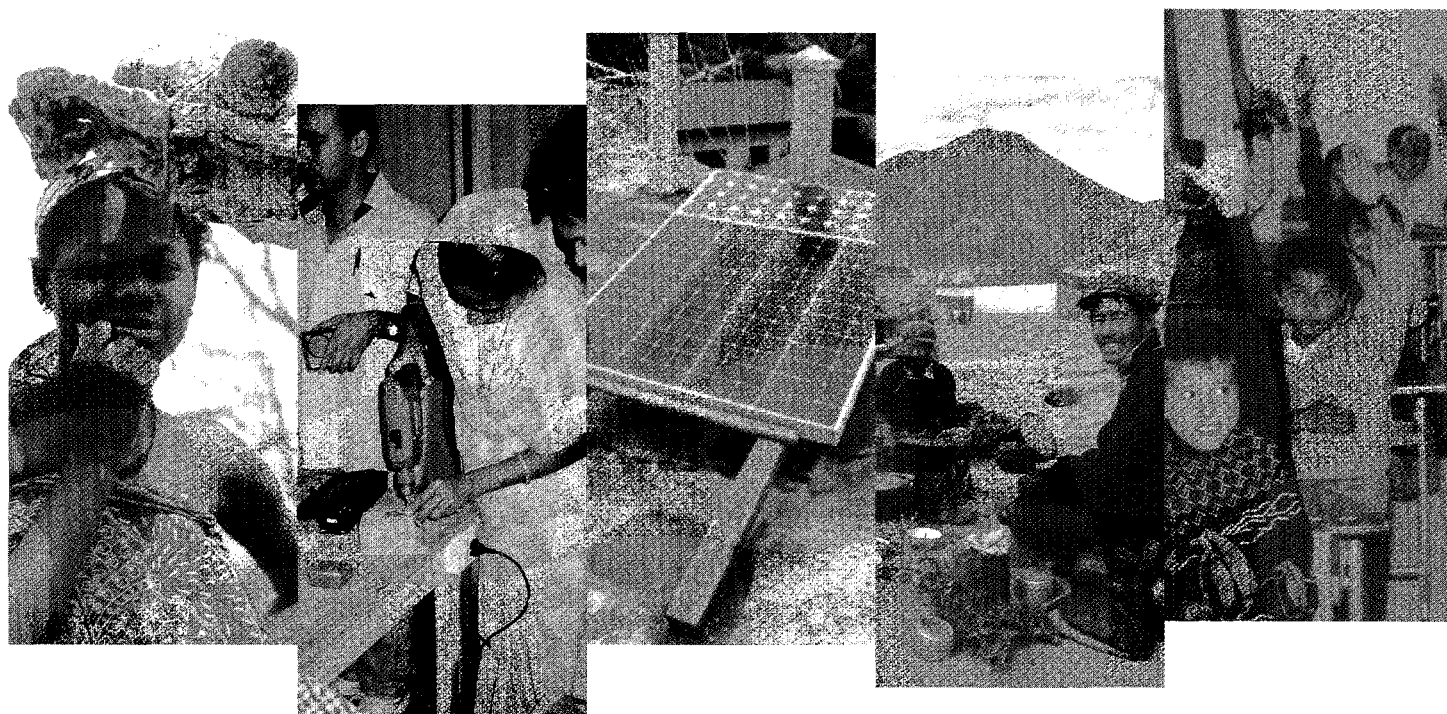


# ESM304

## *Comparative Study on the Distribution of Oil Rents in Bolivia, Colombia, Ecuador, and Peru*



Energy

Sector

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Report

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**Comparative Study on the Distribution of  
Oil Rents in Bolivia, Colombia, Ecuador, and Peru**

**August 2005**

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(ESMAP)

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## Preface

1. The increasing concern regarding the distribution of oil rents in the Andean Sub-Basin has generated the need to carry out an open analysis of this issue within the context of the tripartite dialogues of the Energy, Environment, and Population Program (EAP). This study deepens the work made two years ago, when the distribution of oil rents was analyzed comparatively for the first time in four countries of the region: Bolivia, Colombia, Ecuador, and Peru.<sup>1</sup>

2. The EAP Program is a joint initiative of the Energy Management Assistance Program (ESMAP), the Oil, Gas, Mining and Chemicals Department at the World Bank, the Latin American Organization for Energy (OLADE), and the Coordinating Organization of the Indigenous Organizations in the Amazon Basin, as well as the Association of Oil and Gas Companies from Latin America and the Caribbean Region (ARPEL). (See Annex 1). Its main objective is to improve the relationship among the different stakeholders, that is, government, industry, and indigenous peoples in order to create the conditions that will make it possible to continue developing the oil industry in the Amazon Basin in a manner compatible with sustainable development principles.

3. Most of the resources to fund the study came from ESMAP managed by The World Bank Group, whose main objective is to assess the role of energy in the development process in order to reduce poverty, improve living standards, and preserve the environment. One of ESMAP's strategic thematic area includes continuing sector reforms, as well as the promotion of best practices in the industry in social, cultural, and environmental terms, and improving the socioeconomic situation of the indigenous peoples.

4. The management and distribution of oil rents is undoubtedly a complex issue that requires analysis, on at least three levels: (1) rent collection (mainly royalties and taxes on oil and/or natural gas production); (2) rent distribution; and (3) rent disbursement, that is, its final use.

5. This study only considers the financial flows related to the rents and their use. The environmental and social impacts and liabilities are not assessed.

6. Oil rent collection is related to the fiscal system adopted by the oil and natural gas industry. Governments are deeply interested in oil rent collection for the incentive they provide to industry and, above all, on the resulting fiscal revenues. Investors, although they agree on the need for taxes to exist, consider that their enforcement must allow the investors to obtain an attractive return. Civil society focuses on 1) having a tax system that will share rents fairly between the government and the investor, and later between the central government and the social groups, and 2) protecting the public interest in issues such as the environment, living standards, and respect for the cultural heritage of indigenous peoples.

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<sup>1</sup> See ESMAP Technical Paper No. 20 *EAP: Comparative Study on the Distribution of the Oil Rents*, February 2002.

7. The tax system must allow an appropriate and stable distribution of the revenues among the different government levels. The most convincing argument in favor of allocating oil rents to the regional or local governments is because much of the external costs of the exploitation are local. These costs include environmental deterioration and the demands from the local population to get a better social and physical infrastructure. How the taxes and royalties will eventually be shared will depend mainly on the policies, and in particular, on the nature of the federalism of the involved country, that is, the relative importance that the federal and regional points of view have within each country.

8. Once the rent is collected, the attention is focused on its management. The main challenges to oil buoyancy are closely related to adequate rent management. Oil richness comes unexpectedly, through either the discovery of new reserves or a rapid increase in the prices of crude oil. This situation often exceeds the absorptive capacity within the national economy, especially the institutional capacity of the government agencies to guarantee the correct management of this richness and consequently to invest it in an efficient manner. But the opposite happens as well—sudden price drops and the depletion of deposits result in serious revenue shortfalls and potential budget problems.

9. Combating the misuse or misappropriation of resources is a central objective. It must be always considered that the policies and decisions related to the ups and downs of oil richness are often asymmetrical. Wrong decisions during the high years are very hard to correct in the low years. Moreover, experience shows that oil richness generates strong emotional responses related to its perceived quality as a “national asset,” with the result that it generates a temptation to use it in order to achieve political results, which may not be consistent with a legitimate development policy. Finally, and this must be underlined, oil richness opens a relatively easy path toward corruption.

10. The discovery of new hydrocarbon reserves and the fluctuations in oil and natural gas prices, and consequently in the resulting oil rents, are difficult factors to forecast. This generates a cyclic imbalance in the economy of the producing countries. Moreover, the problem appears as a loss of competitiveness in the economy of a country that is enjoying unexpected prosperity, that is, the “Dutch Disease”, so called due to the problems experienced in Holland at the start of the exploitation of natural gas reserves from the huge Groningen deposit. The growth in hydrocarbon exports results in an exchange rate appreciation, which increases the pressure on the costs and prices of domestic products, reducing their competitiveness and damaging the diversity and balance of the national economy.

11. An interesting aspect of this comparative study of rent distribution in four countries in the Sub-Andean Sub-Basin (Bolivia, Colombia, Ecuador, and Peru) is the existence of several means used to answer the problems in rent collection and management. In one way or another, the fundamental aspect to guarantee an efficient use of the resources is to have a well-articulated development plan that must be known by the public and must include the management of oil funds for savings and stabilization.

12. Decisions on how the oil rents are to be allocated are within the domain of public spending and finance and have a central role in the development policies of the governments. The articulation of priority uses set in the national and regional plans is

desirable. It is evident that the actual spending will depend on factors that remarkably include the institutional capacity for designing, implementing, and auditing programs and projects executed through public spending. Likewise, the transparency of accounting and auditing is very important for success.

13. This comparative study had to confront the issue of access to information, particularly in order to obtain complete statistics. Despite oil rents being intrinsically public funds and consequently subject to multiple regulations, in some of the analyzed countries differences exist in the level of transparency under which the transactions related to oil rents distribution are performed. The management of oil revenues through autonomous state agencies made data gathering even more difficult.

14. As for the use of oil rents in oil-producing regions, the conclusion is that there is still much work to be done. Regardless of the amount of rents transferred, the analysis shows that there is not enough continuity in money flows as to be able to finance long-term development plans for the regions. Moreover, questions still exist about the institutional and political capacity of the central government and, above all, of the regional governments to deal with the ups and downs in oil revenues through development plans that meet the needs of the population.

15. Nevertheless, since the mid-1980s some progress has been observed that tends to make the rent allocation to the oil-producing regions more accurate and effective. Since the late 1990s this benefit has been extended to indigenous communities. This is the case in Colombia, a country that has not only increased the transparency in royalties distribution to departments and municipalities but has also enacted regulations on such matters, allocating a portion of these royalties in favor of indigenous communities whenever oil developments are carried out in indigenous territories. It is important to make efforts not only to extend the enactment and enforcement of such regulations to other countries but also to strengthen indigenous organizations so that they may become agencies capable of receiving and managing public resources.



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The maps contained in Annex 2 were produced by the consultants and are reproduced here with their permission.



## Abbreviations and Acronyms

<b>AIDSESP</b>	Indigenous Organization—Peru (Asociación Interétnica de Desarrollo de la Selva Peruana)
<b>ANH</b>	Agencia Nacional de Hidrocarburos—Colombia
<b>ARPEL</b>	Association of Oil and Gas Companies from Latin America and the Caribbean Region
<b>BCE</b>	Central Bank Ecuador
<b>BOE</b>	Barrel of oil equivalent
<b>CAPEX</b>	Capital Expenditures
<b>CAREC</b>	Committee for the Management of Training Resources - Peru
<b>CEL</b>	Special Committee for Biddings - Ecuador
<b>CIDOB</b>	Indigenous Organization—Bolivia (Confederación de Pueblos Indígenas de Bolivia)
<b>CND</b>	The National Decentralization Council—Peru
<b>CONFENIAE</b>	Indigenous Organization—Ecuador
<b>COICA</b>	Coordinating Body of Indigenous Organizations of the Amazon Basin
<b>CONAP</b>	Confederación de Nacionalidades Amazónicas del Perú
<b>CTAR</b>	Transitory Council for Regional Administration—Peru
<b>DL</b>	Law Decree
<b>DUF</b>	Single Funding Directorate
<b>ESMAP</b>	Joint UNDP/World Bank Energy Sector Management Assistance Programme
<b>EAP</b>	Energy, Environment and Population Program
<b>ECORAE</b>	Institute for Ecodevelopment of the Amazonian Region - Ecuador
<b>EITI</b>	Extractive Industries Transparency Initiative
<b>FDI</b>	Foreign Direct Investment
<b>FEIREP</b>	Fund for Stabilization, Social and Productive Investment and Reduction of Public Debt—Ecuador
<b>FEP</b>	Petroleum Fund—Ecuador
<b>FNR</b>	National Royalties Fund—Colombia
<b>FNDR</b>	National Regional Development Fund
<b>FONCOMUN</b>	Fund for Municipal Compensation—Peru
<b>FPS</b>	National Fund for Productive and Social Investment
<b>GDP</b>	Gross Domestic Product
<b>IGV</b>	Sales tax



<b>IEHD</b>	Special Hydrocarbons Tax—Bolivia
<b>IESS</b>	Ecuadorian Social Security Institute
<b>ILO</b>	The International Labor Organization
<b>ISC</b>	Excise Tax on Petroleum Products
<b>LNG</b>	Liquefied Natural Gas
<b>LPG</b>	Liquefied Petroleum Gas
<b>MEF</b>	Ministry of Economy and Finance
<b>NBI</b>	Unsatisfied Basic Needs
<b>NGO</b>	Nongovernmental Organizations
<b>NPV</b>	Net Present Value
<b>OCP</b>	Heavy Crude Oil Pipeline (Oleoducto de Crudos Pesados)
<b>OLADE</b>	Latin American Energy Organization
<b>OPEX</b>	Operational Expenditures
<b>OPIAC</b>	Indigenous Organization—Colombia
<b>OSINERG</b>	Regulatory Agency for the Energy Sector—Peru
<b>PAI</b>	Institutional Adjustments Programs—Bolivia
<b>PNUD</b>	Programa de las Naciones Unidas para el Desarrollo
<b>RRE</b>	Economic Rate of Return
<b>SAM</b>	Sociedad Anónima Mixta
<b>SERPROADSA</b>	Servicios Profesionales y Administrativos S.A.C.
<b>SOTE</b>	Trans-Ecuadorian Oil Pipeline System
<b>TCA</b>	Amazon Cooperation Treaty
<b>TCF</b>	Trillions of cubic feet
<b>TGN</b>	National General Treasury
<b>TGP</b>	Transportadora de Gas del Peru
<b>UDAPE</b>	The Economic Planning Unit—Bolivia
<b>UNDP</b>	United Nations Development Programme
<b>VAT</b>	Value Added Tax
<b>YPFB</b>	Yacimientos Petrolíferos Fiscales—Bolivia

# Executive Summary

1. Oil rent accounts for a significant portion of the gross domestic product (GDP), the national budget, and the foreign-exchange revenues in the producing countries of the Sub-Andean Basin. Its availability presents an opportunity and a challenge. The issue of the management and use of the oil rent is generating increasing concern among oil companies, civil society, development agencies, and, obviously, governments.

2. The above-mentioned stakeholders agree that the oil-producing regions, and in particular the people dwelling in such regions, should receive indemnifications for damages resulting from oil operations and should realize the opportunity to enter a development growth path. To accomplish this, the regions and the people must benefit from a part of the rent.

3. This study compares the means applied and the statistics available on collection, distribution, and use of oil rents in four countries from the Sub-Andean Basin: Bolivia, Colombia, Ecuador, and Peru, during the period 1998-2003. The terms of reference for the work were written under the framework of the Energy, Environment and Population Program. The funding for the work was obtained from the Energy Sector Management Assistance Program (ESMAP) and from the Norwegian Trust Fund for Environmentally and Socially Sustainable Development.

4. The study presents in a systematic way the available information without adding value judgments or recommendations on the sharing of rents among states and companies, and/or between the central government and the regional governments. Its principal aim is to understand the challenges and risks in the ongoing processes and to identify the trends regarding the rent distribution, in particular, and the fiscal decentralization, in general.

## The Hydrocarbons Sector Situation

5. The significance of the hydrocarbons sector in the analyzed countries can be seen in terms of variables such as the contribution of this industry to the GDP, total exports, and the national budget. In year 2002, the hydrocarbon production/gross domestic product (GDP) ratio achieves its highest value in Bolivia with 19.5 percent, followed by Ecuador (12.2 percent), Colombia (7.2 percent), and Peru (1.4 percent). As for the contribution from oil and gas exports to total exports, Ecuador has a ratio of 40 percent, followed by Colombia (27.8 percent), Bolivia (24.1 percent), and Peru (5.8 percent). Finally, the ratio based on oil rent/current revenues in the budget of each country is the highest in Ecuador, with 17.9 percent, followed by Bolivia (5.1 percent), Colombia (5.0 percent), and Peru (2.4 percent).

6. These figures show that the economies of Ecuador and Bolivia depend more on the oil and gas industry than that of Colombia, and Peru's economy depends on oil and gas the least of the four countries. Furthermore, in Bolivia and Ecuador, there are significant amounts of proven reserves that have not been developed yet.

7. In Bolivia, the changes made in 1996 to the legal framework fostered a major increase in exploration investments, which succeeded in terms of gas and condensate reserves. However, this legal framework was challenged in 2003 and currently a new Hydrocarbons Law is under discussion. In Ecuador, proven crude oil reserves to be developed exist, which could reach international markets because of a new oil pipeline. Nevertheless, both in Ecuador and Bolivia, new changes to the legal framework have been proposed, but they have encountered problems in being approved and implemented.

8. As the world entered the new millennium, both in Colombia and Peru, the fall in crude oil reserves forced changes in the legislation in order to attract new investments, mainly for exploration.

9. Throughout the subregion, natural gas is gaining importance. Colombia has completed a great effort to develop its local market, while Bolivia and Peru have, in addition to the local market, enough reserves for implementing major export projects.

