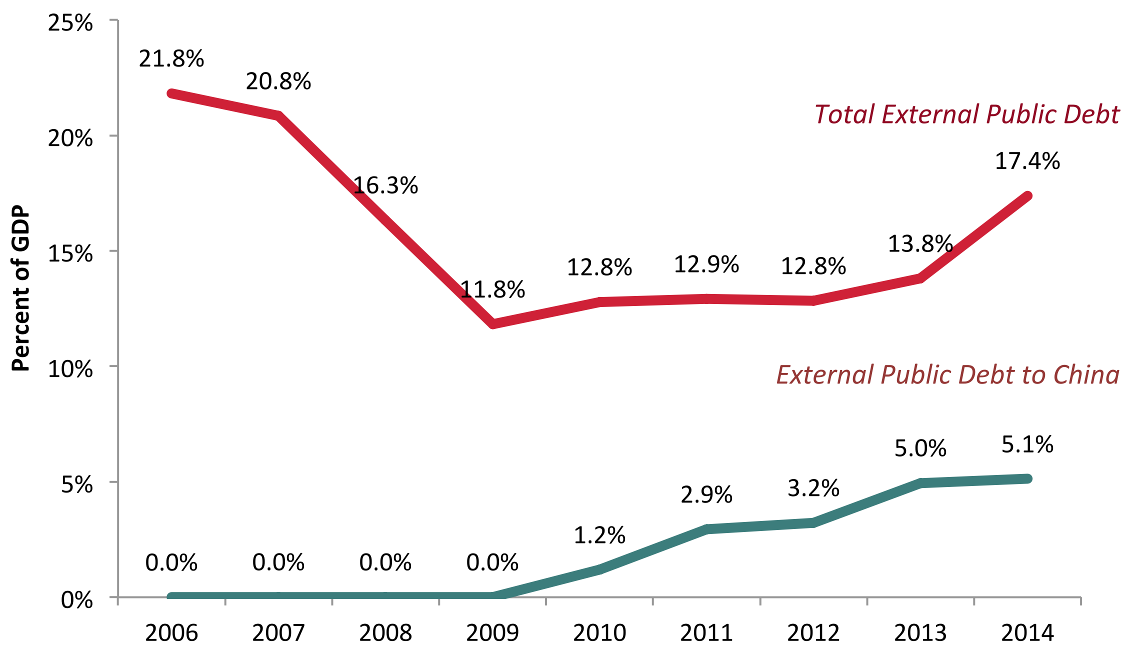
Source: Authors' analysis using UN COMTRADE data.

2.2 China and Ecuador's Access to International Financial Markets

China has recently become Ecuador's most important creditor, and seen Ecuador through a prolonged period of limited access to financial markets. In 2008, Ecuador defaulted on two outstanding bonds totalling $3.2 billion dollars, citing irregularities such as having been issued under a dictatorship and without competitive bidding in selecting investment-banking partners (CAIC, 2008). These two bonds amounted to less than half of all public foreign debt, and only about six percent of GDP (IMF, 2014). Nonetheless, the default was unusual, because the government did not cite financial hardship but irregularities in the debt itself. Many international analysts and pundits vociferously opposed it, Moody's downgraded Ecuador's debt to Caa3, and Ecuador lost access to its traditional Western creditors (Porzecanski, 2010). This signalled an opportunity for Chinese leaders and investors to diversify their economy's sources of primary commodities through the oil loans described below. On the other hand, Ecuador became unable to seek funding elsewhere and China's innovative arrangements involving pre-sales of crude oil provided much-needed funds upfront.

Since the partial default China has become Ecuador's most important creditor, accounting for over one-third of the nation's total external public debt in 2013, as Figure 7 shows. Moody's specifically cited Ecuador's ability to secure financing from China as a reason for upgrading its debt to Caa1 in 2012 (*Reuters*, 2012). In 2014, Ecuador re-entered international finance markets, issuing its first traditional public bond since the partial default (Korby and Jenkins, 2014). As a result, China's share of Ecuador's external public debt fell in 2014. It appears that as of 2014, Ecuador is no longer relying solely on China for new external financing.

Figure 7: Total Ecuadorian Debt Compared with Debt to China (percent of GDP)



Source: Authors' calculations using BCE data.

Gallagher, et al. (2012) explain that China's loans to Ecuador (about 8.5% of Chinese loans to LAC from 2005-2011), constitute a disproportional amount based on its population (2.5 percent of LAC in 2011) and GDP (1.3 percent of the region). Moreover, China has signed a series of oil deals with Ecuador in which it prepays for oil shipments, giving both parties predictability in their trade and providing

Ecuador with up-front income (Benítez, 2014). SENPLADES Subsecretary for Planning Andres Aruaz emphasized in an interview that the government's ambitious projections depend on this access to finance (Aruaz, 2014).

Most loans from China are directed at the extraction and hydroelectric sectors, as Table 2 shows. Ecuador did not receive much Chinese investment until 2009, after the default. Thereafter, China has backed several dams, including both the Coca-Codo Sinclair and the Sopladora projects. These loans have boosted the government's goal of producing some 93.5 percent of its energy needs by the year 2021 via hydroelectric sources (see MEER, n.d., 1, 2 for more), but they also carry conditions to use Chinese equipment and contractors.[3] The loans for the hydroelectric projects have the added benefit of providing power for the large-scale Chinese extraction projects in Ecuador.

[3] As Gallagher et Al. (2012) have highlighted, most of China's loans to Ecuador do not have policy conditions, but do have conditions on using the funds to purchase Chinese goods or services.

Table 2: Loans to Ecuador from Chinese Banks and SOEs

Year	Lender	Partner	Quantity (USD$b)	Purpose
Oil-Backed:				
2009	PetroChina	PetroEcuador	1.0	Advance payment for oil
2010	China Dev't Bank	PetroEcuador	1.0	80% discretionary, 20% oil-backed
2011	PetroChina	PetroEcuador	1.0	Advance payment for oil
Other:				
2010	China Ex-Im Bank	Government	1.7	Coca-Codo Sinclair (CCS) dam
2010	China Ex-Im Bank	Government	0.6	Sopladora dam
2011	China Dev't. Bank	Government	2.0	Renewable energy
2012	China Dev't Bank	Government	2.0	Discretionary
2013	China Ex-Im Bank	Government	0.4	Minas-San Francisco dam, highway
2013	Bank of China, Deutsche Bank	Government	0.3	Cañar, Naranjal dams
2014	China Ex-Im Bank	Government	0.5	CCS dam transmission system
2014	Bank of China	Government	0.3	Road construction
TOTAL:			*10.8*	

Source: Gallagher and Myers (2014), Braütigam and Gallagher (2014), verified by Chinese Embassy official.

Loans for oil involve the China Development Bank (CDB), Ecuador, and Chinese oil companies, and proceed as follows: the CDB lends money to Ecuador, which in return gives a prescribed amount of oil to China's oil companies.[4] The companies pay for the oil at the current market rate: part of their payment goes to an account at the CDB to repay Ecuador's loan, and the remainder is paid to Ecuador (Gallagher et Al, 2012; Sanderson and Forsyth, 2013).