10. In the period covered, environmental and social issues in the analyzed countries have started to receive greater attention, and in some cases they have gained priority. It is noteworthy that there is still much to do, particularly the assessment of the benefits received and to be received by the indigenous communities, whose habitat—in many cases—overlaps the oil operation areas.

### **Decentralization and the Search for Transparency**

11. One of the most remarkable features in the Latin American and Caribbean countries is the attempt to reform the state through initiatives aimed at promoting administrative and fiscal decentralization. In this respect, the studied countries show problems linked to centralization, although of diverse levels of magnitude.

12. Fiscal decentralization is defined as a process to transfer competencies and resources from the state central administration to the regional and local administrations under certain basic principles: (i) clearly defined competencies; (ii) transparency and predictability; (iii) neutrality in resource transfer; and (iv) fiscal accountability.

13. The distribution of royalties and state participation collected from hydrocarbon activities is a part of the fiscal decentralization process that is taking place in the analyzed countries. In Bolivia, Colombia, and Peru, the regions and departments started to have a share in oil rents since the early 1970s, much earlier than the beginning of the administrative and fiscal decentralization process. Colombia started the earliest (1986) and Peru started the latest (year 2002). Although in Peru a Decentralization Law was enacted in 1989, the process was abolished in 1992. In Bolivia and Ecuador, the process started in 1994, and 1997, respectively.

14. The decentralization process in the region has evolved in an unequal manner and in many cases requires significant adjustments. The regional governments have had a share in the royalties for a long time, which is a form of an “*avant la lettre*” fiscal decentralization. In practical terms, the regions and municipalities have not had any kind of previous training on how to manage the transferred amounts in a planned manner or on how to submit the accounts on their use. This has resulted in lack of

transparency-related problems (in the case of Colombia) and administrative problems (in the case of Peru).

15. Within this context, more importance is being given to initiatives promoting transparency in information related to the payments made by private companies to the national governments, as well as to the use of such resources. One of the most important initiatives, which we believe must be supported, is the Extractive Industries Transparency Initiative (EITI), promoted by United Kingdom's Prime Minister Anthony Blair in the World Summit on Sustainable Development held in Johannesburg (September 2002). This initiative encourages governments, private and state-owned extracting companies, international organizations, nongovernmental organizations (NGOs), and other stakeholders in the sector to work together voluntarily in order to promote transparency.

### **Collection of Oil Rents**

16. Oil rents include the revenues earned by the state from royalties charged to extracting companies; the income tax paid by the same companies; the social contributions; the training fees; the payment of patents; and a number of minor charges characteristic of each country.

17. Regarding the institutional framework, no unfavorable aspects are identified that could justify that a single "agency" should collect all royalties and distribute the shares, as is the case in Bolivia, Colombia, and Peru. However, this is considered more efficient than having two agencies, one in charge of collection and another in charge of distributing the state shares. Indeed, the administrative costs are lower with a single agency than with two agencies. The important element is to achieve a higher level of transparency and access to information to avoid duplicating tasks.

18. In absolute terms, in the analyzed period, countries can be divided in two categories according to the amount they receive: the first one made up of Ecuador and Colombia, with oils rents over US\$1 billion per year; and the second one, made up of Bolivia and Peru, with far less oils rents, around US\$200 million per year.

19. Although the models for the oil contracts used in the region are well known, the level of difficulty encountered to get consistent statistics on oil rents vary among countries. While in Colombia and Peru the distribution means that have been established make it compulsory to publish periodically and consistently the figures on royalties and the shares given to the provinces, municipalities and, in general terms, to all the institutions that benefit from oil rents, in Bolivia, the information, although also available, does not segregate between rents from the hydrocarbons sector received by the regions and the revenues from regular transfers made by the central government. However, oil rent flows are less transparent in Ecuador. It is difficult to establish consistent figures considering that PETROECUADOR receives the portion corresponding to the state from contractor operations and merges it with its oil production and, worse yet, within its accounting procedure integrates it with the subsidies granted to the domestic prices, to which it is necessary to add the complexities of this company's management. Moreover, it must be said that Ecuador is a country where revenue earmarking has the greatest level.

20. In unit terms, oil rents per equivalent oil barrel show differences. Ecuador had on average the highest oil rent in the 1998–2003 period, with US\$9.8/bbl. It is followed by Peru (US\$5.9/bbl), Bolivia (US\$4.2/bbl), and finally Colombia (US\$3.9/bbl). It is noteworthy that in the case of Bolivia and Peru, oil rent would be higher if revenues from capitalization and privatization, respectively, were considered. In the case of Ecuador, the largest portion of production was carried out by PETROECUADOR, a company that exploits low-cost fields and has not complied with fully depreciating its investments. In Peru, production is also obtained mainly from oil fields with little additional investments. In the case of Bolivia and Colombia, oil rents include significant volumes of natural gas production, which usually has a lower unit value than oil, diminishing the unit rent significantly.

### **Distribution of Oil Rents**

21. On average, during the 1998–2002 period, Ecuador received the highest oil rent amounting to US\$1.318 billion, followed by Colombia with US\$1.1 billion. Behind them are Peru, with an average annual rent of US\$220 million, and Bolivia, which received US\$224 million.

22. In the analyzed countries, a trend is observed toward decentralizing oil rent management, with a reduction in the central government's share:

- In Bolivia, the central government's share diminished from 77 percent in 1998 to 68 percent in 2002.
- In Colombia, the central government's share diminished from 43 percent in 1997 to 30 percent in 2000. In 2001, it increased but then it fell again;
- In Ecuador, the central government's share diminished slightly, from 100 percent in 1998 to 97 percent in 2002; and
- In Peru, the central government's share has remained stagnant around 59 percent, a figure that will diminish in the next years as gas production increases.

23. The efforts to increase the absolute value of the oil rent must produce results in the coming years. Bolivia, Ecuador, and Peru are poised to realize the greatest success: Ecuador, with an increase in its crude oil production resulting from undeveloped proven reserves and recently completed transportation facilities; Peru with the put in stream of the first stage of the Camisea Project, and Bolivia with an increase in gas exports mainly to the markets of Brazil and Argentina. In the near future, both Peru and Bolivia expect to develop projects to export LNG to the North American market. Colombia, by contrast, must increase its investments in the sector in order to avoid the impact of a fall in the oil production from the Cuisiana and Caño Limon deposits.

24. Besides the largest portions of the rents received by the central government or distributed among the producing regions, minor portions are also distributed among agencies in charge of oil contracts or funds aimed at industry training, and so forth. It is important to have a transparent allocation and to avoid, as far as possible, earmarking procedures that may bypass the budget controls in the countries.

## Use of Oil Rents

25. In all the countries, oil rents go to the regions and the largest portion is allocated to the provincial governments, municipalities in the producing regions, as well as institutions, universities and/or regional development agencies. This increasing segmentation of oil rents resulting from the political process that the countries in the region are undergoing gives rise to the double challenge of increasing the capacity in the beneficiary institutions and increasing transparency in the transactions.

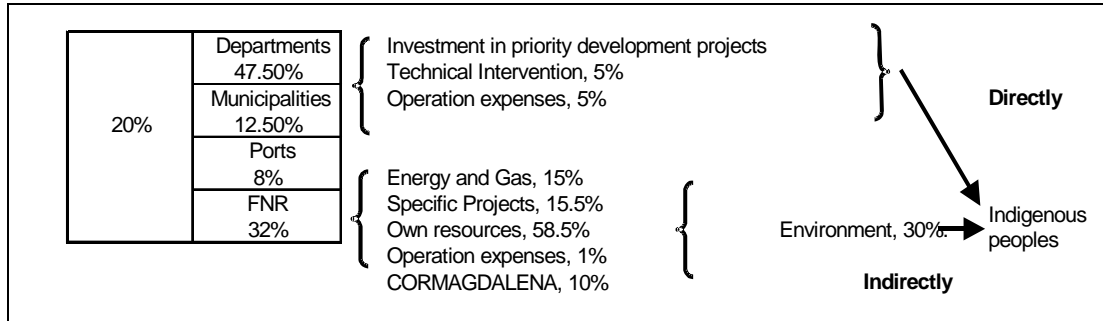
26. In general terms, decisions on how oil rents must be used are within the domain of public expense and finance and the development of macroeconomic policies. The actual expense will depend on several factors, starting with transparent management. In principle, the use of oil rents cannot bypass the priorities governing the development plan of the country in general and of the region in particular. Besides taking into account the priorities for developing new infrastructure, it is very important to put in place efficient control systems. Countries consider that investments must be given priority over current expenses. Giving priority to investments means implementing medium and long-term plans.

27. In *Bolivia*—it is not possible to determine, based on the available statistics, the benefited regions, or the cost-effectiveness and efficiency of the use of resources generated upstream in the hydrocarbon sector, except that they have been managed in the same manner as resources coming from any other sources. Regarding this, some criticism has existed regarding aspects such as:

- Low budget implementation ratio (The Economic Planning Unit [UDAPE] estimates this ratio at 50 percent)
- Weak institutional development due to technical and administrative drawbacks, lack of compatibility between annual plans and programs and budgets, political intervention of municipal councils, high staff turnover, lack of transparency in the administrative processes
- Inadequate design of rules and procedures; inflexibility and complexity of administrative procedures.

28. However, it is noteworthy that a recent initiative exists on the cost-effectiveness and efficiency issues from the Unified Directorate of Funds, that is, the elaboration of Institutional Adjustment Programs (PAI) by the municipal government. These programs are also being elaborated for departmental prefectures.

29. In *Colombia*—the regulations in force very precisely determine how royalties received by the different territorial agencies must be invested: the bulk of resources must be used for investment in priority projects set in the general development plan of the department or in the development plans of the municipalities. The following graph shows the adopted distribution:

**Figure 1: Royalty Distribution**

30. In the case of the National Royalties Fund (FNR), funds are distributed as follows: (i) 15 percent to Energy and Gas Projects; (ii) 15.5 percent to Specific Projects submitted by territorial agencies; (iii) 58.5 percent to Own Resources for Projects; (iv) 1 percent to operation expenses; and (v) 10 percent to the Rio Grande de la Magdalena Corporation. As for Own Resources for Project, the law provides that 15 percent must be allocated to promote mining, 30 percent to environment preservation, and 54 percent to funding regional investment projects defined as priority projects in the development plans of the corresponding territorial agencies.

31. In *Colombia*, according to the laws in force, indigenous communities can have access to oil rent resources:

- **Directly.** Article 11 of Law 756 of 2002, provides that: Whenever non-renewable natural resources are exploited in an indigenous resguardo (territories) or at a point located not further than five kilometers around the indigenous resguardo zone, 5 percent of the value of the royalties to be paid to the department due to such exploitation, and 20 percent of the royalties to be paid to the municipality shall be allocated to investment in the zones where such indigenous communities are settled and shall be used in terms provided *in Article 15 of Law 141 of 1994; and*
- **Indirectly.** Through the use made by the FNR of the resources allotted to environment preservation that can be aimed at the sustainable development of indigenous resguardos.

In both cases, it is indispensable that indigenous peoples become territorial agencies in order to have access to the resources from the share in direct royalties and those from the FNR.

32. The evaluations that have been made on the use of royalties in Colombia have reached important conclusions. It is said that the activities of the oil industry have a positive impact on economic activity, improving the social indexes and the finances in the producing departments and municipalities. However, these results must take into account that some negative impacts have also occurred and that evidence exists showing the lack of transparency in managing funds by some municipalities. Likewise, the

deterioration in public order due to the presence of armed groups and the resulting pressure against public and private activity in the oil-producing regions should be considered.

33. In *Ecuador*—the management of resources from the oil industry, since it started in the 1970s, have been subject to faulty administration. The collection and allocation of resources has become an essentially political process. Governments have found in oil revenues a supposedly endless supply of resources to meet their fiscal needs without needing to plan. An example of this management is maintaining subsidies on gas and oil products through the accounts of PETROECUADOR. Managing oil rents has become more complicated since the different stakeholders have multiplied without even an existing standard pattern of distribution. The classification of oil revenues breaks down such revenues in 30 alleged sources of revenues due to the multiple earmarking that have been established through the years.

34. As for the decentralized use of resources, the amount distributed in 2002 reached US\$71 million, which is a small figure in relation to the total amount collected as oil rent. The largest portion is allocated to ECORAE (80 percent), the law of which provides that the section agencies must allocate not less than 80 percent of the received resources to the funding of roads and environmental sanitation projects in the corresponding territories, especially those included in the Master Ecological Development Plan for the Amazon Region. Nevertheless, detailed information on the use of such resources is not available.

35. Law 122 (Funds for the Development of the Eastern Provinces of Sucumbios, Napo, Morona Santiago, and Zamora Chinchipe) follows with 11 percent of the total amount allocated in 2002. This law provides that revenues from these sector agencies must be allocated exclusively to urban and rural infrastructure works. The funding for this comes mainly from the 2.5 percent and 4.5 percent taxes on the total amount invoiced to PETROECUADOR or its branches by the services companies, local and foreign, respectively, within the jurisdiction of each Amazonian province.

36. Ecuador is the only country that has established funds to manage its surplus from oil rents. From 1999, the obligation was established for oil revenues exceeding those initially estimated in the state budget to be directed to the Oil Stabilization Fund. In June 2002, the Fund for Stabilization, Social and Productive Investment, and Reduction of Public Debt was established, based on the following resources:

- State revenues from crude oil transported through the Heavy Crude Oil Pipeline (OCP) provided that they do not result from a lower use of light crude oils by the SOTE.
- Central government budget surplus.
- 45 percent of what is collected in the Oil Stabilization Fund

If high oil prices are maintained, Ecuador expects to reduce its foreign debt and to improve its financing capacity based on the use of the FEIREP.



37. In *Peru*—the analysis on the use of the Canon (royalty) and Sobrecanon (royalty surtax) is limited due to the lack of information on expenses and investments made by local governments, since there is no controlled and systematic recording of such information. According to the budget regulations, only as of 2003, will such institutions be included in the national public budget, and only then will it be possible to have a systematic recording.

38. Based on the information on those regions (Piura, Tumbes, Loreto, Ucayali, and the province of Puerto Inca, in the Huanuco region) that as of 2002 received over 50 percent of the Canon and Sobrecanon, it can be said that the Oil Canon and Sobrecanon are mainly used to finance capital expenses in hydrocarbon-producing departments. In 2002, such departments used 76.3 percent of the expenses made with such resources to finance capital expenses, 23.0 percent to finance current expenses, and 0.7 percent to finance the debt service.

39. In order to offset the systematic lack of information, regional and local governments keep separate accounting on the use of Canon and Sobrecanon. This makes it possible to identify the expenses and investments to which they are allocated. In many cases, Canon and Sobrecanon cofinance expenses and investments, together with transfers from the central government and resources of the regional and local governments. The Canon and Sobrecanon accounted for 10.5 percent of the expenses in those departments that receive such resources. This level has remained relatively unchanged in the last three years, ranging from a high of 20.9 percent in Loreto to a low of 0.8 percent in Huanuco.

40. The new Gas Canon that will allow the Cusco region to benefit from the rents of the Camisea Project introduces important changes. This Canon comprises not only 50 percent of the royalties but also 50 percent of the income taxes paid by the consortium in charge of the field exploitation. This Canon will be distributed in different shares between the regional government, the municipalities in the region where production is taking place, and the municipalities that do not have any production.

### **The Indigenous Communities**

41. The International Labor Organization (ILO) provides that the Conventions executed between countries are international juridical instruments. Bolivia, Colombia, Ecuador, and Peru have executed ILO Convention No. 169, and therefore they are bound and obliged to enforce it.

42. As for the distribution of the benefits from oil rents, Article 15 of this Convention provides that: *The rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources. In cases in which the State retains the ownership of mineral or sub-surface resources...The peoples concerned shall wherever possible participate in the benefits of such activities, and shall receive fair compensation for any damages which they may sustain as a result of such activities...*

43. Only in the case of Colombia do legal regulations exist that directly provide funds to the indigenous communities. In Peru, the distribution of oil rents, or Canon and SobreCanon, is made as a function of the political division of the country (regions, municipalities). However, new legal regulations (2003) provide the obligation that 10 percent of the Canon must be distributed among the local, municipal, or district governments where the natural resource is located. This is a breakthrough. In Bolivia as well there are adopted patterns of distribution of the rents to the level of provinces and in Ecuador there is ECORAE that is financing several indigenous communities in the Amazonian region. However in these three countries there is a need to clarify legal regulations to enforce the provisions of ILO Convention 169 related to the participation of the indigenous peoples in the oil rents.

**Table 1: The Previous Study—Preliminary Conclusions**

The generation of oil rents is a function of the hydrocarbon reserve volume, the production level, the production cost, and the capacity of such countries to capture the investments needed to achieve a rational exploitation.

The rent distribution structure in a country is a function of parameters established by the different governments through time using legal provisions that usually are modified during the life of the projects. In general terms, in no country does the current rent distribution structure respond to an analysis of the needs of each region or institution. That is why it is not possible to assess in an isolated manner the structure of rent generation and distribution of a given country, since it does not follow a given pattern. Nevertheless, it is possible to assess the regional trends and to compare the structure of each country with the average structure of the four countries.

As a way to introduce this new comparative study, it is noteworthy to remember the general conclusions of the previous study, which are still mostly valid:

- A balanced structure in rents distribution will allow the communities making up the country to feel the benefits of hydrocarbon exploitation. This will make it easier for communities located in the exploitation zone to cohabitate harmoniously with oil companies, without considering that the latter will replace the state in terms of meeting their basic needs.
- Compared to income taxes, which are subject to variations in profits, costs, and investment in the companies, royalties and/or compensations received from hydrocarbon exploitation, as a direct percentage of production, currently are the main source of revenues for the country owning the resources (over 70 percent of the rent).
- Royalties are included in the political constitution of the four countries and are aimed at specific uses governed by legal provisions and specified in the agreements.
- Oil rents are a source of revenue for the state, which must in turn distribute them according to the law and to requirements established for the placement of public funds. Consequently, the institutions receiving these rents must have a defined legal capacity; moreover, they must have

investment plans and an adequate control and auditing system for the use of funds. As long as indigenous communities lack legal and administrative capacity to manage public funds, they will have difficulties accessing oil rents.

- The level of political decentralization influences rent distribution, because as the regions or municipalities reach a higher administrative and political capacity to manage their resources, they will have a higher access to oil rents (amounts currently going to the public treasury could be directly allotted to departments or regions).
- Without correct distribution of oil rents, it is difficult to achieve that hydrocarbon exploitation be compatible with sustainable development in oil-producing regions. Nevertheless, there is no mathematical formula to indicate the most adequate structure for each country.
- Colombia is the only country that has enacted laws on rent distribution aimed at making it possible that such rents directly reach indigenous communities (from 2001). In some countries, the need for social support is recognized in the environmental impact surveys (Ecuador and Colombia).
- The contractual features influence the level of compensation and social support. So, in the contracts that recognize such expenses, either for the calculation of retributions or royalties or for fiscal purposes, the level of compensations and social support is higher.
- In Peru and Bolivia, the agencies in charge of the negotiation of contracts and the supervision and control of the operation of companies directly receive a portion of oil rents. In Colombia and Ecuador, the local companies—ECOPETROL and PETROECUADOR, respectively—that execute agreements on behalf of the state receive resources for such purposes directly as part of their budgets.

# 1

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## The Hydrocarbon Sector Situation

### Background

1.1 The importance of the hydrocarbon (oil and natural gas) sector in relation to the size of the economies in the countries studied is rather different.

**Table 1.1: Importance of the Hydrocarbon Sector  
“Upstream”, as % of the GDP, exports, and national budget (2002)**

	<i>Hydrocarbon Production as % of GDP</i>	<i>Hydrocarbon Exports as % of Total Exports</i>	<i>Rents as % of the National Budget</i>
Bolivia	19.5	24.1	5.1
Colombia	7.2	27.8	5.0
Ecuador	12.2	39.5	17.9
Peru	1.4	5.8	2.4

*Source:* Ministries and companies in these countries, EIA.

1.2 As can be seen in the Table 1.1, hydrocarbon production, including crude oil and natural gas, as a percentage of the GDP has the highest importance in Bolivia, where it reaches 19.5 percent in 2002, followed by Ecuador with 12.2 percent (where the natural gas production is marginal), then there is Colombia with 7.2 percent, and finally Peru with 1.4 percent of the GDP.

1.3 The contribution of hydrocarbon exports—typically crude oil and refined products, natural gas exports are only significant in the case of Bolivia—to total exports is the highest in Ecuador. In this country, oil and its derivatives account for almost 40 percent of the total exports. It is followed by Colombia and Bolivia, where hydrocarbons account for about 25 percent of the total exports (in the case of Bolivia, natural gas exports account for almost 75 percent of the total hydrocarbon exports, and oil accounts for the remaining 25 percent). In Peru, hydrocarbon exports only account for 5.8 percent of the total exports. It is noteworthy that Peru was a net importer of hydrocarbons until August 2004, when the Camisea gas project started production.

1.4 Finally, it is also important to analyze the existing relationship between the oil rents as a percentage of current revenues in the budgets of each country. The most

important contribution is in Ecuador, with 18 percent. It is followed by Bolivia and Colombia with 5 percent and then Peru with 2.4 percent.

## **Bolivia**

1.5 With 300 million barrels of proved reserves, Bolivia qualifies as a country with limited oil reserves. Nevertheless, since the late 1990s and early this decade, important gas reserves have been found in its territory, particularly in the Department of Tarija. The new proved reserves amount to 24 trillion cubic feet and almost 55 trillion cubic feet if proved and probable reserves are added. This ranks Bolivia in the third place in Latin America, only behind Venezuela and Mexico. Taking into consideration that the development of such natural gas reserves could result in significant changes in the country, especially if the plans to export them to North America (Mexico and the United States) materialize, it can be said that Bolivia is facing a great challenge it must deal with in the coming years.

1.6 Associated to natural gas, Bolivia has condensate components (liquid hydrocarbons) of the same natural gas, which has made it possible for the country to increase its liquid hydrocarbon reserves. The liquid hydrocarbons amounted to 80 million barrels in the Departments of Santa Cruz, Cochabamba, and Chuquisacapro, but with the natural gas liquid hydrocarbons from Tarija, proved and probable reserves of liquid hydrocarbons have increased to 957 million barrels in 2003.

1.7 Current oil output in Bolivia amounts to 38,000 barrels/day while its consumption amounts to 53,000 barrels/day; consequently, nowadays it is a net importer (of diesel and other refined products).

### ***Foreign Investment in the 1990s***

1.8 In the 1993–2002 period, about US\$2.5 billion were invested in the hydrocarbon industry in Bolivia, which accounts for 40 percent of the total amount invested in this country during such period (See figure 1.1). The investment rally in the sector starts in 1997 as a consequence of: a) capitalization of oil deposits of the national company YPFB (transformed into Andina and Chaco); b) the gas pipeline network (Transredes); c) the modification of existing oil contracts; and d) the public bid for the leasing of new areas under a legal framework favorable for investment.

1.9 According to the guidelines for the sector reform, YPFB withdrew from any productive activities, becoming the state agency in charge of the promotion of exploration and exploitation, the execution of agreements, and the increase of natural gas production to be exported to Brazil.

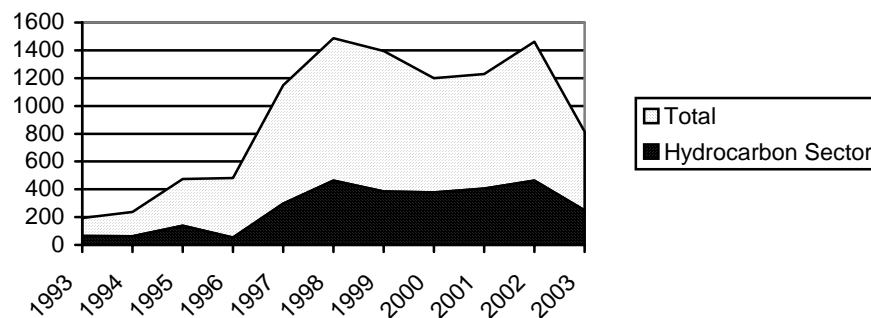
1.10 As a consequence of the new legal framework and the decision to build the gas pipeline to Brazil, a significant incentive for natural gas exploitation appeared. So, from 1998, investments were made for explorations in the Tarija zone. It is noteworthy that the most important success of the foreign companies has been the discovery of important natural gas reserves, but no oil has been found.

1.11 The traditional gas-producing zone in Bolivia was the department of Santa Cruz, in the Pie de Monte region. The bulk of natural gas production (75 percent) came

from the YPFB deposits in this Department. These deposits were capitalized in 1996 and currently are part of the companies Sociedad Anónima Mixta Andina (SAM) and Sociedad Anónima Mixta Chaco.

1.12 As a consequence of the reform in the mid-1990s, and the agreement executed in 1997 to export natural gas to Brazil, major oil companies (British Gas, British Petroleum, TotalFinaElf) made important investments to search for natural gas. Spanish REPSOL-YPF, and the Brazilian State-owned company (Petrobras), and other minor companies (Pluspetrol, Vintage) also made investments. According to the Vice-minister of Energy and Hydrocarbons, investments in the 1997–1999 period amounted to approximately US\$675 million.

**Figure 1.1: Bolivia—Foreign Direct Investment**



1.13 It is noteworthy that the investment for the Santa Cruz-Sao Paulo gas pipeline (US\$2.1 billion, of which 80 percent was made in Brazil and 20 percent in Bolivia), appears in the Commerce and Services item and amounts to US\$435 million for the 1997–1999 period. The same happens with the investment for the Yasyrg gas pipeline (US\$300 million) and the gas pipeline from Rio Grande (Bolivia) to Cuiaba (Brazil), in which US\$200 million has been invested.

**Table 1.2: Bolivia—Proven and Probable Oil Reserves Table**

(MMB—2003)	<i>Proven</i>	<i>Probable</i>	<i>Proven + Probable</i>	<i>%</i>
Cochabamba	32.8	40.9	73.7	7.7
Chuquisaca	5.0	2.2	7.2	6.8
Santa Cruz	43.4	38.1	81.5	8.5
Tarija	404.9	389.6	794.5	83.0
<b>Total</b>	<b>486.1</b>	<b>470.8</b>	<b>956.0</b>	<b>100.0</b>

Source: Ministry of Mining and Hydrocarbons

**Table 1.3: Bolivia—Certified Reserves of Natural Gas**

	1997	1998	1999	2000	2001	2002	2003
Proven (P1)	3.75	4.16	5.28	18.31	23.84	27.36	28.69
Probable (P2)	1.94	2.46	3.30	13.90	22.99	24.93	26.17
P1+P2	5.69	6.62	8.58	32.21	46.83	52.29	54.86
Possible (P3)	4.13	3.17	5.47	17.61	23.18	24.90	24.20
P1+P2+P3	9.82	9.79	14.06	49.82	70.01	77.19	79.06

Source: YPFB

### ***The Commercialization of the Natural Gas Reserves***

1.14 The initial purpose of the exploration efforts of the oil companies was to fulfill the natural gas export commitments with Brazil. However, the size of the new discoveries exceeded by far the capacity of absorption of the Brazilian market, opening new perspectives for both the private companies and the Bolivian government.

1.15 On the side of the government, the abundance of reserves has generated the need to establish a market diversification and industrialization strategy based on natural gas. This strategy has two main axes: the first one is aimed at the Southern Cone, where Bolivia expects to maintain a certain level of natural gas export to Argentina, and at the same time to become the hub for energy integration projects related to natural gas in this subregion, giving, as far as possible, value added to its exports through the development of power stations and a petrochemical industry.

1.16 The second axis is aimed at North America, but it requires the construction of infrastructure in order to get in the first instance access to a port on the Pacific Ocean. This situation has a difficult definition, having generated the competition between the ports of Mejillones in Northern Chile and Ilo in Southern Peru, which has necessitated considering both government interests and historical and geopolitical order.

1.17 For the companies, the huge volume of gas discovered has obliged them to look for new projects in order to monetize their reserves. Consequently, and regardless of the increase in the volume of exports to Brazil and Argentina, the companies have developed several projects, the most ambitious being the one that expects to export liquefied natural gas (LNG) to Mexico and the United States. This implies the construction of a gas pipeline to the Pacific coast, a liquefaction plant and supplementary facilities at the shipping port, as well as the corresponding marine fleet, and the construction of a regasification plant at the destination port. The total investment for the project (including the investment to be made at the destination markets) is estimated at around US\$6 billion, a third of which will be made in Bolivia and the selected Pacific port. In July 2001, the consortium Pacific LNG was established in order to execute the project. It is made up by Repsol-YPF (37.5 percent), British Gas (37.5 percent) and Pan American Energy LLC (controlled by BP Amoco) (25 percent).

1.18 The debate in Bolivia on the natural gas policy is complex, with two main overlapped components. The first one concerns the destination of the export markets. The second one is a debate involving stakeholders and including the interests of the government, the interests of the consortiums and companies that discovered the reserves, and the interests of the political parties and civil society, whose presence in this debate is critical.

1.19 Regarding the first component, political sectors and member of the civil society challenge the convenience of exporting to the United States, with the argument that the prices being agreed are unfavorable for the country. The second component has a nationalistic nature and is related to Bolivian history. The political parties and sectors of the civil society have had important participation here.

1.20 In late 2003, a popular uprising led to a change of government. In April 2004, the current President of Bolivia, Carlos Mesa, proposed modifications to the Hydrocarbons Law (that is, including the sovereignty notion, increasing the government take through a new supplementary tax, returning YPF to productive and commercial activities, looking for natural gas industrialization alternatives, and so forth), as well as a referendum, through which the citizens should state their position on the convenience of the changes in the law and the conditions for exporting natural gas.

1.21 The referendum was held on July 18, 2004 with a majority in favor of the government's proposals, with which it is in a better position to advance to the elaboration of a new law for the sector.

1.22 So far there is no clear forecast about the exact contents of the law and its consequences for the future of the industry. The debate about the law is still open in Congress and it is expected to continue during the first trimester of 2005.

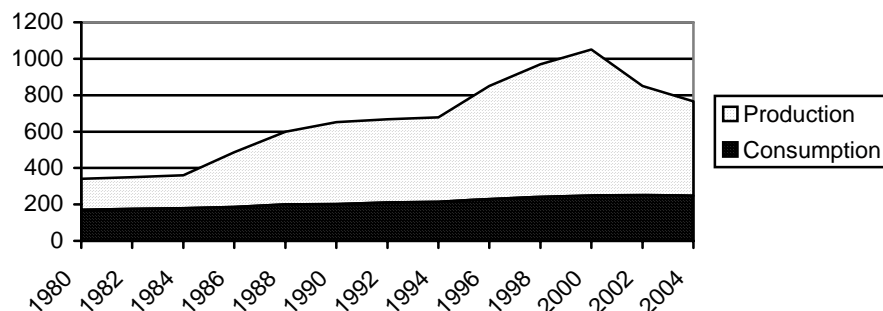
## **Colombia**

1.23 With 1.542 billion barrels of proved reserves as of the end of 2003, Colombia is also considered an oil-producing country, ranked sixth in the region, after Venezuela, Mexico, Brazil, Argentina, and Ecuador. Oil reserves in Colombia have been falling in the last years (in 1993 the reserves amounted to 3.6 billion barrels, more than twice the current level). This has generated concern among the decisionmakers and has led to a number of changes in the oil laws in the last three years.

1.24 Since 1985, Colombia is self-sufficient in oil, meeting the needs of its domestic market, which have continuously increased in the last years. Oil production, after growing in the 1990s, reaching its high in 1999 with 816,000 barrels/day, has started to descend, reaching 578,000 barrels/day in 2002. The production in 2003 was 540,000 barrels/day, which implies a fall of 6 percent compared to 2002. This has resulted in lower exportable amounts, both for ECOPETROL and for the contracting companies. Crude oil exports reached a high of 515,000 barrels/day in 2002 (with ECOPETROL accounting for 50 percent), and fell to 292,000 barrels/day in 2002 (with the share of ECOPETROL decreasing to 39 percent).



**Figure 1.2: Colombia—Oil Production and Consumption in Colombia  
1980–2003**  
(Thousand barrels per day)



1.25 Oil exploration and exploitation in Colombia is carried out in two modes: (i) through the state-owned company ECOPETROL, and (ii) through joint ventures between ECOPETROL and foreign private companies. The direct share of ECOPETROL in the total oil production is around 17 percent but increases after adding its share in the joint ventures.

1.26 Proved reserves of natural gas in Colombia as of the end of 2003 amounted to 4.0 trillion cubic feet, ranking it seventh in Latin America, after Mexico, Venezuela, Bolivia, Argentina, Brazil, and Peru. Gas production and consumption amounted to 594 million cubic feet/day in 2003, being noteworthy that consumption has increased 50 percent from 1994 to 2002, thanks to the National Plan of Massification of Gas Consumption promoted by the National Government.

### ***Changes in the Oil Legislation***

1.27 Legislative Decree 2310 of 1974 has been the basis for Colombian legislation until its amendments in the 1990s. This law provided that joint ventures with the state received a royalty equal to 20 percent of the production, regardless of the size of the deposit. The remaining 80 percent was divided equally between ECOPETROL and the Partner. According to the joint venture agreement, the state, through ECOPETROL, becomes a partner of the companies that are successful in oil exploration, which implies a stability guarantee granted by oil legislation. Once oil has been found, the agreement provides that ECOPETROL will assume 50 percent of the investments needed to develop production. This implies the need for less investment capital for the foreign company assuming the exploration risk. But this participation has meant the need for more capital from ECOPETROL, especially where those agreements have resulted in major oil discoveries, as those occurring in Cupiana and Cusiagua in the second half of the 1990s.