These loans' complicated structure makes them difficult to compare to traditional loans. However, they have an important advantage in terms of risk management for

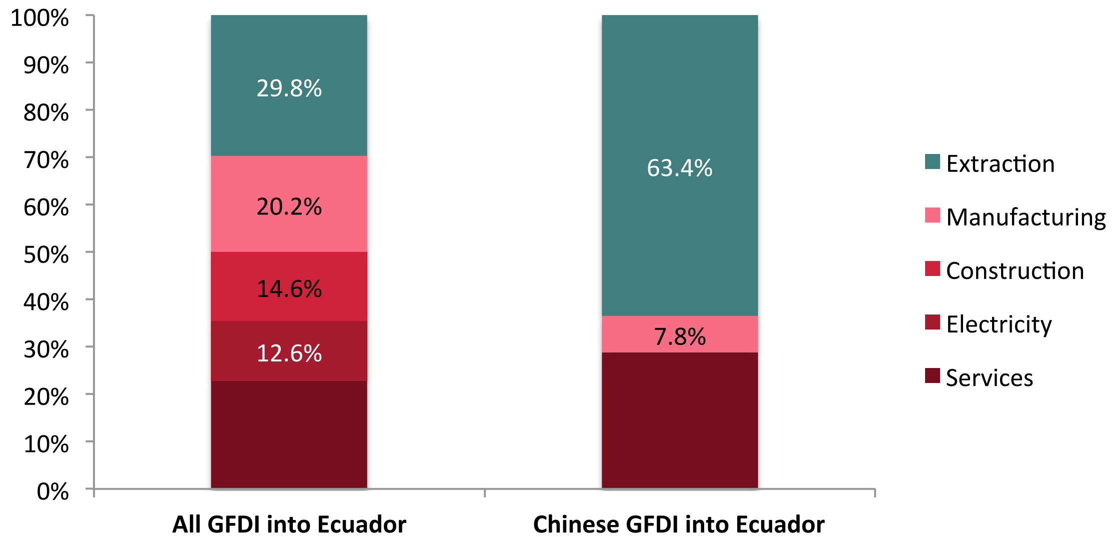
[4] It is important to note that not all oil sold to Chinese oil companies this way is ultimately destined for China. PetroChina, the main purchaser, also ships Ecuadorean crude to California (Schneyer and Mora Perez, 2013).

both China and Ecuador. Most international loans depend on the borrower's continued access to US dollars (or Chinese yuans) for repayment, which can trigger complications for countries with "soft" currencies or with no currency of their own at all, like Ecuador. In this case China and Ecuador avoid that risk, but face two others: the possibility of an unexpected drop in the world oil price (meaning that more barrels of oil would be required to repay the loan) or an unexpected drop in Ecuador's oil output. The short-term nature of these arrangements (usually fewer than 8 years, according to Bräutigam and Gallagher, 2014) reduces the risk of a drop in world oil prices (Ecuavisa, 2013). However, technical or community problems could still affect Ecuador's oil production with very little notice or none at all. In practice, this means that ensuring the steady output of oil must be even more of a top national policy priority than it was previously, as important as access to hard currency is for other borrowing countries in Ecuador's position.

2.3 China as a Source of Investment

Chinese investors have played a crucial role in the development of Ecuadorean oil fields. Overall, China has accounted for only about 4 percent of all greenfield foreign direct investment (GFDI) into Ecuador over the last decade. However, as Figure 8 shows, those inflows have been much more heavily concentrated in extraction than overall GFDI inflows. The other category of foreign direct investment, mergers and acquisitions (M&A) shows an even more pronounced difference. China represented nearly half of all M&A inflows into Ecuador from 2003 through 2012, and 100% of those inflows went into extraction. In contrast, extraction represented only about 20% of M&A inflows into Ecuador from other countries during those years.

FIGURE 8: Greenfield FDI Inflows to Ecuador, by Source and Sector



Source: Authors' analysis from FDIMarkets. Note: extraction includes mining and drilling; electricity includes hydropower and solar; construction includes residential, tourism, and medical facilities.

China has differed from most other sources of oil investment in two important ways. First, Chinese petroleum companies have remained in the country through major oil reforms in 2007 and 2010, each of which increased the state's revenue from oil production. After each round of reforms several other foreign oil companies left the country, including the Brazilian firm Petrobras, the French firm Perenco, and City Oriente, which was registered in Panama. Zach Chen, commercial attaché at the Chinese Embassy in Quito, attributes the perseverance of the Chinese oil companies to a long-term company strategy. The Chinese oil companies in Ecuador, CNPC and Sinopec, are both state-owned enterprises (SOEs), and serve the Chinese government's diplomatic as well as financial interests. Diplomatic relationships take time to build and must be stronger than short-term profit motives.

China has also distinguished itself as an investment partner in its willingness to support downstream industry linkages in Ecuador, rather than solely producing crude petroleum and refining it once it reaches China. As Table 3 shows, Ecuador has been a net importer of refined petroleum products over the last decade, even as their net exports of crude petroleum have grown. This arrangement means that Ecuador is losing out on money (because refined petroleum is more expensive than crude), technology, and good jobs. Ecuador is addressing this imbalance through the Refineria del Pacifico (RdP), a major refinery project near the Port of Manta that will be the largest infrastructure undertaking in the country's history when it opens in 2017. The project was in the works for several years as a joint project between Ecuador and Venezuelan oil SOE PDVSA, but it gained new life after China's CNPC acquired a 30% stake in 2013. This kind of partnership increases the amount of oil revenue that stays in Ecuador, supports more local employment, and allows for technology transfer. So it is not surprising that Ecuador's two partners in this endeavor are two of its closest diplomatic allies: China and Venezuela.

TABLE 3: Ecuador's net petroleum exports by type, 1993-2012 (percent of GDP)

	1993-1997	1998-2002	2003-2007	2008-2012
Crude petroleum	5.4%	4.6%	7.4%	8.3%
Refined petroleum products	0.2%	0.2%	-0.3%	-1.1%

Source: Authors' analysis based on UN COMTRADE and BCE data.

The RdP project is an example of how Chinese investment and finance are interwoven in Ecuador. When CNPC joined as an RdP partner, it brought access to Chinese financing, as well as an expectation of the use of Chinese labor and equipment. An interview with an RdP chief engineer revealed that there would be a significant number of Chinese laborers arriving in the coming years to work on the site (RdP, 2014). Venezuela's PDVSA had no such requirements, but could not secure the necessary financing as quickly. Despite the fact that negotiations for the RdP are ongoing and may take a few more years to meet the demands required for such a major investment, with reported costs expected to surpass US$10 billion, the Chinese banks that are financing the bulk of it provide a much faster route toward completion, according to the chief engineer and his colleagues.