1.28 In July 2000, the Board of Directors of ECOPETROL approved adjustments in the agreements, mainly the following: the participation of ECOPETROL in the new joint venture agreements to be executed (to be applied on newly discovered deposits that are declared profitable) is reduced from 50 percent to 30 percent, which means that: a) ECOPETROL will assume 30 percent of the investments, b) it will be the

owner of 30 percent of the purchased goods until the termination of the agreement, and c) it will receive an initial percentage of 30 percent of the hydrocarbon (oil and/or natural gas) production. In 2002, Law 756 was enacted, which modifies the royalties system even for agreements executed under the 2000 round, and which basically allows variable royalties to apply as a function of the deposit size and to increase the lower limit, resulting in a minimum royalty of 8 percent (rather than 5 percent) for deposits with a production of up to 5,000 barrels/day.

1.29 With this measure, the government estimated that investments could be attracted in order to promote the discovery of new oil reserves. Nevertheless, in spite of a record in the execution of new agreements (64) being achieved in the 2000–2002 period, so far no major success has been obtained with the new investments. It is estimated that investments for US\$310 million/year are required in exploration during the next 10 years in order to replace the existing reserves. This volume of investment is much higher than the current levels of public and private investment amounting to US\$122 million/year.

1.30 Consequently, in its new legislation, Colombia has decided to grant additional investment incentives in order to achieve the level of investment required for the discovery of new reserves. The most important modification of the legal framework for the sector has been the enactment of Legislative Decree 1760 in 2003. A first important element of this Law is that it repeals all regulation opposing it, “especially Decree 0030 of 1951 and Legislative Decree 2310 of 1974.” Although this Law does not include specific contractual modifications, once Legislative Decree 2310 of 1974 has been repealed, the possibility is open for any contractual mode (even concessions, which were abolished by Legislative Decree 2310). Even though the details are not known yet, it is considered that in Colombia joint ventures will not have the same priority as before in the future.

1.31 For the first time in the region, the new agreements include a full clause about the abandonment of fields and the need to create a fund to eliminate the generation of environmental liabilities from the start of the exploitation.

1.32 In the new policy, a major aspect has been the reorganization of ECOPETROL, resulting in the elimination of its double function: regulator and operator (subject to regulation). It also allows the participation of its employees in the stock capital, basic governance means are introduced, and elements are incorporated to make the company achieve competitive levels. As for the royalties system, Law 756 of 2002 continues in force.

1.33 The new law splits ECOPETROL into two entities: Agencia Nacional de Hidrocarburos (ANH) and Sociedad Promotora de Energía de Colombia S.A.

1.34 The ANH is a special administrative unit attached to the Ministry of Mines and Energy, with legal capacity, own assets, and administrative and financial autonomy. Its main function is the integrated management of hydrocarbon reserves owned by the nation. ANH started to operate officially on January 1, 2004. The second organization, named Sociedad Promotora de Energía de Colombia S.A., has as its main function to participate or invest in companies whose corporate purpose is related to activities in the energy sector or similar, related or supplementary activities.

1.35 ECOPETROL will also be engaged exclusively in the development of industrial and commercial activities, being the company in charge of the oil operations carried out by the State. In order to be assigned exploration and exploitation areas by the ANH, ECOPETROL must compete with private companies. ECOPETROL may take part in the entire oil production chain, both internally and abroad, except for the transportation of natural gas within the national territory.

**Table 1.4: Oil Reform under the Uribe Administration**

***Background***

Insufficient hydrocarbon reserves in the country put satisfying the domestic demand and generating revenues in the medium and long term at risk. To counter this situation, the Ministry of Mines and Energy (between the second half of 2003 and the first half of 2004) within the framework of National Development Plan “Toward a Community State” aimed to guarantee Colombia, in the medium term, double its capacity of self-sufficiency and exports, and, in the long term, to maximize the development of the hydrocarbon potential of the nation.

Additionally, and supplementing what has been outlined above, actions were carried out aimed at the fulfillment of the following strategic objectives:

- To improve the competitive environment in the hydrocarbon sector, providing more transparency by segregating the roles of regulator and regulated company, and, simultaneously, providing ECOPETROL with the tools required to develop successfully in the future.
- To maximize the incorporation of reserves and to increase the production of oil and gas in the country, within competitiveness criteria and promoting the maintenance of a stable environment for investors and activities in the sector.
- To facilitate and promote private investment in all the stages of the production chain in the hydrocarbon sector, with special emphasis in the hydrocarbon exploration and exploitation chain.
- To establish an adequate balance among all the components of the energy basket in the country, optimizing the nonrenewable natural resources and defining opportunity prices for all the costs making up the production, transportation, and marketing chain of such basket.
- To continue supporting the definition of policies aimed at getting transparency, deregulation, and promotion of competition conditions in the sectors of fuel transportation and storage.
- To gradually eliminate the subsidies on liquid fuels.
- To strengthen the role of the state in terms of regulation and control of the illegal marketing of hydrocarbons and their derivatives, with special emphasis on smuggling and theft.

- To continue the optimization process in the refineries in the country, so that their competitiveness and productivity are guaranteed within international standards.
- To foster the design of sustainable schemes to provide liquid fuels derived from oil in the country borders.

### ***The Reorganization of the Hydrocarbon Sector***

The transformation process was started with the establishment of a Special Administrative Unit attached to the Ministry of Mines and Energy, named Agencia Nacional de Hidrocarburos (ANH), through which the industrial and commercial activities related to exploration, exploitation, refining, transportation, and marketing of hydrocarbons were segregated from the administration of the hydrocarbon reserves owned by the nation.

As a consequence, ECOPETROL has simultaneously started an internal transformation process in order to comply with the new requirements, such as guaranteeing its future viability and getting prepared to compete successfully in equal conditions with the other companies operating in the Colombian and international markets.

The reorganization process in the hydrocarbon sector had as its main goal to free ECOPETROL of the double role of entrepreneur and manager of the oil resources, in order to transfer to the new institution the integrated management of the hydrocarbon reserves owned by the nation, supported on three pillars, namely: (i) agreements with companies, (ii) exploitation planning, and (iii) resource management.

Because of the hydrocarbon sector's dominant role in different sectors of the economy, in establishing main public policies, and in foreign relations, the transformation has given the Colombian hydrocarbon industry a new impetus.

### ***General Benefits***

The implemented changes have resulted in benefits of a diverse nature, including great benefits for the state and its citizens through the creation of an economically sound company with higher transparency in the management of the nation's strategic asset, thereby recovering the state's role as a regulator.

Likewise, the ANH was created as the focus point for strategies aimed at exploring and recovering new hydrocarbon reserves that will allow self-sufficiency in this matter to be guaranteed, to contribute to the commercial balance, and to generate revenues for the nation.

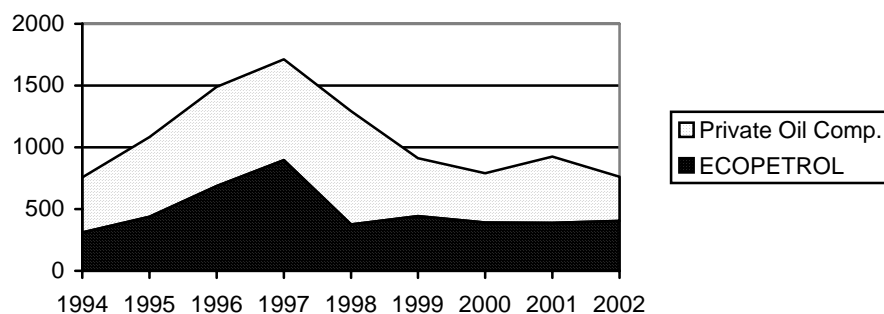
Also, benefits other than economic are expected, such as higher transparency, fairness, and political stability, which give a positive sign for investors in the sector and for the state, due to the greater efficiency of its companies. Through agreements with higher autonomy, it will be possible to mitigate the restrictions hindering the exploration programs, eliminate barriers, and increase aggressive plans for well drilling that will translate into a surge in hydrocarbon exploration and exploitation, with incalculable effect on the country at a time when fiscal problems exist and revenues are needed to overcome them.

### Foreign Investment in the 1990s

1.36 Until 2003, foreign investment in oil in Colombia had specific features, due to the specific mode of joint venture agreements between the state-owned company and the foreign contractor, in which ECOPETROL had a share of 50 percent (now 30 percent since 2000) and the contractor the remaining percentage.

1.37 Foreign Direct Investment (FDI) in oil exploration during the 1990s has exceeded by far the ECOPETROL investment in the same activity, being 4 or 5 times larger. FDI reached its high in 1998 with US\$343 million and fell in 1999 and 2000 as a result of political violence. Nevertheless, in 2000, a consortium led by PETROBRAS discovered the Guando deposit, with reserves that were initially estimated at 1.4 billion barrels, the largest discovery in the last eight years. Since then Colombia has not made any significant oil discovery.

**Figure 1.3: Colombia—Investments in Oil Exploration and Production (million of USD)**



Source: Ecopetrol

1.38 Investment in oil production development by both ECOPETROL and FDI clearly increased from 1995 to 1998, averaging US\$1.4 billion/year. This was due mainly to the investment in the Cusiana and Cupiagua deposits (BP, TOTAL, and Triton together with ECOPETROL), and to the construction of the oil pipeline to the Caribbean coast by the same companies. From 1998, investments in development have notoriously decreased due to political violence. However, it is expected that the new legal framework will make it possible to recover the production and export levels of previous years.

1.39 To encourage investments in the oil sector, the national government has defined a new contractual framework, where participation systems are specified for contracts in the sector and the interaction between investors and the state is regulated. In April 2004, the new contract model was introduced, where the new guidelines for the government's hydrocarbon policy have been expressed. With this new model, Colombia is in a better competitive position at the international level for obtaining risk capita investment aimed at deposit exploration and exploitation.

## Ecuador

1.40 Ecuador is a country that could be classified as an oil-producing country. It is ranked fifth in the region in terms of reserves, with 4.6 billion barrels of proved reserves as of December 2003. Oil production that year was 421,000 barrels/day. Since domestic consumption reaches 130,000 barrels/day, an important exportable excess exists amounting to 290,000 barrels/day.

1.41 The oil industry is very important for the Ecuadorian economy. In 2002, it accounted for almost 20 percent of the government revenues and for over 40 percent of the total exports. Consequently, the country's economy is very sensitive to fluctuations in the international prices of oil. As a whole, the oil sector accounts for 12 percent of the GDP.

1.42 Oil activity is carried out mostly through the state-owned company PETROECUADOR, which currently controls the bulk of the country reserves and accounts for about 50 percent of the production. Since the mid '90s, the importance of foreign companies in oil production is growing.

1.43 Natural gas reserves in Ecuador amount to only 345 billion cubic feet. So far, the development of this hydrocarbon is very limited. In late 2002, the American company Noble completed the Amistad project to generate electric power from offshore natural gas. It started operations in 2003. Natural gas production and consumption reached 16 million cubic feet/day.

1.44 The main objectives of the Ecuadorian oil policy in the 1990s were to:

- Modify the oil contract system in order to grant greater incentives for oil exploration and exploitation by local and foreign private companies;
- Open downstream activities to private investment;
- Expand the Trans-Ecuadorian Oil Pipeline System (SOTE).

Of these objectives, only the third has been achieved completely. In 2000, the construction of the Heavy Crude Oil Pipeline (OCP) was authorized in order to transport 400,000 barrels/day. Its construction was completed in August 2003. The OCP has made it possible to double the transportation capacity to 850,000 barrels/day. If the investments needed to develop already proved reserves are obtained, a substantial increase in production will be achieved.

1.45 Since late 2003, the new Ecuadorian government has tried to implement private investment-friendly policies. It has even proposed that the oil deposits of PETROECUADOR itself could be operated by private companies. Nevertheless, delays exist in the required changes in the Hydrocarbons Law. The deposits to be offered in public bid would be:

- Auca, with reserves amounting to 199 million barrels;
- Shushufindi, with reserves amounting to 570 million barrels;
- Culebra-Yulebra, with reserves amounting to 73 million barrels; and

- Lago Agrio, with reserves amounting to 62 million barrels.

1.46 It is estimated that the investment required for the development of these deposits would be in the order of US\$1.4 billion. Furthermore, in October 2003, the Ninth Round of Oil Contracts started with the bidding process of four blocks: 4, 5, 39, and 40. Three of them are located on the Pacific Coast and one in Santa Elena. According to PETROECUADOR, the investment required for these blocks in a period of 20 years is estimated at US\$1–2 billion.

### ***Current Attempts to Reform the Sector***

1.47 In Ecuador, reforms have been proposed to the current legislation in order to encourage private investment in oil deposits operated by the state-owned company PETROECUADOR and in new areas. In 2003, a proposal to reform the Hydrocarbon Law was discussed in the Congress. The discussion focused on two subjects:

- The joint management agreements for future oil bids, in particular in the Ninth Round of Bids for oil blocks.
- Elaboration of new regulations for the Special Committee for Bidding Processes in order to execute joint venture agreements for oil exploration and exploitation in the Amazon blocks Shushufindi, Lago Agrio, Auca and Yuca-Yulebra, currently developed by PETROECUADOR.

1.48 With the new joint venture agreements, foreign companies would commit themselves to generate a base production equal to the current production in these blocks. Furthermore, they would have to make investments in order to increase production (incremental production). The state expects to receive all the production below the base curve and a minimum of 35 percent of the incremental production, plus royalties and taxes, with which the state's share would increase to 57 percent. The contractors consider the state's take too high.

1.49 In May 2004, President Gutierrez annulled the bidding process and changed the Ministry of the sector. Currently, the Ministry of Energy and Mines is working in a new bidding process using existing legal contractual models whereas the Congress is apparently starting a debate to formulate a new legal contractual framework.

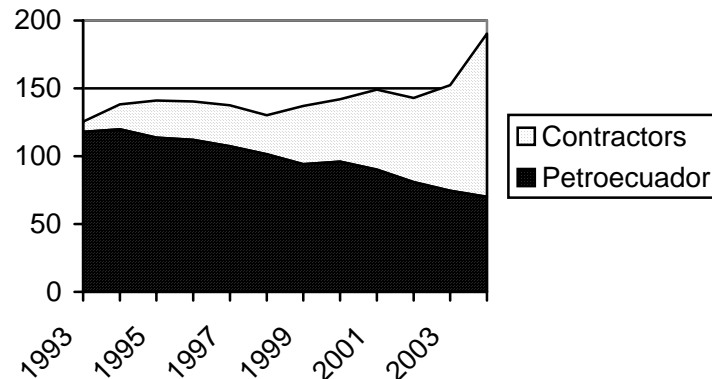
### ***Foreign Investment***

1.50 Direct investment from oil companies in exploration and exploitation grew from US\$90 million in 1990 to US\$1.063 billion in 2002, having achieved a high of US\$1.12 billion in 2001. In the 1990s, foreign oil investments reached a substantial amount, estimated at over US\$6 billion. This increase has made the foreign oil investment a major determining factor in the country's FDI. However, investments in oil exploration and production from PETROECUADOR decreased from an average of US\$150 million in the first half of the 1990s to an average of less than US\$90 million in the last five years.

1.51 As a consequence of these trends in the exploration and exploitation investments, oil production from foreign companies increased significantly: from 7,500 barrels/day in 1993 to 62,000 barrels/day in 2002, that is, a nine-fold increase. In

percentage points, their share increased from 6 percent to 43 percent of the total oil production, while PETROECUADOR declined significantly.

**Figure 1.4: Ecuador—Oil Production: 1993–2002**  
(in million barrels)



Source: Ministry of Energy and Mines.

1.52 Because the OCP was put on stream late in 2003, production increased to 153 million barrels, of which 74.5 million were produced by PETROECUADOR and 79 million by contractors. In 2004, the contractors continued to increase their share in total production. The foreign companies that have considerably increased their investments and production are: City Investing (a subsidiary of Canada's Alberta Energy), Repsol, YPF (Spain), Alberta Energy (Canada, it acquired City), Agip (Italy, it acquired ARCOS's share), and Occidental Petroleum (United States).

1.53 Despite the increase in production achieved by the foreign companies, they have a number of objections that are delaying the new investments. They include:

- The lack of stability and juridical safety, besides the law for the sector being discussed in the Congress;
- The controversy with the tax authority in relation to the refunding of the Valued Added Tax;<sup>2</sup>
- The existing base production levels set by the state for the exploitation of the PETROECUADOR deposits;
- The guidelines to assume the environmental responsibilities, considering the very heavy environmental liabilities at the PETROECUADOR deposits; and
- The risk that the conflicts with the indigenous communities may hinder production.

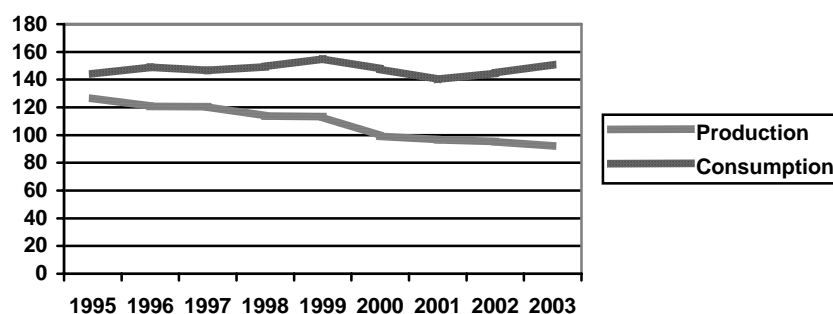
<sup>2</sup> An international arbitration panel resolved the dispute in early July 2004 in favor of Occidental. Consequently, the government must refund to this company the withheld VAT amounting to US\$75 million. The Government of Ecuador has objected to this resolution.