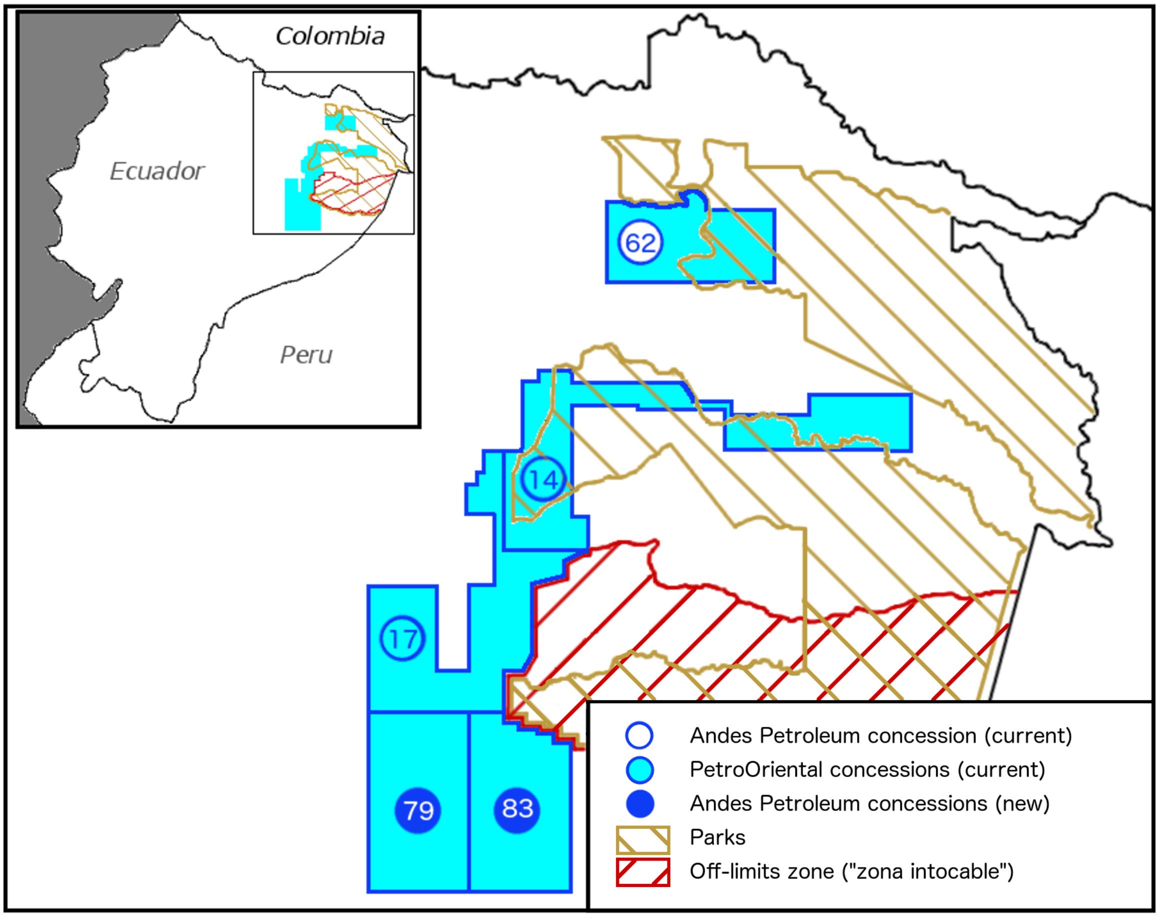
3. CASE STUDY: CNPC AND SINOPEC IN ECUADOR

The Chinese oil companies mentioned above, CNPC and Sinopec, operate in Ecuador under the names Andes Petroleum and PetroOriental. They are two of the most successful foreign oil companies in Ecuador, and have recently won new concessions to increase their presence and production in Ecuador. Nevertheless, their expansion plans face significant obstacles, because the environmental and social contexts of the new concessions are much more fragile than in their current locations. If these challenges are not adequately addressed, they could threaten the viability of the projects altogether. The case study below examines the successful history – and risky future – of CNPC and Sinopec in Ecuador.

3.1 CNPC and Sinopec in Ecuador, 2006 to 2014

In 2006, CNPC and Sinopec jointly purchased the Ecuadorean assets of Canadian firm Encana, including three oil concessions in the country's eastern provinces of Sucumbios, Pastaza and Orellana, as well as a lead stake (32.3%) of the Heavy Crude Pipeline (Oleoducto de Crudos Pesados, or OCP) project, which was built in 2003 and operated by several MNCs, including Repsol, Perenco and Petrobras. CNPC and Sinopec formed Andes Petroleum to manage Block 62 in the northeastern province of Sucumbíos, and PetrOriental to manage Blocks 14 and 17 in Orellana and Pastaza, further to the south. Figure 9 shows the locations of these blocks, along with Andes Petroleum's new concessions (discussed below). Both groups are majority-owned (55%) by CNPC, with Sinopec owning the remaining stock.

FIGURE 9: Map of Ecuador, with Andes Petroleum and PetroOriental holdings shaded



Source: Adapted from Secretaría de Hidrocarburos.

Andes Petroleum and PetroOriental are among the most important oil producers in Ecuador. Taken together, they account for about one-fourth of Ecuador's total production (ARCH, 2011-2013). Andes alone produces more than any other private producer except for Repsol, and including PetroOriental raises the level even higher than Repsol's.

When CNPC and Sinopec arrived in Ecuador, they inherited Encana's uneasy relationship with community leaders and environmentalists, mostly centered on the OCP pipeline. According to the Paola Carrera, Undersecretary for Environmental Quality at the Ministry of Environment, the government does not keep databases of firms' environmental or labor performance, but it is possible to track the instances that were severe enough to spur public protest, though CLACSO's "Observatorio Social de América Latina" (OSAL) initiative (Carrera, 2014; CLACSO, 2000-2012).

OSAL has documented at least four large-scale strikes during the OCP's construction in 2001 and 2002: two by environmental activists seeking to block the project entirely, one by workers seeking better pay, and one by community leaders seeking local jobs and a fund for projects to offset the economic effects of expected environmental damages.

Since arriving in Ecuador, Andes and PetroOriental have maintained more positive relationships with the government and civil society than Encana had. OSAL archives contain zero records of environmental protests that specifically targeted Andes or PetroOriental. In contrast, Repsol was targeted by a weeklong road blockade in 2006 over environmental concerns, and PetroEcuador was the target of large-scale environmental protests in 2006, 2007, 2008, and 2010.

The comparatively peaceful company-community relationship enjoyed by the Chinese oil firms may be partially due to the fact that Andes Petroleum (which produces about three times as much oil as PetroOriental) is located in Sucumbíos, which has been home to large scale agricultural and oil development for decades, including Texaco's original oil fields. Interviews with Undersecretary Carrera and remediation expert Michel Boufadel made it clear that the local aquifer is still so heavily polluted from the remaining Texaco pits that fishing and small-scale agriculture are no longer healthy options for local communities. In a site visit to Texaco's nearby Aquarico 4 well, Boufadel explained that the most toxic components of oil spills are compounds like benzene, which are invisible and quick to dissolve in water and spread throughout the aquifer and downstream waterways. Thus, even after remediation efforts have removed some of the visible effects of these decades-old oil spills, the water used by surrounding communities can still carry powerful toxins, making traditional livelihoods unsafe. According to interviews with Sucumbíos Prefect Guido Vargas and local rights organizers Jose Fajardo and Ivonne Macias, the region's people and their water supply are still very much negatively affected by Texaco's legacy, and by practices they passed on to the state-owned Petroecuador, which also operates nearby (Vargas Ocaña, 2013; Fajardo, 2014; Macias, 2014). Local community leader Javier Piaguaje explained in an interview that members of the local Secoya (also known as Siekopai) and Siona nations must now travel to the nearby Cuyabeno National Park for their hunting and fishing. Since Andes Petroleum does not operate in the park itself, its drilling has not posed any further threat to the quality of life for these tribes (Piaguaje 2014).