## Peru

1.54 Oil reserves in Peru amounted to 352 million barrels as of December 2003 and liquid hydrocarbon (oil and natural gas liquids) reserves amounted to 789 million as of the same date. Oil production has fallen since the late 1980s, having reached an average of just 92,000 barrels/day in 2003, an insufficient amount to meet the domestic demand of 151,000 barrels/day. Therefore, Peru is a net importer of oil with a deficit in its oil trade balance amounting to US\$724 million in 2003 compared to US\$492 million in 2002. The deficit increased in 2003, not only due to the lower production but also due to the high international prices of hydrocarbons and their derivatives.

**Figure 1.5: Peru—Oil Production and Consumption, 1995–2003**  
(thousand barrels per day)



1.55 This situation will change with the put in stream of the first stage of the Camisea Natural Gas Project due in August 2004. This deposit has proved natural gas reserves amounting to 8.1 trillion cubic feet and 600 million barrels of liquids. Adding to the probable reserves, Camisea currently has 14.4 trillion cubic feet (December 2002). In its first stage, the project will supply Lima's market.

1.56 Natural gas proved reserves in the country as of December 2003 amounted to 8.7 trillion cubic feet. If probable reserves are added, the figure reaches 16 trillion cubic feet. In 2003, natural gas production amounted to 180 million cubic feet/day from the deposits in the northeastern region and the central jungle, of which 72 million cubic feet/day (40 percent) went to consumption and the rest was reinjected into reservoirs (35 percent), used in other manners or vented (25 percent).

1.57 Investments in exploration started to increase in the mid-1990s due to the incentives provided by Law No. 26221. However, they decreased in the following years until reaching just US\$12 million in 2003. As for exploitation investments, they have been very marked by the Camisea project, both in the 1996–1998 period (under the Shell/Mobil consortium) and from 2001, under the Pluspetrol-led consortium.

**Table 1.5: Peru—Investments in Hydrocarbon Exploration and Exploitation (1995–2003, in US\$ Million)**

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Exploration	37.6	104.3	187.0	228.4	112.7	12.1	30.5	31.1	12.2
Exploitation	110.4	252.5	341.4	237.3	45.2	112.8	165.6	321.8	347.4
<b>Total</b>	<b>148.0</b>	<b>356.8</b>	<b>528.4</b>	<b>465.7</b>	<b>157.9</b>	<b>124.9</b>	<b>196.1</b>	<b>352.9</b>	<b>359.6</b>

Source: Anuario Estadístico de Hidrocarburos, 2003, Ministry of Energy and Mines—Peru

### **Structural Reform in the 1990s**

1.58 The guidelines that allowed a significant increase in oil investment in Peru<sup>3</sup> during the 1990s included the following:

- The state redefined its role in the “Oil Sector,” progressively withdrawing from productive and commercial activities. PERUPETRO, a new oil-contracting agency was established in order to promote investments and execute oil operation agreements. PETROPERU sold its deposits in Northwestern Peru (coast) and in the jungle to private companies.
- A radical change in the model of exploration-exploitation agreement, segregating the royalties from the income taxes. The royalties are set at a minimum and are progressively increased as a function of the project results, based on the “accumulated revenues/accumulated disbursements ratio” (R factor).

1.59 Peru has not been successful in its campaign to increase its oil reserves, even though investments in exploration from 1995 to 1998 increased significantly. So, in 1997, 41 agreements were executed and an average of 10 exploration wells per year was achieved for the 1997–1998 period, while in 1990 only four agreements had been executed and until 1996 only 12 exploration wells had been drilled.

1.60 Considering this negative oil exploration result, the state has promoted additional investments in the exploration lots and in the exploitation deposits, in the latter case, especially in the marginally profitable wells, in order to increase production. So, through Supreme Decree No. 033-2002-EM, PETROPERU is authorized to accept in those agreements in force a reduction of 30 percent in royalties, with a limit of 13.8 percent, provided that the agreement is in the exploration stage and has not had any discovery of commercial hydrocarbons. In the case of deposits under exploitation, Supreme Decree No. 017-2003-EM adds the following methodologies for the computation of royalties or compensation:

- *Production Scale Methodology*—to be applied according to the Supervised Production of Hydrocarbons in a given Contract Area, according to the

<sup>3</sup> An international arbitration panel resolved the dispute in early July 2004 in favor of Occidental. Consequently, the government must refund to this company the withheld VAT amounting to US\$75 million. The Government of Ecuador has objected to this resolution.

following levels and percentages: for production below 5,000 barrels/day, a royalty of 5 percent; for production ranging from 5,000 to 100,000 barrels/day, a royalty from 5 percent to 20 percent (according to negotiations); and for a production over 100,000 barrels/day, a royalty of 20 percent.

- *Economic Result Methodology*—RRE to be applied according to the formula:  $RRE = \text{Fixed royalty} + \text{Variable royalty}$ . Fixed royalty is 5 percent and variable royalty is to be computed based on the accumulated revenues and accumulated disbursements, having 1.15 percent as the base royalty.

### ***The Exploitation of Camisea Natural Gas, a Mega-Project (Blocks 88 and 56)***

1.61 This includes the deposits with proved and probable reserves estimated at 14.4 trillion cubic feet, located at Block 88 (with exploitation, transportation, and distribution agreements executed in 2000), and Block 56, the agreement for which is currently under negotiation and is to be incorporated into the Great Camisea Project. Its development is a fundamental strategic option within the energy policy, since it will allow the proved reserves of natural gas and liquid hydrocarbons to increase significantly and the production and consumption patterns for energy resources to be modified. The use of natural gas in thermal power stations, in the industry, automotive transportation, and domestic consumption will generate a substitution effect that will make it possible to reduce the deficit in the oil trade balance, which will be reinforced by the production and exportation of liquids (mainly naphtha and liquefied petroleum gas, [LPG]).

1.62 Block 88—Camisea comprises two deposits, San Martín and Cashiriari, located in the Amazon jungle and discovered in 1984 by Shell. In 1986–1987, Shell negotiated an exploitation agreement with the government, but this did not succeed due to a number of controversies, some of them of a financial nature, since Peru at that time was in default with the international financial agencies and consequently had no access to major credit sources required for the project execution.

1.63 Eight years later, negotiations were restarted and in May 1996, the Peruvian Government executed an agreement with the Shell/Mobil consortium to develop this deposit for US\$2.5 billion. In order to materialize the investment, the Peruvian Government granted the consortium, through Legislative Decree 818, a number of incentives that increased the profitability of the project (early return of the General Sales Tax, fractioning of the customs duties payment, and so forth.).

1.64 The consortium developed proved natural gas reserves on the order of 8.1 trillion cubic feet and 600 MMB of liquids. However, in July 1998, the consortium stated that it would not continue the project, which resulted in an early termination of the agreement. Such withdrawal was caused by different factors: the nonexistence of a market in Peru large enough for natural gas, a fact that expressed the need to create conditions for its development; discrepancies between the government and the consortium on the price of natural gas to produce electric power; the vertical integration of the project (exploitation, transportation, and distribution) demanded by the consortium but not included in the project, for which it was rejected by the government; and the

consortium demand to export natural gas to Brazil, something that was not included in the agreement either.

1.65 For this reason, the government called a new bidding process for the project. Thus in February 2000, the consortium made up by Pluspetrol (Argentina, 40 percent), Hunt Oil (United States, 40 percent), and SK Corporation (South Korea, 20 percent), was the successful bidder for the exploitation of the deposit during a period of 40 years having offered an initial investment of US\$400 million, and estimating a total investment during the contractual period amounting to US\$1.6 billion. Pluspetrol officers have estimated that the Peruvian State will receive about US\$1.9 billion in taxes and US\$3.5 billion in royalties.

1.66 In October 2000, the consortium Transportadora de Gas del Perú (TGP) led by the Argentinean company TECHINT, was awarded the transportation and distribution of natural gas and byproducts. TGP offered an investment of US\$1.45 billion for a 33-year agreement. Besides TECHINT, with a share of 30 percent, the consortium is made up of the companies SONATRACH (Algeria, 10 percent), Graña y Montero (Peru, 12 percent), SK Corporation (9.6 percent), Hunt Oil (19.2 percent), and Pluspetrol (19.2 percent). On December 9, 2000, the corresponding Exploitation, Transportation, and Distribution agreements were executed.

1.67 In May 2002, the French/Belgian company Tractabel was awarded the administration of the distribution of natural gas through the pipe network in the city of Lima-Callao, with the establishment of the company Gas Natural de Lima y Callao. The investment to be made by Tractabel was estimated at US\$200 million. The natural gas from Camisea arrived at Lima in August 2004.

1.68 The Camisea deposits are located in a humid jungle with high biodiversity levels and inhabited by indigenous peoples. The development of the project in its first stage has been subject to criticism by some NGOs. Nevertheless, both the involved companies and the government have made great efforts to manage the project impacts and to meet the requirements of the financing agencies, such as the Inter-American Development Bank, Andean Corporation for Development, and EXIMBANK. In particular, the government has committed itself to invest in improving its evaluation and monitoring capacity in relation to social and environmental impacts of the projects in the sector.

### ***The New LNG Export Project***

1.69 In addition, the Peru-LNG consortium, made up of Hunt Oil and SK, is developing a project to export to Mexico and the United States liquefied natural gas (LNG) from the Pagoreni deposit—currently Lot 56 (discovered by Shell/Mobil in 1998 and returned to PERUPETRO in 2001), which is adjacent to the Camisea deposits.

1.70 It is estimated that this project will require an investment in Peru amounting to US\$2.2 billion, which is broken down as follows: deposit development, US\$550 million; expansion of the current gas pipeline, US\$550 million; construction of the liquefaction plant, US\$1.1 billion. Should this project be implemented, this would be the first LNG plant on the South American Pacific coast.

### **Regional Gas Projects**

1.71 With the assistance of the ESMAP Program and of the CIDA, studies are being carried out in order to invite tenders for the gas transportation and/or distribution concessions in the regions of Ayacucho, Cusco, Ica, and Junin. If the planned schedule is followed, these infrastructure projects will be built and operational by early 2007.

### **Preliminary conclusions**

1.72 The hydrocarbons industry in the studied countries has increased its importance significantly.

- In Ecuador and Bolivia, important quantities of proved hydrocarbon reserves exist. Nevertheless, the legal framework to implement the investment in the exploitation of these deposits is still lacking.
- In Colombia and Peru, the fall in crude oil reserves has made it necessary to modify the legislation and, consequently, the agreements, in order to attract new investments, mainly in exploration.
- Natural gas is increasing its importance in the subregion. This is true for Colombia, which has completed an important effort to develop its domestic market, as well as for Bolivia and Peru, where besides the domestic market; options exist for very important export projects, which are additional in the case of Bolivia.

1.73 The social and environmental issues have started to receive greater attention and, in some cases, priority attention, but there is still much to do. An essential aspect is the manner of the decentralization efforts and the search for greater transparency in the generation and distribution of rents in these countries are to be carried out.

# 2

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## **Decentralization and Indigenous Peoples**

### **The Origin of Decentralization**

2.1 Latin America has undergone deep political and economic changes since the 1980s. Related to the continent's return to democracy, the following changes have taken place: a greater economic openness, the consolidation of price stability, and the new analysis of the size and function of the public institutions. One of the most remarkable features of the attempts to reform the state has been the initiatives to promote administrative and fiscal decentralization.

2.2 Economic and political factors have had priority in the determination of these processes. On the one hand, the economic motivation emerges from the search for cost-effectiveness and greater efficiency in the distribution of public resources, the attempt to reduce expenses, adjust the finances of the central government, and promote self-financing through empowering the subnational governments. On the other hand, the excessive economic centralism of these countries has been seen by sectors of the population that live away from the capital cities, as a hindrance for the development of regional markets and for the decentralization of the productive investment of the state. Thus, important sectors of the population have expressed their desire for the implementation of laws promoting a real decentralization.

2.3 The studied countries have problems linked to centralism of a different magnitude; the distribution of the population between cities and rural areas is different in each of them as detailed in the table below:

**Table 2.1: Distribution of Urban and Rural Population**

	<i>Population</i> (Millions inhabitants)	<i>Capital City</i> (Millions inhabitants)	<i>Cities</i> (With 1+ million inhabitants)	<i>% of Urban Population</i>
Bolivia	8.7	Sucre (0.2)	La Paz y El Alto (1.5) Santa Cruz (1.2) Cochabamba (0.8)	63
Colombia	42.3	Bogotá (7.4)	Medellín (3.0) Cali (2.4) Barranquilla (1.7) Bucaramanga (1.0) Cartagena (1.0)	75
Ecuador	13.2	Quito (1.4)	Guayaquil (2.0)	63
Peru	27.5	Lima (7.1)	Arequipa (0.7)	73

### Principles of Fiscal Decentralization

2.4 Fiscal decentralization is seen as an economic policy instrument, as well as an institutional reorganization instrument to handle the new requirements of the regions. According to the literature on fiscal decentralization, it is defined as a process of the transfer of powers and resources from the national or central administration of a given state to the regional or local administrations.

2.5 The international experience shows that fiscal decentralization must be based on clearly set principles that must provide rules and limits that will make it possible to maintain the macroeconomic and fiscal stability. The basic principles are:

- *Clearly defined powers.* A clear distribution of functions must exist among the national, regional, and local levels of government in order to determine the responsibility of each one in terms of administration and of the provision of services, and to promote and foster accountability among the leaders.
- *Transparency and predictability.* Transparent and predictable means must exist to provide fiscal resources to the subnational governments.
- *Neutrality in the transfer of resources.* A well-organized schedule must be established for the transfer of services and powers from the central government to the subnational governments with neutral fiscal effects, that is, avoiding the transfer of resources without the transfer of disbursement responsibility as a counterpart.
- *Fiscal responsibility.* The establishment of fiscal rules including indebtedness rules and a limit for the annual increase of expenses by the subnational governments, compatible with the transparency and fiscal

soundness rules for the national government, in order to guarantee the fiscal sustainability of decentralization.

### Oil Royalties and Participation Shares as Part of the Fiscal Decentralization Process

2.6 The granting to the producing regions of all or part of the rents collected in the hydrocarbon extraction activity is part of the fiscal decentralization process. This process is being implemented—although not in all the analyzed countries—even before the enactment of the legal regulations that launched the regional decentralization processes.

2.7 In Bolivia, Colombia, and Peru, the participation of the regions and departments in the oil royalties started in years 1972, 1974, and 1976, respectively, while in Ecuador the process was implemented through the state-owned oil company CEPE (later PETROECUADOR). The process of administrative and fiscal decentralization in these countries was launched later. Colombia began this process the earliest (1986), while Peru began it the latest (2002), although a Decentralization Law was enacted in Perú in 1989, the process was abolished in 1992. In Bolivia and Ecuador, the process started in 1994 and 1997, respectively.

**Table 2.2: Oil Royalties and Decentralization Laws**

	<i>Participation and Oil Royalties: Law and year</i>	<i>Decentralization: Law and year</i>
Bolivia	Law 10170 de 1972	Popular Participation Law (1994) Administrative Decentralization Law (1994)
Colombia	DL 2310 de 1974	Municipal Reform Law (1986) Constitutional Reform of 1991
Ecuador	In a centralized manner since 1973 through CEPE and Petroecuador	Special Law for State Decentralization and Social Participation of 1997
Peru	DL N° 21678, de 1976 Political Constitution of 1979 Political Constitution of 1993	Bases for Decentralization Law 2002

2.8 The transfer of economic resources from the oil industry should comply with the basic principles of fiscal decentralization. Usually, fiscal decentralization processes include the granting of powers and capacities. Given the known difficulties at the regional level, all resource transfers should be linked to training in order to achieve efficient management of such resources. In this regard, it is appropriate to consider some preliminary remarks and questions:

- The decentralization process has evolved in an uneven manner throughout the region.
- Decentralization requires the actual transfer of powers at the same time that the regions show capacity.



- The regions have long had a share in royalties; consequently, they are a sort of “avant la lettre” fiscal decentralization.
- Regions and municipalities do not always receive prior training in order to manage such money.

2.9 Serious problems exist. For instance, in Colombia, they are related to the lack of transparency that has devolved into corruption. In other countries, such as Peru, the problems are administrative.

## **Progress in the Decentralization Processes**

### ***Bolivia: Remarkable Progress***

2.10 The progress in the decentralization process was promoted by Law 1551 of 1994 on Popular Participation and Law 1654 of 1995 on Administrative Decentralization. The Popular Participation Law is aimed at: improving living standards and participative democracy through a better distribution of resources and a better use thereof; incorporating urban, rural, and indigenous communities into national life; fostering citizen participation; guaranteeing equal opportunities, and strengthening public agencies.