In fact, according to Piaguaje, residents of the local town of San Pablo de Katetsiaya are hopeful that Andes Petroleum will discover oil nearby. Piaguaje was a plaintiff in the now-famous international lawsuit against Chevron for the damage left by Texaco (Chevron acquired Texaco in 2000). However, he explained that at this point, with existing contamination preventing a return to traditional livelihoods, the community's best available option would be for Andes Petroleum to find oil, set up operations, and invest heavily in the town in order to secure local support. Specifically, he mentioned his hope that Andes, in conjunction with the government, would establish a "millennium city" with full public services, like the ones that PetroEcuador has established in nearby Cuyabeno and Pañacocha to win over the local population (Piaguaje 2014).[5]

However, Andes and PetroOriental have had their share of labor disputes. Early in their presence, they both faced community conflict over local job opportunities. In November 2006, 300 local residents entered, occupied, and stopped production for Andes, demanding 400 local jobs. In July 2007 community members, transit workers, and municipal staff from the nearby town of Nueva Loja blocked a major road to demand more local jobs and other local investment. More serious conflicts involved PetroOriental, in the parish of Dayuma, Orellana. Dayuma crosses several oil blocks, including two major ones: Block 14, operated by PetroOriental, and Block 61, operated by PetroEcuador. Most of the protests focused on PetroEcuador (CLACSO documents 15 different protests, strikes, and blockades against PetroEcuador in 2006 and 2007), but PetroOriental also received some attention. In the summer of 2006 and again in 2007, local residents blockaded the road into the PetroOriental facilities twice, demanding more local jobs and the patronage of local

[5] Other community leaders, cited by Maldonado (2013), have expressed opposition to Andes' expansion in Block 62. However, it is important to note that Maldonado quotes a community leader discussing the voting process that took place in the community prior to the signing of an agreement with Andes to allow for the expansion. As will be discussed in greater detail below, similar votes have been notably absent in the establishment of the new Andes concessions in Blocks 79 and 83.

transportation providers. After extensive negotiations, an agreement was reached on the provision of a Social Fund tasked with local job creation and credit programs.

The issue of local employment has been largely eliminated, thanks to the Hydrocarbon Law of 2010, which requires petroleum companies to hire Ecuadorean staff for 95% of unskilled positions and 90% of administrative and technical positions (Asemblea 2010b). Furthermore, Chinese Embassy Attaché Zach Chen states that Andes and PetroOriental have established English as the primary working language in their Ecuadorean facilities, and only hire workers who speak it fluently. This requirement dramatically limits the pool of potential workers, raising their salaries, reducing turnover and improving morale. However, this policy also has a strong downside: it limits hires from the immediate vicinity, where schools are not able to teach students sufficient English. According to interviews with Shushufindi mayor Édgar Silvestre and human rights advocate Wendy Obando, the requirement contributes to local unemployment and underemployment and will remain so until local schools are able to meet it (Silvestre, 2014; Obando, 2014). So while this problem has been addressed at the national level, it may continue to cause friction with the local community in the future.

Another area of labor relations continued to plague Andes and PetroOriental until recently: profit sharing with contract workers. Contract work is more limited in Ecuador than in neighboring countries, due to a 2008 law that limits subcontracting to “complementary” work such as janitorial and security services. Nonetheless, contract workers must be included in profit sharing, which Andes Petroleum and PetroOriental neglected to do until a series of lawsuits forced them to make additional payments to a total of 307 former contract workers. At issue was not the companies’ willingness to pay – they had originally distributed the correct amount of their profits – but the fact that the original amount was shared among too few workers. As a result, the companies had to pay an additional $16 million to the originally excluded workers (CLACSO, n.d.; Ecuador Inmediato 2009). Since the oil companies did not benefit financially from skirting the law initially, and since they suffered such extensive financial costs to address the problem later, , it is unlikely that their oversight was intentional or that the problem will occur again.

3.2 New Concessions in the South-Central Amazon

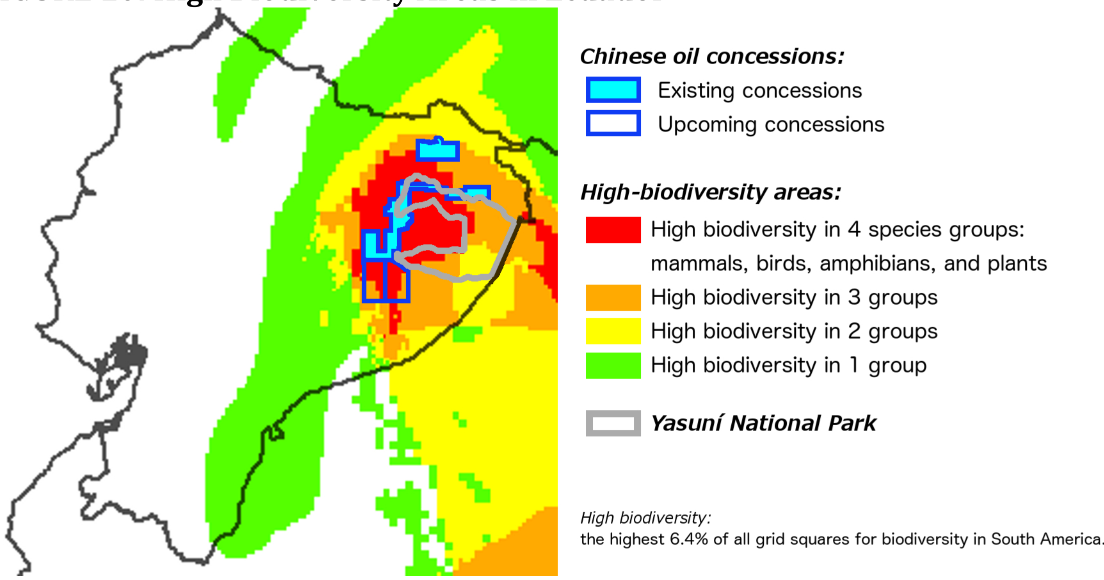
Andes Petroleum recently won two additional oil concessions, in Blocks 79 and 83 (marked in Figure 9 with dark stars). These blocks border the southern end of PetroOriental's current concessions, but they are farther away from Andes' current concession in the northern region of Tarapoa, Sucumbíos. The economy and ecology of the new concessions are quite different from Tarapoa. Moreover, unlike the Tarapoa concession, the new blocks will be greenfield projects. Because of these differences, it seems very unlikely that Andes will be able to expand its operations with the same positive community and government relations it has enjoyed in the past.

3.2.1 New challenges in the physical and social landscape of Blocks 79 and 83

The new sites will be greenfield projects just outside of the Yasuní National Park. The prospect of new oil exploration in the Amazon has brought intense criticism from environmental and indigenous groups, including Amazon Watch, the Pachamama Alliance, Acción Ecológica, and others (Zuckerman 2014). Although these new blocks are outside the borders of Yasuní, the area actually boasts a higher level of biodiversity than the park itself. As Figure 10 shows, most of the area covered by the new concessions has extremely high biodiversity in four major categories: amphibians, birds, mammals, and plants (Bass et Al. 2010). In contrast, most of the park has high biodiversity in two or three of those categories. Thus, from a conservation standpoint it is arguably at least as important to treat the ecosystem in blocks 79 and 83 carefully as in the park itself.

Many experts on the Ecuadorean Amazon, such as biologist Santiago Espinosa of the Pontífica Universidad Católica de Ecuador and conservationist Kelly Swing of Boston University and the Universidad San Francisco de Quito, believe that the government currently lacks the institutional capacity to successfully manage the ecosystems near the planned extraction sites (Espinosa, 2014; Swing, 2013). Federico Auquilla, former Vice Minister of Mines and current advisor to Chinese firms in Ecuador, corroborated this view, though he also expressed confidence that the government will be ready for these responsibilities by the time the new greenfield projects come online (Auquilla, 2014).

FIGURE 10: High Biodiversity Areas in Ecuador

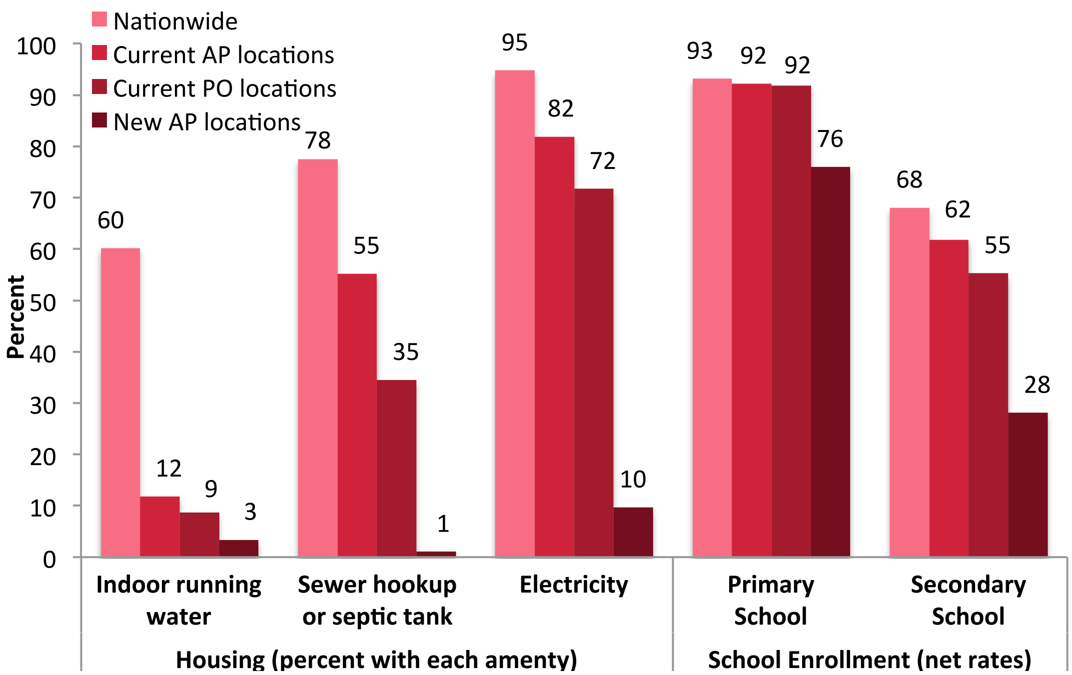


Source: Adapted from Bass et Al., 2010.

Furthermore, the social landscape in blocks 79 and 83 is quite different from the one Andes Petroleum has known in its current concession. First, unlike the northern Tarapoa block, the new southern concessions are entirely covered by traditional indigenous territory. A majority is Sápara territory, with the remainder covered by Kichwa territory. Both groups are classified by UNESCO as having endangered languages; the Sápara language is "critically endangered," with only nine speakers (Moseley 2010). Although the Sápara nation is small (numbering less than 300), its language is one of just two Ecuadorean cultural practices included by UNESCO in the Representative List of Intangible Cultural Heritage of Humanity. In including the language, UNESCO highlighted their "oral culture that is particularly rich as regards their understanding of the natural environment … demonstrated by the abundance of their vocabulary for the flora and fauna and by their medicinal practices and knowledge of the medicinal plants of the forest" (UNESCO 2008). Respecting the rights of this indigenous group, recognized internationally for its vulnerability as well as its cultural importance, will be paramount in Andes' attempt at socially responsible extraction.

In addition, residents in the southern concessions have very different living standards from the communities in Andes' northern territory. The new concessions lie within the parish of Montalvo, Pastaza, among the poorest in the country. As Figure 11 shows, very few households in Montalvo have even the most basic services. Fewer than 10% have electricity in their homes, fewer than 5% have indoor running water, and only 1% has a sewer hookup or septic tank. These figures place Montalvo in the bottom 3% of Ecuador's parishes for running water and the bottom 1% for the other two services. The educational situation is equally grim. Only about three-fourths of children attend primary school, and fewer than one in three attend secondary school, putting Montalvo in the bottom 1% and 2% of parishes nationwide, respectively.

FIGURE 11: Basic service coverage, Ecuador and regions of Ecuador where Andes Petroleum (AP) and PetroOriental (PO) operate



Notes: Shown are averages of the parishes in each oil concession, weighted by the number of homes or school-age children in each parish. Andes Petroleum's current concession includes the parishes of Aguas Negras and Tarapoa, in Cuyabeno Canton, Sucumbíos. PetroOriental's current concessions include the parishes of Alejandra Labaca, Dayuma, El Edén, Inés Arango and Taracoa, in Orellana Canton, Orellana; and Arajuno, Arajuno Canton, Pastaza. Andes Petroleum's new concessions are in Montalvo, Pastaza Canton, Pastaza.
Source: Authors' analysis of Sistema Nacional de Información (INEC) data.

These communities' lower living standards will surely impact Andes' ability to peacefully coexist with them. Past protests directed at Andes and PetroOriental have most commonly demanded jobs and public works (CLACSO, 2000-2012). Specifically, Commercial Attaché Chen reported that Andes has earned its positive community relations in the past by funding the construction of schools and churches. The demand for public works in Montalvo is sure to be much greater than what Andes saw in Tarapoa.

Finally, communities in the new southern concessions do not have the same decades of experience negotiating with the government and foreign companies as their northern counterparts. Mario Melo, an Ecuadorean lawyer who has represented indigenous groups in the past, explained that the northern Siekopai nation (who expressed hope for additional petroleum activity) has an exceptional negotiation track record. It would be naïve to expect negotiations in the south to go as smoothly as they have in the north (Melo, 2014).

3.2.2 Addressing the new challenges posed by new landscapes

PetroOriental already has experience working in a delicate ecosystem: block 14 is located in and around Yasuní (shown in Figure 9). However, PetroOriental inherited that concession from Encana. This will be the first time either company has established new concessions anywhere in Ecuador, much less in the Amazon. As of this writing, Andes Petroleum is still negotiating the concession contract with the government. Assuming the negotiations are completed successfully and exploration begins, it will be important for Andes to seriously consider ways to limit its impact.

Clearly, Andes will have to avoid contamination at all costs. Beyond that, however, Andes would do well to make limiting roadways a priority. As mentioned above, ecologists consider access roads from extraction projects to be the single largest cause of Amazonian deforestation. Biologists Santiago Espinosa and Kelly Swing, who work extensively in Yasuní, claim that roads have already opened inside the park without proper consultation (Espinosa, 2014 and Swing, 2013).