2.11 The Administrative Decentralization Law has three goals: improving and strengthening the cost-effectiveness and efficiency of public administration; establishing the fiscal decentralization system; and establishing the Executive Power structure at the departmental level.

2.12 The progress is remarkable in all areas: “Before popular participation, only 24 municipal governments managed US\$63 million per year without restrictions or conditions for their use. Currently they manage US\$166 million just in tax-coparticipation resources. In nine years, the total amount of resources managed by municipal authorities increased to US\$3 billion, that is, 29 percent of the total public investment, with which over 70,000 investment projects were executed in the 314 municipalities in the country.”<sup>4</sup>

2.13 The municipal challenge for the next five years is to improve management quality but to achieve that goal, the country and all its institutions and organizations must work together in order to improve the external and internal conditions to deepen popular participation and administrative decentralization.

### ***Ecuador: Initial Process Suffering Problems***<sup>5</sup>

2.14 The decentralization process is based on the Political Constitution of the State, which says:

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<sup>4</sup> Source: Rubén Ardaya (2004): Bolivia: *La necesaria evaluación del desempeño municipal*, VIII Foro Descentralista, Lima.

<sup>5</sup> Source: Consejo Nacional de Modernización del Estado, *Descentralización en el Ecuador*, Dra. Lida Moreno Badillo.

- *Article 1:* Ecuador is a sovereign, independent, democratic State with a decentralized administration.
- *Article 226:* The powers of the Central Government may be decentralized, except for defense and national security, foreign affairs policy and foreign relations; economic and tax policies, foreign indebtedness management and those powers explicitly excluded by the Constitution and international agreements.

2.15 Under decentralization, the transfer of powers cannot take place without an equivalent transfer of resources, and the transfer of resources cannot take place without the transfer of powers. Decentralization will be compulsory when a sectional agency requesting it has the operational capacity to assume it.

2.16 In Ecuador, there is a Special Law on State Decentralization and Social Participation enacted on October 1, 1997, as well as the Regulations for this Law published in June 2001. This implies that the process has a period of implementation that is still reduced.

2.17 The process has enough legal framework and the current situation is that there are many studies, methodological proposals, event analyses, power identification, and definition of powers by government levels in some sectors (2002–2003). Progress has been achieved in different sectors, such as education, health, transportation, agriculture, tourism, environment, and social welfare. The table below lists the agreements signed with the provincial and municipal councils.

**Table 2.3: Ecuador—Progress in Decentralization**

SECTOR	SECTIONAL GOVERNMENTS					
	Provincial Councils			Municipal Councils		
	Requested	Signed	Total	Requested	Signed	Total
<b>Health</b> (Cotacachi, Bucay, Loja, Chordeleg)	–	–	–	10	1	11
<b>Education</b> (Cayambe, Jama)	–	–	–	10	–	12
<b>Roads/transportation</b> (Loja, Ibarra)	–	–	–	5	1	6
<b>Agriculture</b> (Municipalities and Provincial Council of Tungurahua, Los Rios)	2	–	2	10	–	–
<b>Tourism</b>	–	–	–	–	60	60
<b>Environment</b> (Municipalities and Provincial Council of Tungurahua)	3	8	11	18	59	77
<b>Social Welfare</b> (Azuay and Napo)	–	2	2	8	30	38
<b>Total Requests</b>			<b>15</b>			<b>207</b>

- 2.18 According to the government, a number of problems exist, including:
- Difficulties for processing at the central level
  - Weak involvement of the ministers.
  - Different levels of knowledge and comprehension of the legal, administrative, and fiscal framework of the process
  - High turnover of decisionmakers
  - Blocking of procedures at the bureaucratic levels of the ministries.
  - Resistance to change at all levels.
- 2.19 Furthermore, allowing agreements to be executed through operation of the law results in weakening and uncertainty. The cessation and nonfulfillment of obligations assumed by the ministries in the agreements also has negative repercussions and damages the credibility of the stakeholders throughout the process.
- 2.20 Actions to be taken immediately include:
- Publication of the National Decentralization Plan in the official registry
  - Declaration of decentralization as a policy of the state
  - Allocation of staff for the decentralization committees in each of the ministries in order to execute and supervise the launched processes
  - Continuation of the ongoing processes and fulfillment of the commitments made through agreements.

***Colombia: Significant Progress but Serious Problems Persist<sup>6</sup>***

2.21 The decentralization reform started in 1986, with the enactment of Legislative Act 01, which reformed the Constitution. Then, Laws 11 and 12 were enacted, which tried to return to the municipalities an important number of powers over services, such as drinking water, basic sanitation, education, health, maintenance of infrastructure, sports, food safety, agriculture aid, urban land development, popular housing, urban transportation regulation, among other functions.

2.22 The municipal treasuries were strengthened both in terms of own revenues and in terms of transfers, and a number of political and citizen participation means and agencies were established.

2.23 With the new Colombian Constitution (1991), the powers of the subnational governments were increased, granting them more political, administrative, and fiscal autonomy. For this purpose, the share of the subnational governments in tax revenues was increased. Currently, the share is not only in the VAT but also in all the current revenues (income tax, customs duties, and VAT).

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<sup>6</sup> Source: Fabio Velásquez (2004): Colombia: *¿De regreso a un esquema centralista?* - VIII Foro Descentralista, 29 y 30 de marzo del 2004, Lima.

2.24 In this new system, the government is responsible for stabilizing and distributing resources, while the subnational governments are responsible for allocating such resources and providing services, such as education and health.

2.25 In the late 1990s a number of fiscal problems forced the government to carry out two reforms that seriously affected the territorial finances: a) Law 617 of 2000 on austerity in the expenses from municipalities and departments; and b) Legislative Act 01 of 2001, which changed the calculation base for the transfer system, reducing the transfers.

2.26 The current administration has followed the same behavior as its predecessors, stating that serious fiscal problems occur due to decentralization. Its proposals are aimed at cutting the territorial finances and the municipalities' expenses even more.

***Peru: First Attempts Started in 2001–2002***

2.27 In 2002, the Law on Decentralization Bases and other legal regulations were enacted. That year, elections were also held to elect regional governments. In this manner, the decentralization process that had been halted in 1992 during the Fujimori administration was resumed.

2.28 The decentralization process has several stages, in which the different ministries must transfer power to the regional and local governments, except for those related to health and education that must be transferred in the last stage of the process. In late 2003, the Fiscal Decentralization Law was enacted, which orders the transfer to the regional governments of a percentage (30–40 percent) of the sales tax (IGV) and the Excise Tax (ISC) collected in the corresponding regions.

2.29 It is noteworthy that empowering local government has advanced the regional decentralization process. The local governments have important resources from the so-called FONCOMUN (Fund for Municipal Compensation). The money for this fund is collected together with the IGV (currently the IGV rate is 19 percent: 17 percent goes to the National Government and 2 percent to the FONCOMUN). It is estimated that in 2004 S/. 1.597 billion Soles (US\$457 million) will be collected.

2.30 The National Decentralization Council (CND) must submit before the Council of Ministers the Annual Transfer Plan proposal. This plan must start with the transfer of powers from the sectors to the regions and municipalities, except for those related to health and education that will be transferred in the fourth and last stage of the process. But starting the transfer of powers implies having four complex and controversial issues solved: a) which powers are transferable and which ones are not; b) what capacities are needed to have access to such powers; c) how can such capacities be proved; and d) how are regions and municipalities going to be supported in order to develop the required capacities.

2.31 The Council of Ministers has already approved the proposal for the National Training and Technical Aid Plan submitted by the CND. The Congress is discussing two bills on the National Certification System. It is yet to see the final

resolution of this debate and how the CND will deal with the issue of which powers are transferable, to whom and what capacities are required to be granted such powers.

2.32 The Plan must also define how the transfer of the social programs and Special Projects from INADE to the municipalities and regional governments will continue. In 2003, the transfer of resources was started from a number of social programs (PRONAA, FONCODES, ORDESUR and Pro Vías Rural) to a number of district and provincial municipalities certified by the CND. In the same manner, nine special projects were transferred from INADE to the corresponding Regional Governments, while those located in borderline or coca-growing areas were still pending.

2.33 Finally, the Plan must also start the transfer to the regions of the assets, companies, and projects with regional scope that are currently in the hands of the government. These transfers should have started in 2003, but the Executive delayed the organization of these assets in a hierarchy system. For this reason, the Congress enacted a law setting the deadline to solve this issue in late January. Only through Supreme Decree No. 023-2004-PCM dated March 23, the Presidency of the Council of Ministers has approved the existence of national, regional, and local assets. However, the list of assets, companies, and projects to be transferred will be part of the Annual Transfer Plan 2004.

### **Importance of the Indigenous Peoples**

2.34 The countries in this study have a very significant portion of the indigenous population grouped in indigenous settlements that receive several juridical names, such as peasant communities, native communities, community territories, ethnic groups, and so forth. In this study the term Indigenous Peoples is used as it is stated in the ILO Convention No. 169, which these countries have executed. Of the four countries, Colombia has the lowest indigenous percentage (less than 2 percent) and Bolivia, the highest (about 50 percent).

2.35 Although the importance of the indigenous peoples in the history, culture, and identity of these countries is unquestionable, the population censuses have been ineffective in capturing the ethnic identity factor during data gathering and demographic analysis. The lack of uniformity in the methodology and the lack of criteria to define who is indigenous have prevented the existence of accurate figures of the number of indigenous inhabitants in the four countries for decades. Only recently, and thanks in part to the World Bank-sponsored program “We All Count,” the agencies responsible for the management of censuses and surveys have incorporated criteria that are more uniform and have more methodological value for the statistic identification of their indigenous population. In this regard, the World Bank is preparing a new publication with updated data on indicators of poverty and access to services such as education and health in different countries in Latin America, focused on indigenous peoples.

2.36 For this study, the most important information about the number of ethnic and indigenous populations is related to the spatial distribution of indigenous peoples. Most of them dwell in the highlands of Peru, Bolivia, and Ecuador, (in decreasing order). Nevertheless, the indigenous peoples and ethnic groups with the lowest number of members, and consequently with the highest vulnerability to changes, dwell in the

lowlands of Bolivia, Ecuador and Peru. In the case of Colombia, the country with the lowest percentage of indigenous population among the four countries (less than 2 percent of its total population or about 800,000 inhabitants), most of its indigenous inhabitants live in hot valleys, in the Colombian Amazon, and on the coast, while in the other three countries the indigenous population is concentrated mainly in the Andean zones. Of these three countries, Bolivia has the best balance in the spatial distribution of its indigenous peoples in highlands and lowlands, while in Peru and Ecuador the numeric difference between highlands inhabitants and lowlands inhabitants is overwhelming.

2.37 The most updated census information has included criteria aimed at trying to capture the ethnic factor, the most common being the use of the indigenous language at home and the existence of indigenous ancestors. So, according to the 2001 national census in Bolivia, the indigenous population in Bolivia accounts for almost half of the total population (49.95 percent), that is, a little over 4 million persons. In Peru, according to the 2001 national household survey, the indigenous population would account for 45.2 percent, that is, a little over 12 million persons. In Ecuador, 9.2 percent of the population is considered indigenous, according to the 2001 National Census, that is, a little over 1 million persons. In total, indigenous population in the four countries would amount to 18 million people out of a total population of 91 million, that is, about 20 percent. According to the most updated social indicators, being indigenous in any of these four countries still implies, above all, being rural dweller, poor among the poor, with much less access to health, basic sanitation, education, and justice services than their nonindigenous fellow countrymen.

2.38 According to the 2001 national household survey in Peru, 63.8 percent of indigenous households live in poverty, compared to 42 percent nonindigenous households in the same situation. Likewise, 35.3 percent of indigenous households are in extreme poverty, compared to 16.6 percent of nonindigenous households in the same situation. In the case of Bolivia, between 2000 and 2002, 72.5 percent of the rural dwellers were indigenous and 82 percent of the rural households were below the poverty line and 55 percent below the extreme poverty line. Crossing both categories of data, it is possible to assume that most of these rural poor are indigenous. In Ecuador, 75.8 percent of indigenous persons earn incomes below the cost of a basic goods and service basket compared to 69.5 percent of non-indigenous persons in the same situation (Leon 2003). As stated by Arango and Sanchez (2004), the problem with these poverty indicators is that few of them are applicable to the indigenous population, whose way of life depends on the use of natural resources rather than on money revenues. Nevertheless, this does not prevent us from stating that these indigenous groups live in a state of poverty, mainly due to the lack of basic services to meet their needs and the asymmetry existing in the insertion into the market.

2.39 Maybe, the most striking feature of this group of peoples is their extraordinary cultural diversity, being particularly relevant even in the case of lowlands dwellers and especially in the Amazonian region, because despite their number being lower than the number of Andean groups, they comprise the highest quantity of ethnic groups and languages. Considering that the oil and gas reserves in these countries, as well as the lots in operation, are located in the lowlands, attention must be focused on this group of peoples.

2.40 According to the Amazon Cooperation Treaty (TCA, 1993), there would be about 1 million indigenous persons in the territory encompassed by the Amazon Basin. Of these, about 300,000 are located in the Peruvian Amazonian, about 200,000 in the Bolivian Amazonian, about 100,000 in the Ecuadorian Amazonian, and about 70,000 in the Colombian Amazonian. This makes a total for these four countries of about 700,000 Amazon indigenous dwellers. This population is distributed in a set of ethnic groups as follows:

- In Peru, 300,000 indigenous persons are distributed in 42 ethnic groups.
- In Colombia, 70,000 indigenous persons are distributed in 55 ethnic groups.
- In Ecuador, 100,000 indigenous persons are distributed in 16 ethnic groups.
- In Bolivia, ethnic groups in lowlands include territories out of the Amazonian, such as the Cruceños and Chiquitania, where important gas reserves exist, as well as other non-Amazonian indigenous groups. Including the indigenous groups in the lowlands, these groups would be distributed in 42 ethnic groups.

2.41 As it can be seen, 70,000 persons in these four countries (plus an unidentified number of indigenous persons in non-Amazon lowlands in Bolivia) belong to 177 ethnic groups, each of them with their own cultural heritage and language, even though grouped into linguistic families and with common cultural features of adapting to the environment.

2.42 The social and cultural situation of these groups is also diverse. Two extremes can be established in a continuum of changes: from the small groups that are still isolated in Peru (as well as in Brazil) to the ethnic groups that have lost their language and get mixed with the so-called ribereños, peoples that live along the large Amazon rivers and that are a product of crossbreeding.

2.43 An important number of these peoples are extremely vulnerable due to the reduced number of members, the lack of an organization to support them, and the presence of external factors and impacts that work against their survival. So, during the twentieth century over 90 ethnic groups disappeared in the Amazon Basin (TCA 1993), while in just the Peruvian Amazonia during the second half of the twentieth century, 11 ethnic groups have disappeared and there are 18 more that might suffer the same fate (Mora and Zarzar 1997).

2.44 The most transcendental demand of these peoples for many decades has been to guarantee their access to the territory and the natural resources on which they depend for their survival and reproduction. In part, this demand has been and is being fulfilled, particularly in Colombia and Bolivia, with the establishment of indigenous resguardos, and indigenous and community territories, respectively. In Peru and Ecuador, the legislation only acknowledges assignment of use for community territories, but without a notion of ethnic group.

2.45 The Amazon indigenous peoples have achieved an important level of political organization, through the establishment of regional federations organizing sets of ethnic groups by basins, which in turn join together in order to establish representative organizations at the nationwide level, such as CIDOB (Confederación de Pueblos Indígenas de Bolivia) in Bolivia, OPIAC in Colombia, CONFENIAE in Ecuador, and AIDSESEP (Asociación Interétnica de Desarrollo de la Selva Peruana) and CONAP (Confederación de Nacionalidades Amazónicas del Perú) in Peru. The Coordinating Body of Indigenous Organizations of the Amazon Basin (COICA) is the only supranational agency representing the indigenous peoples in the basin and has had a fundamental role in the tripartite dialog sponsored by the EAP Program.

2.46 Most of the demands of the indigenous peoples in the Amazonia find their juridical expression in the ILO Convention 169 but some surpass it. Besides the claim for their territorial property to be guaranteed (their first and fundamental claim), they have the following demands:

- The right to informed consent through consultations held prior to the development of activities that could affect the use of their territories and their access to natural resources (veto power).
- The right to participate in the benefits resulting from extraction activities developed with their consent in their territories or in occupation and use zones.
- The right to a bilingual and intercultural education and the access to scholarships for superior education.
- The right to better health services and the access to such services.
- The acknowledgment of customary law and their manners to administer justice.
- The right to the sustainable growth of their communities and the best possibilities to have access to the markets.
- The right to political participation and to have representatives in the state powers.

2.47 As it can be seen in the maps of Annex 2 on hydrocarbon operations in these four countries, there is a clear although varying overlap between the lots granted for exploration and exploitation and the lands occupied by indigenous peoples. This situation is in constant flux and the current maps depict a snapshot of a process that changes with time. However, considering the concentration of indigenous peoples in these zones, the overlap with the lots becomes constant. Given this situation, it is pretty obvious that the policymakers in the sector and in public treasury of these countries should make the necessary efforts to achieve a fairer and more equitable distribution of the benefits in the sector, with the purpose of letting these people receive the benefits that they deserve because they are directly affected by these activities.