Analysts often point to the nearby Block 16 (which Repsol developed and which like PetroOriental's Block 14 overlaps Yasuní) as an example of best practices for drilling with limited road construction. Repsol did build a road from their operations to a nearby river, but left it unconnected from the country's highway system to discourage the development of new towns in the park. Instead, equipment and trucks must use barges to reach the road and eventually the oil installations (Bass et Al, 2010). In 2012 Repsol sold a 20% stake in Block 16 to Tiptop Energy, a subsidiary of Sinopec (one of the two Chinese SOEs that own Andes Petrolem), so Andes has privileged access to the technology used in Repsol's lower-impact methods (Repsol 2012). However, even the limited use of roads in Block 16 has resulted in continued deforestation around the road, at an annual rate of 0.11%. At that rate, by 2063, 50% of the forest within 2km of the road will be deforested due to human settlement and forest deterioration (Greenberg et Al, 2005). Again, some of the leading biologists working in the Ecuadorian Amazon have consistently argued that roads are the biggest threat and that the Ministry of Environment is not equipped to control accessibility in these remote sections of the forest. Ecuadorean SOE Petroamazonas has also attempted this roadless approach in the past, though a team of Italian researchers from the University of Padua have published reports claiming that it violated its environmental impact assessment (EIA), which promised a "cutting-edge, roadless helicopter-enabled design" (Hill, 2014a).

To truly address road-based deforestation, Andes would need to go beyond Repsol's model and attempt the "offshore-inland" model promoted by former U.S. Secretary of the Interior Bruce Babbitt and the Blue Moon Fund (BMF), in which roads are severely limited or not built at all, and equipment is brought in by helicopter as though the sites were offshore platforms (Tollefson, 2011). Ecologist Kelly Swing reiterated the importance of this approach in an article about oil development in nearby Yasuní:

… any plan must require that the job genuinely be done in an environmentally sound way. This can be done only if the oil is extracted without new roads, which open the way to so many destructive forces. If roads continue to be built to provide access then, without question, all is lost. Instead, the oil must be extracted using 'off-shore' strategies, which are more expensive but do less damage. It goes without saying that any operations would have to include proper maintenance and independent

monitoring, but having isolated oil platforms scattered across the landscape has to be better than horizon-to-horizon deforestation. (Swing 2011).

BMF (2014) and Thomas Lovejoy (2014) point to the successful "offshore-inland" Camisea project in Peru, which has been operating for 10 years and produces over 90% of Peru's natural gas (Sanborn and Dammert, 2014). Camisea has been notable for the conservation of forest cover: from 1986 to 2005, the site lost only 43 hectares of forest, or 0.02% of the total (Raschio and Contreras, 2013). It should be noted that Andes Petroleum may face a social obstacle in pursuing such a roadless tactic. According to CLACSO (2000-2012), protests against Ecuadorean oil companies have demanded paved roads more frequently than any other form of public works investment.

However, if Andes Petroleum intends to develop its new concessions in a more environmentally and socially responsible manner, it will have to go beyond the model of Camisea. César Gamboa, of Peru's Derecho Ambeinte y Recursos Naturales, has portrayed Camisea a first step that nonetheless is lacking in social responsibility (Gamboa et Al 2008; Sanborn and Dammert 2013; Tollefson 2011). Gamboa et al. (2008) claim that the Camisea project fell short in two social areas that will be especially important if Andes expands in Ecuador: the prior consultation process with civil society and indigenous groups, and the respect for traditional indigenous lands. The latter concern has brought international condemnation onto the Camisea project, including a demand from the United Nations Committee on the Elimination of Racial Discrimination (CERD) for the "immediate suspension of the planned extractive activities in the [Kugapakori-Nahua-Nanti] Reservation that may threaten the physical and cultural survival of the indigenous peoples and interfere with their enjoying full wellbeing and their economic, social, and cultural rights" (Avtonomov 2013, authors' translation).

To avoid garnering this kind of international notoriety, Andes will have to genuinely commit to respecting indigenous territory and ensuring a complete and satisfactory prior consultation process. One way to make such a comprehensive and credible commitment would be for Andes to work with the Equitable Origin industry certification program, whose EO100 standard covers a broad array of performance targets, including indigenous peoples' rights as well as biodiversity conservation.

The EO100 standard is new, having recently certified its first oil site (Pacific Rubiales, in Colombia), so it offers Andes Petroleum a way to set itself apart as an industry leader.

Unfortunately, problems with the prior informed consultation process so far have already begun to jeopardize Andes' prospects for positive community relations. Ecuador's constitution and international agreements set high standards for community consultation and participation, but they seem to have been circumvented in this case.

Ecuador is one of just 20 signatories to ILO Convention 169, which calls for nations to consult with indigenous groups prior to developing subterranean mineral deposits below tribal hunting, fishing, or otherwise traditional territory (ILO, 1989). Article 57 of Ecuador's new constitution also enshrines this requirement, with the added note that if the affected community does not agree to the proposal, the government must follow additional steps detailed in the 2010 Citizen Participation Law, which states that "if … a majority opposition emerges in the respective community, the decision to undertake the project or not will be made through a resolution, adequately debated …, which, in cases where it is decided that the project will be undertaken, must establish parameters that minimize the impact on communities and ecosystems; moreover, it must plan for mitigation, compensation, and damage repair; and where possible, it must include the members of the community in the labor force for the respective projects, in conditions that guarantee human dignity" (Article 83, authors' translation). In sum, the prior consultation process must seek the community's majority approval; if the majority of the community opposes the project, a resolution to proceed in a limited-impact way must be drafted, debated, and approved.

Unfortunately, members of the Sápara nation claim that majority approval was never sought, according to our interviews. Indeed, the Secretaría de Hidrocarburos (SHE), which conducted the consultation, does not claim to have sought it. Instead, SHE reports that the Sápara President at the time, Basilio Mucushigua, signed an agreement allowing oil exploration in exchange for $2.4 million in local public investment (SHE, 2012). This neglect of majority opinion is not surprising, given its omission in Executive Decree 1247, which directed this particular consultation process (Correa, 2012). The Decree allows for comments to be submitted either through community meetings or individually at local consultation offices, provided that the offices are extensively advertised through local press, government, or community leaders. SHE reports that 16,469 people participated in this consultation process, throughout the 16 blocks that the government hoped to develop. However, Mazabanda (2013) estimates that the indigenous nations whose territories overlap with the oil blocks include 69,114 adults, and that the total adult population of the oil blocks is 141,397. Even if Mazabanda's estimates are significantly overstated, SHE consulted with only a small minority of the affected population. It is worth noting that it is equally likely that SHE's estimates are overstated. SHE include 10,469 people who participated directly in the consultation process, as well as 6,000 who participated in "socio-environmental management model" workshops, which are outside the scope of Executive Decree 1247; nor does SHE claim to have taken any precautions to avoid double-counting those who may be in both groups.[6]

It may still be argued that those who did not participate were voluntarily abstaining from the consultation. However, current Sápara President Klever Ruiz and President of the Association of Sápara Women Gloria Ushigua said in interviews that they never saw or heard any of the advertisements required by Executive Decree 1247 (Ruiz 2014; Ushigua; 2014). Neither Ruiz nor Ushigua doubts that former Sápara President Mucushigua signed an agreement with the SHE. But both insisted that SHE never sought approval from the majority of the Sápara nation, in violation of the 2008 Constitution and the 2010 Citizen Participation Law, or even held a widely-advertised public comment period, as required by Executive Decree 1247.

Beyond the consultation process, the potential new oil projects have already created tremendous conflict in the Sápara nation, which will surely complicate Andes' attempts to begin operations smoothly there. Both Ruiz and Ushigua report that when former Sápara President Mucushigua was asked about the agreement, he

[6] Representatives of the Ecuadorean government asked not to be quoted on this matter. An anonymous government source reiterated the government's confidence in the process and asserted that there was full support of indigenous communities for the current oil expansion even though no vote or poll was taken to establish majority support. This stands in stark contrast to Andes' operations in Block 62, in which a vote was taken prior to the expansion of operations.

threatened to have anyone who stood in its way killed. Within a week, the 13-year-old son of an opposition community leader was allegedly murdered. Suspecting that Mucushigua was behind the death, the ethnically Sápara majority of the Sápara community met and elected Ruiz as the new president. (Mucushigua is not ethnically Sápara, according to Ruiz, but lived in a Sápara settlement and had been elected president.) Both Ruiz and Ushigua indicate that the community is deeply divided between ethnic Sápara, opposed to the drilling, and other residents who are in the minority but who welcome the oil exploration. Finally, it is unlikely that Andes will be able to win over the Sápara easily. When asked what she would like to say to Andes Petroleum, Ushigua replied "The indigenous Sápara say to the hydrocarbon companies that we do not want oil exploitation; we want to be left alone …. We ask the big countries to please respect our rights and our life that comes from nature" (Ushigua 2014, authors' translation). Both the Kichwa and Sápara people have taken this appeal internationally, with leaders representing them in the People's Climate March in New York in September 2014. At preparations for the March, Ushigua stated publicly: "We are ready to fight with all the strength of our ancestors against the companies and governments to protect the land from which we came, a land that must remain free from oil exploration" (Zuckerman, 2014).

Image 3: Kichwa and Sápara leaders protest Andes Petroleum New York City, 2014

Left: Leonardo Cerda, Kichwa leader; Center: Gloria Ushigua, President of the Association of Sápara Women; People's Climate March, New York, 21 September 2014. Source: Amazon Watch.

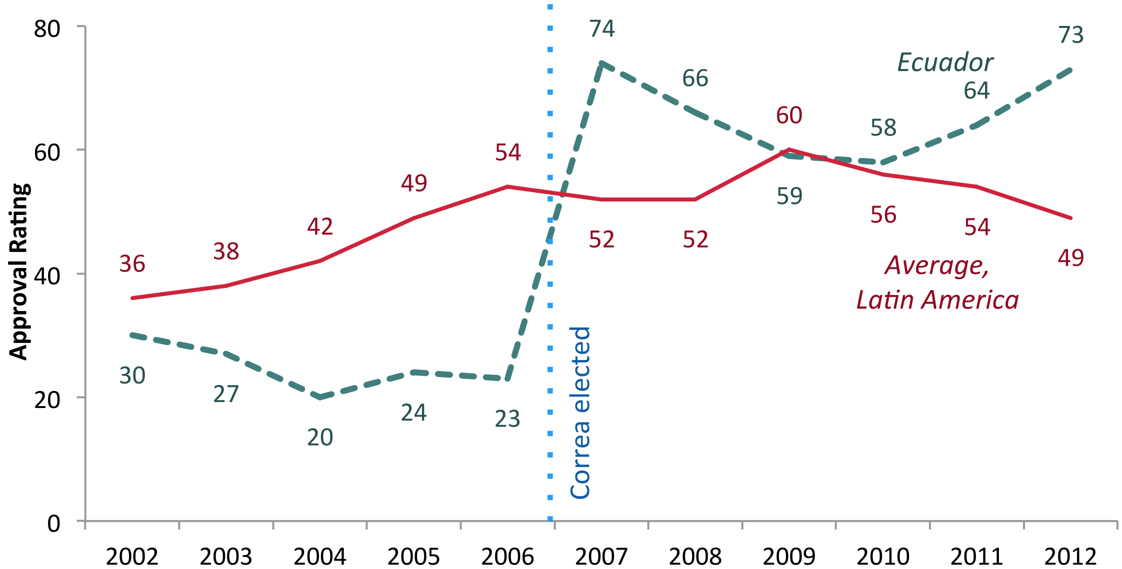
Finally, Mario Melo, the lawyer for indigenous groups cited above, stressed the importance of respecting the wishes of indigenous groups in the south, who have different goals than their northern counterparts near Andes Petroleum's current concessions:

I do not doubt that there may be the opportunity to negotiate around further petroleum activity in [Siekopai] territory. But that is not the case for all [indigenous] nations. Indigenous nations and peoples, in their practice of self-determination, may seek out petroleum activity, or not. If they come to agreements that respect their rights and if through those agreements they see greater opportunities, then that is good. There are other communities, such as those in the central-southern Amazon, who are organized and seeking other alternatives for good living … the problem arises when efforts are made to impose something on them … It is vital to respect those who say "yes" as well as those who say "no." (Melo, 2014, authors' translation).

3.3 Political Fallout from the Oil Expansion Process

The Correa administration has consistently ranked among the most popular in Latin America, as shown in Figure 12. Public support for his Alianza País party, in alliance with environmentalists and indigenous leaders, enabled the writing of the new 2008 Constitution. Correa was not the first politician in Ecuador to harness the energy of civil society; the country's indigenous, environmentalist, and historically marginalized groups, including campesinos and the Afro-Ecuadorian population, became a significant factor in national politics in the 1980s. Correa, like his predecessor Lucio Guttierrez, capitalized on the strength of these groups by incorporating their calls for deep reforms and justice. Yet, unlike Guttierrez who was removed from power after being labelled a lackey for Washington, Correa has maintained a remarkably high favorability rating. However, many of Ecuador's civil society organizations focused on human, environmental and indigenous people's rights are now opposed to the president. For his part, and Correa has recently denounced collusion between environmental and indigenous groups and Assembly President Alberto Acosta during the Constitutional Assembly. Specifically pointing to three Articles focused on ancestral rights that are under review for possible amendment as of this writing, including Article 57 mentioned above, Correa lamented that their resulting "incompetence can do more damage than good and it can condemn to poverty the same people that you are trying to help" (*Ecuador Inmediato*, 2014).

FIGURE 12: Approval ratings, Ecuador and Latin American average, 2002-2012



Source: Latinobarómetro, 2013. Note: The survey asked respondents "Do you approve or disapprove of the government administration headed by [leader's name]?" (authors' translation).

Despite his initially astronomic approval ratings, Figure 12 also shows that Correa's popularity has been volatile. Correa and other members of his Alianza País party easily won the presidency and maintained strong control of the national assembly in February 2013 (see Neuman 2013 for more on this election). However, challenges followed and in early 2014 elections the party lost mayoralties in four major cities: Quito, Guayaquil, Cuenca and Manta. Many Ecuadorean pundits connected this loss to Correa's decision to exploit oil in the ITT section of Yasuní National Park[7] and targeting of indigenous and environmental critics of his policies. Correa has expressed a desire to address the problems behind this "painful" loss, asking his cabinet to resign and implying that there were important lessons to learn (*The Economist* 2014).

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[7] In 2007, Ecuador announced plans to seek funds internationally in exchange for *not* drilling in the Ishpingo-Tambococha-Tiputini (ITT) section of Yasuní, citing a benefit to the planet (and a cost to Ecuador) of foregoing drilling. This plan, known as the Yasuní-ITT initiative, ultimately failed, and the Spanish oil company Repsol won a concession to drill in the area.