2.48 In order to benefit from the decentralization process that is gaining momentum in the studied countries, the indigenous peoples must not only strengthen



their organizations but they must also have to participate actively in the regional electoral processes, especially in those municipalities where they constitute the majority.

### **Preliminary Conclusions**

2.49 The excessive economic centralism of these countries has been viewed by sectors living away from the capital city as a hindrance to developing regional markets and decentralizing the state's productive investment. Thus, important sectors of the population have stated their desire that laws be implemented to promote effective decentralization.

2.50 In the studied countries, the problems linked to centralism vary in their magnitude. The situation of the population differs in each of them, as well. For instance, in Peru, the difference in population between the first and the second most important cities is 10 times, while in all the other analyzed countries this difference is much lower.

2.51 For this reason, and for the sake of administrative efficiency, the countries have launched decentralization processes, considering them part of the state reform process. There are four main axes:

- Clearly defined powers
- Transparency and predictability
- Neutrality in the transfer of resources
- Fiscal responsibility

2.52 The participation in oil rents distributed in a decentralized manner is, strictly speaking, a part of the fiscal decentralization process. Nevertheless, it must be said that a characteristic feature of the countries in the region is that this participation started in 1970 and precedes the decentralization processes launched by these countries.

2.53 The progress in the decentralization processes in the analyzed countries is heterogeneous. Bolivia and Colombia have older and more advanced processes, while in Ecuador the process started in 1997 and in Peru in 2002.

2.54 So far, the balance of the decentralization process varies in each of the analyzed countries. In Bolivia, the progress has been remarkable, especially in 1995–1996, when Law 1551 on Popular Participation and Law 1654 on Administrative Decentralization were enacted in 1994 and 1994, respectively. In Colombia, the process started in 1985 and experienced remarkable progress. Nevertheless, in the last year a number of problems have arisen (some of them due to political violence and corruption problems), which have led to a certain trend toward “recentralization.” In Ecuador, there has been little progress and the process is having difficulty with implementation. In Peru, although the process has just started (2002), regional governments have already been elected, and the process for the “unification” has also started, as well as the transfer of resources to the regional governments. A fiscal decentralization process is also expected, conditioned to the “unification” of regions.

2.55 Indigenous peoples must become integrated into the decentralization process, so that their organization level is felt in the regions where they constitute a majority.



# 3

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## The Collection of Oil Rents

### Sector Reforms of the 1990s

3.1 In the analyzed countries, the agreements with foreign companies are the instruments channeling foreign investment into the hydrocarbon sector. In the 1990s, important reforms have been made in the hydrocarbon laws in most of the Latin American countries. This has been the case of Bolivia, Colombia, and Peru.

3.2 The reform has been made up mainly of measures aimed at increasing competitiveness in the countries, granting more incentives to risk capital in order to prevent its migration toward other regions in the world. Moreover, Latin American countries have to compete with countries that have more oil production, such as the Middle East, Eastern European countries, China, West Africa, and so forth, which a few years ago did not allow foreign investment.

3.3 The sector reforms carried out in the different Andean countries are similar, except for Ecuador. The existing differences are related to characteristic features of each country, such as: reserve volume, production/consumption ratio for hydrocarbons and their derivatives, technological level, and experience of the national oil industry, among others.

3.4 The reforms in the hydrocarbon laws have included the following fields: a) the oil contracting system in the exploration and exploitation sector (upstream); b) the activities in the transportation, refining, and marketing activities (downstream), including the opening and deregulation of the oil markets; c) the modernization of the state-owned companies and the elaboration of new corporate strategies to fit in with the new paradigm in force; d) the privatization of state-owned companies, as was the case in Bolivia and Peru.

3.5 As an introduction, it is interesting to review the following tables from Wood Mackenzie's study *Global Oil and Gas: Risks and Rewards* that summarizes the exploration situation and the fiscal systems applicable in a good number of countries in the 2000–2001 period. They show the higher or lower prospectivity of the zones in these four countries, both for oil and natural gas, based on the results of exploration carried out in the 1990s, as well as the more or less strict conditions of the fiscal systems then, based on the “government take” parameter on the net flows of the projects discounted at 10 percent.

3.6 The study made by Wood Mackenzie differentiates projects carried out by companies with operations in the countries (“existing investors” case) from the case of “new investors” that are just entering the country and consequently do not have assets in the depreciation process that under some laws can be depreciated as a whole in the accounting of each company. Finally, the study offers a world ranking, where the position achieved by the countries under study can be found.

**Table 3.1: Exploration Results**  
**% of success in technical and commercial terms (1991–2000)**

	<i>Number of Exploration Wells</i>	<i>% of Commercial Success</i>	<i>% of Technical Success</i>
Bolivia	50	24.00	28.00
Colombia	170	12.94	14.12
Ecuador	46	28.26	45.65
Peru	46	4.35	13.04

**Table 3.2: Number of Findings (1991–2000)**

	<i>Oil Findings</i>	<i>Natural Gas Findings</i>	<i>Total Findings</i>
Bolivia	4	8	12
Colombia	12	10	22
Ecuador	13	0	13
Peru	1	1	2

**Table 3.3: Government Take**  
**(% of NPV in the case of oil or natural gas developments—  
 by new investors and by existing investors)**

	<i>Oil Deposit</i>		<i>Natural Gas Deposit</i>	
	<i>New Investor</i>	<i>Existing Investor</i>	<i>New Investor</i>	<i>Existing Investor</i>
Bolivia	53.07	52.87	58.55	58.21
Colombia	56.47	54.88	61.94	58.60
Ecuador	81.87	86.59	n/a	N/a
Peru	>100.00	>100.00	71.54	70.20

**Table 3.4: Position in the World Ranking  
(Based on the most favorable conditions for projects  
by new investors and existing investors)**

	<i>Existing Investors</i>	<i>New Investors</i>
Bolivia	10	11
Colombia	28	21
Ecuador	44	29
Peru	55	47

3.7 Obviously, after 2001, in order to attract the investments it needs, Peru has decided to improve the contracting conditions, making the royalties rates variable. Colombia has also evolved in that direction; while in Ecuador the congress is still working on the reformulation of the investment conditions in the sector. However, in Bolivia, there are intentions to increase the “government take” through the current referendum and the new law for the sector.

3.8 This section of the study describes the types of contracts that have been signed in the selected countries without entering into the discussion of their validity or their rationality for the distribution of the rent between the companies and the state. This section also touches upon the institutional framework established in each country to proceed with the collection of the rents.

### **Description of Oil Agreements in the Region**

#### ***Bolivia—Risk Sharing Contracts***

3.9 After enactment of the Hydrocarbons Law 1689 in 1996, the obligation was introduced that exploration, exploitation, and marketing activities be necessarily executed by the private sector through joint venture agreements with YPFB.

3.10 The risk sharing contract is the means provided by Law No. 1689 through which the state, as owner of the hydrocarbon deposits, exercises its right to explore, exploit, and market the deposits. The joint venture acquires the right to explore, exploit, transport, and market the obtained production upon payment of a share for YPFB (6 percent) plus the corresponding royalties (12 percent), making up 18 percent of the total production value. The income tax is 25 percent. In addition, surtax was established, besides the general income tax applied on all economic activities.

3.11 In those fields capitalized into SAMs (mixed capital companies), there is a state share similar to a royalty of 19 percent and a supplementary national royalty amounting to 13 percent. The state has 50 percent of the SAM stocks, which are assigned to the country pensioners. The dividends generated by the SAMs are used to increase the pension funds.

3.12 Regarding marketing, there is free import and export of liquids, as well as free local marketing of hydrocarbons and its derivatives, but natural gas exports are conditioned to the previous fulfillment of the needs of the local market.

3.13 In the transportation area, oil pipelines and gas pipelines were transferred to TRANSREDES through capitalization and without exclusivity on the service. Multi-use pipelines were transferred to oil tanking through privatization.

3.14 The fiscal system and the ownership and marketing regime may undergo changes in the current process of elaborating the law for the sector.

### **Colombia—Association Contracts**

3.15 Since 1974, through Legislative Decree 2310, the exploitation of hydrocarbons is carried out in two manners: a) with direct participation of the state-owned company ECOPETROL; and b) through a mixed arrangement with the participation of the state through ECOPETROL, which executes agreements with private companies, mostly foreign investors. These are the association contracts.

3.16 The uniqueness of these agreements is that if the private company finds oil, ECOPETROL associates with it in a 50–50 percent scheme, assuming a posteriori its corresponding exploration investment portion, as well as 50 percent of the investment required for the development and production of the deposits. Throughout the years, successive modifications have changed the percentage with which ECOPETROL associates with the foreign investor. Currently, ECOPETROL's share has been reduced to 30 percent.

3.17 The association contracts consider the payment to the state of a royalty equal to a percentage of the gross value of the supervised production. This royalty was originally 20 percent, but has been reduced in the last years, until a minimum of 8 percent for deposits with small production.

3.18 The association contracts have evolved and start using the R Factor methodology for the distribution of production. The modification made in June 2002 set a maximum share for the investor of 70 percent of the production (after the payment of royalties). This percentage decreases until 35 percent of the production as the R Factor increases due to an increase in production.

3.19 In Colombia, the income tax is 35 percent. With the creation of the ANH, Colombia is trying to increase the competitiveness of its model contract for the oil industry.

### **Ecuador—Several Types of Agreements**

3.20 PETROECUADOR has the most important reserves and, as provided by law, the responsibility for executing and supervising the oil agreements. Considering the changes in the hydrocarbons law during the last two decades, Ecuador now has a wide range of agreements.

- *Service Contracts*: Joint venture agreements, where the private company carries out the exploration and exploitation with its own resources and if commercially exploitable deposits are found, PETROECUADOR refunds the incurred costs and investments and recognizes a tariff per produced barrel. The only agreement of this type in force now is the one executed with AGIP.

- *Participation Agreements:* These are agreements for hydrocarbon exploration and exploitation, through which the contractor carries out at its own expense and risk, the investments and assumes the required costs. Should the contractor consider it profitable to start production, it will have the right to participation in the production in the area under the agreement. This participation will be lower than the royalty level provided by law. This type of agreement has been the most successful. Currently, 14 agreements of this type exist and 5 blocks are in a bidding process.
- *Marginal fields:* These are hydrocarbon exploration and exploitation agreements in areas with production levels at the time of bidding that do not account for over 1 percent of the national production. The contractor carries out, at its own expense and risk, the investments and assumes the required costs, obtaining from PETROECUADOR the payment of a previously set production cost for the base curve production and participation in the incremental production to be obtained over such base curve. Currently, five agreements of this type are in force and there are five additional deposits in the process of bidding.
- *Operational Alliances:* These are agreements applied to rehabilitating and developing deposits owned by PETROPRODUCCION, in which private companies, under the direction of PETROPRODUCCION provide a wide number of services and financing. The payment of services costs plus a financing and management fee is made based on the increase in production obtained in the corresponding deposit. For this purpose, a trust is established under the management of the Central Bank. Deposits Víctor Hugo Ruales, Atacapi, and Parahuacu are being developed under this type of agreement.
- *Strategic Alliances:* These are agreements based on covenants previously executed with state-owned companies. Their purpose is to carry out joint projects at any stage in the hydrocarbon industry. The only agreement of this type currently in force is the one with Chile's ENAP for the rehabilitation and development of four deposits owned by PETROPRODUCCION. ENAP receives for its services a payment in cash equal to a percentage of the production from the deposits, depending on the oil prices.
- *Specific Services:* These agreements required by PETROECUADOR are executed in order to carry out hydrocarbon exploration and exploitation activities in the Shiripuno, Tivacuno, and Ancon deposits.

3.21 The income tax in Ecuador valid for all these contracts is 25 percent.

### **Peru—Several Types of Contracts**

3.22 There are also several types of agreements with private (local or foreign) investors.



- *Service Contracts:* These are hydrocarbon exploration and exploitation agreements executed between private companies and PERUPETRO as representative of the state. Through these agreements, the oil company operates the lot, and per each supervised barrel PERUPETRO pays it a fee in cash for the rendered services. This fee is calculated based on an R factor (accumulated revenues/accumulated disbursements). With this fee, the oil company covers its investment, the cost of the rendered services, and generates profits after the payment of the income tax. In this type of agreement, all the production in the area under the agreement is owned by PERUPETRO, which assumes its commercialization and then distributes the rents according to the laws in force. Service agreements do not pay royalties but they do generate oil rents since the revenues obtained by PERUPETRO are used to pay operation costs (1.5 percent), contributions to OSINERG (0.75 percent), and to the Ministry of Energy and Mines (0.75 percent), as well as the rights of the regions to have a share in the rents, and the remaining amount is transferred to the state.
- *License Agreements:* These are agreements through which the contractor has the power to explore and exploit hydrocarbons in the agreement area, making, at its own expense and risk, the investments and assuming the costs required for the exploration and exploitation of hydrocarbons. In these agreements, PERUPETRO transfers to the contractors the ownership on all the hydrocarbons drawn by them. Once the production has started, the contractor will pay PERUPETRO a royalty. This royalty will be calculated based on the supervised volumes, an R factor, the international prices for oil, and the percentages offered and agreed. As it was mentioned above, the government has recently granted greater incentives to investors, establishing royalties with a floor of 5 percent and a gradual increase to 20 percent as the oil production increases.

3.23 It is noteworthy that from 1993, when the Hydrocarbons Organic Law No. 26221 was enacted, the tax stability right for hydrocarbon exploration and exploitation agreements was confirmed.

3.24 *Other types of agreements:* These are agreements that allow other options, such as technical assessment agreements, through which the companies carry out low-cost exploration activities that can even include preliminary seismic assessments, and which, in the case of finding the area or lot attractive become license agreements or service contracts.

3.25 The income tax in Peru is 30 percent, plus a 4.1 percent tax on profit distribution.

### **The Agency in Charge of Negotiating Oil Agreements**

3.26 In most Latin American countries, oil reforms of the 1970s led to a strengthening of the state-owned companies, giving them the responsibility for most of the upstream and downstream activities, which in some cases resulted in giving these companies a sector monopoly.

3.27 One of the activities entrusted to the state-owned companies of several countries in the region, including the Andean countries of this report, was to become the agency in charge of negotiating, on behalf of the state, the oil agreements with the foreign companies. Within this framework, the state-owned companies were in charge of negotiating the royalties and their collection with the foreign companies.

3.28 The oil legislation reforms in the 1990s modified this situation, providing higher incentives to the participation of private companies in oil exploration and exploitation. In countries, such as Argentina, Peru, and Bolivia, upstream activities were completely privatized. In these cases, new agencies had to be established to negotiate and manage the oil agreements with foreign companies and the corresponding royalties.

- In *Bolivia*, the Law of 1996 maintained YPFB in charge of negotiating agreements with oil companies, but it was legally forbidden to take part in the exploration or exploitation of hydrocarbons. This trend was followed by countries not included in this report, such as Brazil, where the National Oil Agency was established in 1997.
- In *Colombia*, the National Hydrocarbon Agency has been established as a special administrative unit under the Ministry of Energy and Mines, with legal capacity, own assets, and administrative and financial autonomy. One of its main functions is to design, promote, negotiate, execute, supervise, and manage the new exploration and exploitation agreements.
- In *Ecuador*, in November 2002, the national government established the Special Committee for Biddings (CEL). The CEL is in charge of the general conditions for the bidding and granting of agreements referred to in Article 19 of the Hydrocarbons Law. The CEL is comprised of the Minister of Energy and Mines, who chairs it, the Minister of National Defense, the Minister of Economy and Finance, and the General Comptroller of the State. The Executive President of PETROECUADOR acts as the Secretary of this Committee. He receives the administrative support of PETROECUADOR for the fulfillment of his duties. Once the successful bidder is known, the agreement is executed between PETROECUADOR and the foreign company (Decree 3394 dated November 2002, Article 44). The management of the agreement is entrusted to PETROECUADOR (Article 46, *idem*).
- In *Peru*, the state agency PERUPETRO was established through Law 26225 enacted in 1993. It is in charge of promoting, negotiating, executing, and supervising the hydrocarbon exploration/exploitation or exploitation agreements. The rationale for the establishment of PERUPETRO was that it was thought then that all PETROPERU—the state-owned company—could be privatized, except for the function inherent to the state, that is, oil contracting. Nevertheless, through Law No. 28244 dated June 4, 2004 the Peruvian State authorizes PETROPERU S.A. to negotiate agreements with PERUPETRO for exploration and/or exploitation and oil operations or services, according to law.

### ***Preliminary Conclusions***

3.29 Oil sector reforms related to agencies in charge of the negotiation of oil agreements have taken the following shapes:

- In Bolivia and Peru, where state-owned companies have been privatized, autonomous agencies have been established to negotiate oil agreements with private companies. However, in Bolivia, the bill under discussion considers that YPFB must stop being just the agency in charge of negotiating agreements and aggregating the gas production from several companies to export it to Brazil and must reassume productive and marketing activities along the oil production chain.
- In Colombia, since 2003, ANH negotiates the oil agreements with private companies and ECOPETROL. The sense of the reform is that ECOPETROL must be just another company competing with private companies.
- In Ecuador, CEL negotiates the oil agreements with the participation of PETROECUADOR. However, PETROECUADOR takes part in negotiating the agreements with foreign companies and its own agreements and royalties, and then continues as supervisor of the fulfillment of the contractor's obligations.