Critics focused especially intensely on two areas: Correa's decision to open the ITT sections of Yasuní National Park to oil exploration, and perceived favoritism toward Chinese oil investors in the process. Though Ecuadorean SOE PetroAmazonas will ultimately run the ITT concession, a "secret document" allegedly surfaced shortly before the 2014 elections, purporting to show that Ecuador promised China access to those oilfields, as part of a $1 billion loan from the China Development Bank in 2009 (Hill, 2014b). More broadly, sensationalist reports claiming that China now owns all of Ecuador's oil or that it dictates government policy often receive considerable attention in national and international press reports (for examples, see *Reuters*, 2009; Villavicencio, 2013). However, survey results show that Ecuadoreans overall have more mixed feelings about their country's relationship with China. According to a 2012 LAPOP survey, most Ecuadorians believe that China has a growing influence in their country, though respondents place greater trust in the US (46.4%) than in China (38.3%). However, respondents appreciate the new relationship with China: 61.1% believe China has a positive influence on Ecuador, though that number drops to 56.8% for the influence of Chinese businesses specifically (Zechmeister et Al., 2012).

After the ITT Initiative failed, Andes Petroleum became a focus of environmental and indigenous-rights protests, even though the ITT concession ultimately went to PetroAmazonas. This is primarily because the ITT concession was auctioned off at the same time as the concessions acquired by Andes, the 11th round of concession auctions. The auctions themselves drew fierce criticism and protests, which expanded to address all of the new concessions, including Andes Petroleum's. So it is worthwhile to briefly explore the damage done to the alliance between the government and environmentalists, and prospects for the future.

The ITT Initiative was popular with the Ecuadorean public, and its failure brought widespread protest. The government that was widely regarded as environmentally conscious now faced broad segments of the Ecuadorian population troubled by the new push for drilling in the ITT. Polls from Quito's *El Comercio* immediately after Correa's decision revealed a strong majority opposed to drilling, though later poll numbers found the population more divided. Moreover, critics noted that by declining to support the initiative, China forfeited an opportunity to prove its commitment to being a partner in Ecuador's stated goal of responsible extraction.

The environmental group Yasunidos reacted to the initiative's failure by attempting to force a referendum on the subject. In May 2014, the Ecuadorian National Electoral Council (CNE) rejected the referendum proposal, ruling that the majority of the signatures Yasunidos collected were fraudulent or otherwise unacceptable. But the environmentalist community held onto its demands, and the struggle gained publicity as a prominent news outlet backed and published an independent analysis by Enrique Mafla, Professor of Computer Science at the Escuela Politécnica Nacional, which called into question the CNE's decision (Mafla, 2014).

The Correa administration's relationship with environmentalists took a further hit during the auction process for the new oil concessions, including Andes Petroelum's new concessions as well as the ITT concession. Yasunidos staged protests during the concession auction, together with representatives of indigenous nations and the Fundación Pachamama, one of the most well-established environmental CSOs in Ecuador. During the protests, the Chilean ambassador to Ecuador and a representative of the Belarusian company Belorusneft were assaulted (*El Telégrafo*, 2013). Indigenous representatives claim that the assault was the work of infiltrators, while the Minister of the Interior accused the protestors of "affecting the public peace" (Alvaro, 2013). Within a week, Pachamama announced that government agents had raided their offices and shut down the organization (Pachamama Alliance, 2013). Regardless of where blame lies for the incidents surrounding the auction, they have seriously damaged the relationship between the government and its erstwhile environmental allies.

Most recently, Ecuadorean civil society leaders have begun to reach out directly to Chinese firms and banks funding their investments in search of accountability on environmental and social norms. For example, members of Acción Ecológica, and rights advocate Paulina Garzón have highlighted various social and environmental policies established by Chinese banks and have worked with transnational partners in Peru and Brazil, while making inroads with Chinese NGOs in addition to their historic cooperation with US and European NGOs, to raise the pressure on Chinese policy-makers. Similarly, the Centro de Derechos Económicos y Sociales has produced a manual for Ecuadorean community organizers, informing them of the environmental and social standards that Chinese policy banks expect of the investors, and advising them on how to directly contact the banks if projects do not live up to these standards (Hill, 2014c). The existence of this manual could mean that Andes' behavior will receive closer scrutiny in its new concession than it has received in the past, and that perceived misdeeds will be reported back to its funders in China. So it is in the interest of Andes Petroleum as well as the Ecuadorean government to ensure that these new concessions meet the highest standards possible.

This rift between Correa and civil society helps to explain the backlash that Andes Petroleum is already facing in its new concessions. It also helps explain why indigenous leaders such as Gloria Ushigua and others have sought audiences internationally, potentially bringing more scrutiny and risk to Andes Petroleum's expansion. It is no exaggeration to say that civil society worldwide is watching Andes Petroleum's expansion. If Andes hopes to continue its track record of peaceful, successful investment in Ecuador, it must take great care in its interactions with environmentalists, indigenous nations, and the Ecuadorean government.

4. CONCLUSIONS AND RECOMMENDATIONS

China has been an invaluable economic ally to Ecuador over the last several years. This new partnership has ensured Ecuador access to international credit markets after its partial bond default, and provided an important source of new investment and trade revenue during the recent global downturn. An important caveat is that the relationship's heavy focus on oil production necessarily complicates Ecuador's stated goals of diversifying away from petroleum. Nonetheless, Ecuador has a strong legal framework for the oil industry, including a constitution that recognizes the rights of nature, and more specific legislation that requires oil projects to conduct EIAs, consult with the local community, respect indigenous territory, hire Ecuadorean workers and share profits with them, and pay substantial taxes to fund public investments in affected communities. This framework, if properly enforced, could be a model for other natural-resource producing countries worldwide.

The upcoming expansion of oil production through new concessions, including the ones won by Andes Petroleum, is the first major test of Ecuador's social and environmental protections from the oil industry. It is crucial for Ecuador's government and China's oil companies to show their commitment to the protections they've agreed to in the past. But it will not be easy; these concessions are in an area that is extremely important environmentally, and completely covered by traditional indigenous territory. A commitment to transparency and public accountability would be a good first step. Ecuador could make progress in those areas by signing on to the Extraction Industry Transparency Initiative (EITI), allowing the public to trace oil revenues from firms to the central government, and back to local governments. Andes Petroleum and PetroOriental could also sign onto EITI as a show of good faith, reporting on their taxes, royalties, and any additional community spending, as Chinese mining firm Chinalco has done in Peru. Furthermore, Undersecretary Carrera indicated that the Ministry of the Environment has a long-term goal of digitizing records of company environmental behavior, and making these records publicly available. Such a move would show the government's commitment to enforcing its laudable legal framework, reward firms who have worked hard to maintain high standards, and empower citizens.

Finally, the specific concessions that Andes Petroleum has just won need to be handled with great care. The community consultation process has so far been fraught with protest and caused more division than peace. If Ecuador is to live up to its reputation of valuing its people and ecosystem, it would be wise to consider upholding its commitment to seeking majority opinion of the local community, and taking that opinion into account. In practice, such an approach must include acknowledging that the majority of the local population has not agreed to the project, and either revisiting the consultation process or initiating the process required by the Citizen Participation Law when there is not majority approval: drafting, debating, and approving a development plan that incorporates the highest standards of environmental and social responsibility. Furthermore, the unique biodiversity of the area suggests that all parties could benefit from a serious consideration of an "offshore-inland" approach to any new oil projects in Andes Petroleum's new concessions, which would limit the projects' interference with indigenous communities as well as the forest itself.

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