3.30 Where state-owned companies still maintain activities in the area of exploration and exploitation, the agency in charge of the oil agreements, and consequently of the royalties, should be autonomous.

3.31 The problem when a state-owned company is in charge of productive and commercial activities is that it collects taxes and is also responsible for managing the country's hydrocarbon resources and through the agreements receives a significant part of the oil rents. This is a problem of accumulating functions in an agency that manages very important state resources. This is the case of companies that must still be in charge of the subsidies on LNG and diesel, or of the monopoly in the import of refined products, that is, in charge of very significant amounts of money, which must adhere to political decisions and many times do not pass through the control of the national budget.

### **Agencies in Charge of Collecting Royalties and Distributing Rents to Regions**

3.32 From the analysis made in each country, it can be seen that in Bolivia and Colombia a single agency is in charge of collecting and distributing royalties (although in Colombia, currently, besides ECOPETROL, the National Royalties Committee is a distributing agency). In Ecuador, two agencies collect and distribute royalties (Central Bank of Ecuador [BCE] and PETROECUADOR). In Peru, the collecting agency is PERUPETRO, but the distributing agency is the Ministry of Economy and Finance (MEF). However, the MEF entrusts PERUPETRO to draw the checks to be distributed among the regional and local organisms that receive oil royalties and gas royalties.

3.33 The point here is whether a single autonomous agency must be in charge of collecting royalties (which, has been analyzed, have constitutional and legal bases determining them) and distributing the rents (regional shares, canon, and so forth).

- In *Bolivia*, the collecting agency is the same as the distributing agency
- In *Colombia*, the collecting agency is, in part, the distributing agency. ECOPETROL is a collecting agency and directly distributes among the producing departments, municipalities, and ports (68 percent of the royalties). The remaining 32 percent is given to the National Royalties Fund, which distributes the rents according to law. Therefore, in Colombia there is a single collecting agency (ECOPETROL) but two distributing agencies (ECOPETROL and the National Royalties Fund).
- In *Ecuador*, there are two collecting agencies:
  - a) PETROECUADOR earns revenues from its internal and external commercialization of oil and derivatives and after deducting its costs (according to the amounts approved in the budget) delivers them to TGN.
  - b) The MEF and the BCE are responsible for managing the taxes that are part of the rents.
- In *Peru*, the collecting agency is also the distributing agency but takes directions given by the Ministry of Economy and Finance.

3.34 A priori no unfavorable aspects are identified that could justify or suggest that a single agency should collect all royalties and distribute the shares (canon), as is the case in Bolivia, Colombia, and Peru. However, having a single agency to fulfill both functions, that is, collecting and distributing, as already provided in the laws of each country, is considered more efficient than having two agencies (one in charge of collecting and another in charge of distributing the shares). Indeed, the administrative costs are lower with a single agency than with two agencies. The important element is to achieve a higher level of transparency and access to information, avoiding the duplication of efforts and functions in two or three agencies.

**Table 3.5: Agencies Collecting and Distributing Royalties and Shares**

<i>Countries</i>	<i>Negotiating agency</i>	<i>Collecting agency</i>	<i>Distributing agency</i>
Bolivia	YPFB	YPFB	YPFB to producing departments (11%) YPFB to Beni and Pando (1%) YPFB to TGN through PNC (13%) YPFB to TGN through PNC (19%) YPFB to YPFB (6%) La Paz, Oruro, and Potosi have no share
Colombia	ANH	ECOPETROL	a) Ecopetrol to direct beneficiary agencies (producing departments, municipalities, and ports) b) Ecopetrol to National Royalties Fund c) National Royalties Fund to the Committee that allocates and distributes among departments and municipalities with no direct share.
Ecuador	CEL (where PETROECUA -DOR is a member)	-Petroecuador collects revenues from commercialization of derivatives -BCE collects revenues from Direct Exports and Royalties	-BCE and Petroecuador deliver to TGN. There are other agencies receiving direct share, for example, National Defense Council, FAE and FEP  -TGN allocates collected revenues among PGN, and other participants according to law
Peru	Perupetrol	Perupetrol	Ministry of Economy and Finance. It entrusts Perpetrate the drawing of checks with the following distribution: -Loreto (10%) of revenues collected in producing zone and 2.5% of revenues collected in Ucayali -Ucayali (10%) of revenues collected in producing zone and 2.5% of revenues collected in Loreto -Piura (10%) of revenues collected in producing zone and 2.5% of revenues collected in Tumbes -Tumbes (10%) of revenues collected in producing zone and 2.5% of revenues collected in Piura -Puerto Inca (Huanuco): 10% of the production in the zone

*Source:* Reports from consultants

## Designing a Tax System

### *Royalties or Taxes?*

3.35 In designing a tax system, it is critical to specify clearly the objectives that the system is aimed at fulfilling and/or the objectives against which it will be evaluated later. The objectives discussed here are those most frequently referred to in the context of the hydrocarbon tax systems.

- The tax system must encourage a wide range of oil and natural gas exploration and exploitation activities, showing at all times that they are beneficial from the society's perspective as a whole. If a socially desirable allocation of resources is sought, the tax system should, as far as possible, guarantee that all the projects with positive returns before taxes will also show positive returns after taxes.
- The excess of benefits over the project costs before taxes, including a minimum return on capital required to attract investments, is called "economic rent." It is generally accepted that a greater share of the project rents should go to the owner of the resource, usually the state. The correct form to express the state share is as a percentage of the net cash flow in the "total cycle" of the project, discounting the minimum return required for the capital. In international practice, the state's share—throughout the project cycle—usually ranges from 45 percent to 50 percent in its lower level and from 80 percent to 85 percent in its upper level.
- Most of the countries try to vary the government's share as a function of the progressive function of the rent and or of the project's profitability. When the project is successful, government earnings are increased without generating negative impacts on the incentives to exploit and produce. The profitability of an oil project will depend on the hydrocarbon prices. If the prices are high, the state's share must be increased, however, if the prices fall, this share must be reduced to allow the project or agreement to continue so that the state may continue obtaining revenues.
- The high costs of the projects reduce the rent or income available to be shared between the government and the investor. Consequently, the tax systems must give the investor incentives to limit costs. High rates for marginal taxes, resulting in low costs after taxes, inaccurate definitions of recoverable costs, provisions to accelerate the recovery of costs or the recovery of a multiple of costs, although useful for other purposes, result in the loss of incentives to control costs.
- The governments usually prefer sure, predictable flows of fiscal revenues, which are difficult to attain in a sector such as the oil industry, which depends on varying prices and production volumes. Most of the governments place a premium on fast taxable earnings in order to solve urgent budget problems or to fulfill political promises. Due to this fiscal

planning, it is likely that tax systems producing a minimum stability in fiscal revenues will be favored.

- Oil resources usually are concentrated in some areas or regions of a state or federation. The tax system must include an appropriate, acceptable, and stable division of the tax revenues among the different levels of government (central, regional, and municipal).
- Finally, it must be considered that oil is a global business. In order to establish an oil and gas tax system, the guest country must consider the probable impact on the capacity of the national sector to compete for capital investment with other oil and gas producing areas in the world. Although many factors play a role in the international competitiveness of the oil industry in a country, the tax system is one of the most important for the investors.

### ***Instruments of the Tax System***

3.36 A wide range of tax instruments are currently being applied on gas and oil production in the world. In principle, it is appropriate to differentiate the “taxes on profits,” that is, imposed on the difference between revenues and costs; and the “taxes on revenues” that are expressed as percentage of the value of production. Royalties are usually structured as taxes on revenues, while income tax is based on profits.

3.37 The main argument in favor of royalties is that they are relatively easy to manage. A second argument is that they generate fast earnings; they are applied from the start of production, so it is not necessary to wait until the company has depreciated its investments and the project has started to generate profits. The main drawback of these taxes is that they are insensitive to the economic result of the project. Since they are applied on profits, it is possible that low production in projects with positive profitability before taxes will not have positive returns after taxes, because royalties or any taxes on production can be equal to or more than 100 percent of the profits after taxes. The higher the taxes on revenues or on production and the less or more marginal the results of the project before taxes, the more likely it will be that socially desirable production will be suspended or abandoned and the investments in new socially desirable production will be delayed or cancelled.

3.38 Many oil-producing countries have adjusted their tax systems in order to get simple taxes on profits to behave more progressively and/or in order to prevent the regressive behavior of their taxes on revenues or on production.

3.39 Besides taxes and royalties, taxation systems in the industry include other provisions, such as limitations for cost recovery, bonds upon execution agreement or at the start of production, fines, and environmental incentives, such as penalties for flaring or venting natural gas into the air, as well as the contributions to the industry training programs. In practical terms, no oil and natural gas taxation system trusts a single instrument. The number of instruments included in the oil tax “package” can go from two or three to a dozen or more. The practice of having to build a package of tax instruments is understandable, considering the different objectives of oil and natural gas

fiscal revenues and the different comparative advantages of the diverse tax instruments aimed at fulfilling such objectives.

### **Tax Management**

3.40 For the design or evaluation of any taxation system, the administrative capacity is very important for effective and efficient management. In order to achieve this objective, the taxation structure must be as transparent and simple as possible, without seriously prejudicing the other design goals of the taxation system to be applied. It is necessary to minimize the incentive to carry out operations as a function of the tax, that is, transferring costs or revenues reports from one category to another in order to reduce tax obligations.

3.41 Management must be based on available data and easy to monitor. It must be stable and perceived as sensible, fitting a wide range of project circumstances but without creating incentives to evade taxes and/or allowing changes in or exceptions to taxes.

3.42 The administrative procedures must also be transparent and simple, with clearly defined responsibilities. The staff must be well trained and adequately paid. The number of participants, the wages, and other resources should be sufficient to manage the expected workload. An auditing and penalties system must be introduced in order to guarantee the fulfillment and timely payment of taxes.

### **Constitutional and Legal Bases Giving Origin to Royalties**

3.43 In Colombia, royalties are established in the Constitution and have been ratified by specific laws. In Bolivia, Ecuador, and Peru, royalties are established by law. In Annex 3, the constitutional and legal regulations originating royalties are presented.

**Table 3.6: Constitutional and/or Legal Bases for Royalties**

	<i>Constitution</i>	<i>Laws</i>	<i>Modes</i>
Bolivia	No	Yes. Law 1689 of 1996	% of gross production
Colombia	Yes. Article 360	Yes. Law 756 of 2002	% of gross production
Ecuador	No	Yes. Law 1978 as amended	% of gross production
Peru	No	Yes. Law 26221 of 1993	% of gross production

*Source:* Constitutions and Laws of the countries.

3.44 Etymologically, royalty means “the king’s portion.” When these countries were created, the king’s portion became the state’s portion. The rationale in the Colombia Constitution is that the exploitation of a nonrenewable natural resource must generate an economic consideration in favor of the state-named royalty (Article 360). In the other countries, the royalty payment is established by law and there is no justification at the level of Colombia’s rationale.

3.45 In the case of shares (Canon), in Colombia, Ecuador, and Peru, the Constitution provides that the corresponding regions have the right to receive an



appropriate share from the total of revenues and rents obtained by the state from the exploitation of natural resources in the different zones. In Colombia, this appears in Article 361 of the Constitution. In Ecuador, it appears in Article 251 and in Peru in Article 77.

3.46 In the case of Bolivia, Article 171 of the Constitution provides that “within the framework of law, the social, economic, and cultural rights of the indigenous peoples living in the national territory are acknowledged, especially those related to their original community lands, guaranteeing the sustainable use and exploitation of natural resources, their identity, values, languages, customs, and institutions.” But there is no explicit mention of participatory rights.

### Oil Rents in the Andean Countries

3.47 For this analysis, oil rent means the addition of all revenues earned by the state due to oil activities in the country. These revenues earned by the state come from different sources, the most important being: royalties charged on extracting companies; income tax paid by the same companies; social contributions; training payments; patent payment; as well as a number of payments specific to each country.

3.48 Analyzing the oil rent at an aggregated level (see Annex 4), without entering now into a breakdown analysis, the analyzed countries can be divided as a function of the amount they earn, in two categories: the first one made up of Ecuador and Colombia, with oil rents above US\$1 billion per year. The second one, comprised of Bolivia and Peru, with rather lower oil rents, around US\$200 million per year.

**Table 3.7: Average Oil Rents Collected by Countries, 1998–2002  
(in US\$ million)**

<i>Items</i>	<i>Bolivia</i>		<i>Colombia</i>		<i>Ecuador</i>		<i>Peru</i>	
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>
Royalties & Participation	151.1	76	688.4	62	1149.8	100	189.2	86
Income Tax	11.5	6	403.7	36			29.2	13
Social Aid			17.5	2			0.2	
Patents and Penalties	15.6	8	1.6	0				
Training Others	19.5	10					1.4	1
<b>Total</b>	<b>197.7</b>	<b>100</b>	<b>1111.2</b>	<b>100</b>	<b>1149.8</b>	<b>100</b>	<b>220.0</b>	<b>100</b>

3.49 In order to enable the comparison among countries, the following classification for the oil rents collection accounts has been chosen:

- Royalties paid by oil companies
- Income tax, paid by state-owned and private oil companies
- Social aid

- Patents and penalties
- Training
- Other revenues, only for Ecuador, where the Oil Stabilization Fund is considered.

3.50 According to this classification, in the 1998–2000 period, for which data are available in the four countries analyzed in relation to the structure of oil rents, it appears that in all the cases the collection of royalties is much higher than the collection for other concepts.

3.51 In Bolivia and Peru, around 80 percent of the collected revenues come from royalties paid by oil companies. In Colombia, the amount paid for royalties is lower, 62 percent of the total. However, in Ecuador, royalties are very difficult to be computed directly. For comparison purposes, in the case of Ecuador, the amounts indicated are consolidated under the category royalties and participation. In the case of Ecuador, given the fact that rents are mainly accounted by Petroecuador, it is not possible to separate easily upstream operations from downstream operations in order to correctly determine the rent levels, as it is possible in other countries.

3.52 The country with the highest contribution from income tax is Colombia, with 36 percent of the total. This tax is imposed both on private companies and on ECOPETROL. Colombia is followed by Bolivia and Peru, with 5 percent and 13 percent, respectively. In the case of Bolivia, paid taxes averaged US\$11.5 million in this period and correspond only to upstream activities of the oil companies (that is, the taxes that have been considered are: taxes on profits, tax on remittances, and surtax). In the case of Peru, the income tax is only for upstream companies.

3.53 Ecuador receives a marginal contribution from the income tax paid by oil companies. This has several reasons: 1) the only figures available are those for income tax payment in 2003 by private companies, amounting to US\$23 million; 2) the payment of the income tax by PETROECUADOR is not included. This is because all its revenues are directly transferred to the central government.

3.54 The payment of patents—that is, the surface rights—achieves its highest level in Bolivia, with 4 percent of the total. In this case, it is necessary to state that this item is made up by the payment of patents and penalties. Bolivia is followed by Colombia with 1.6 percent.

3.55 In Colombia, the social aid item is important. It encompasses the social aid programs established in the Environmental Impact Surveys. This item includes the voluntary social investment programs that are carried out in cooperation with territorial agencies and other institutions by the oil companies as part of their fulfillment of their social responsibility programs.

3.56 In Peru, small amounts exist in the training programs (CAREC).

3.57 Finally, the other revenues item is related exclusively to PETROECUADOR and comprises a list of pre-assignments established by law.

3.58 This analysis concludes that a lack of accuracy in the data on oil rent collection in the analyzed countries exists. The country presenting its information in the clearest and most transparent manner was Colombia, followed by Bolivia and Peru.

### **Oil Rent per Barrel**

3.59 It is important to do a comparison of the unitary oil rent (per oil barrel) obtained by the analyzed countries. With this purpose, a table has been made where the total oil rent (for all concepts) and the oil and natural gas production (both expressed in oil barrel equivalent) are shown. Dividing the oil rent (in million dollars) by the produced volume becomes the unit oil rent.

3.60 In the 1998–2003, (see Table 3.8) the highest unit oil rent belongs to Ecuador, with an average of US\$9.14 per barrel.<sup>7</sup> The high values are explained by the low production costs in this country and because in this period most of the production was obtained by the state-owned company PETROECUADOR, a company that due to budget restrictions did not invest—at least—the amortization of its assets, for which the corresponding depreciation of such assets was not considered, thereby increasing the oil rents. It is noteworthy that the natural gas production, which usually has a unit value lower than that of oil, is almost zero in Ecuador.

3.61 Ecuador is followed by Peru, with an oil rent of US\$5.80/barrel during the same period, reaching its high in 2000 also, when the highest oil price was recorded in the international market. Most of the oil rent in Peru comes from oil production since natural gas production is still very low (this will change with the putting on stream of the Camisea natural gas project in August 2004<sup>8</sup>). However, oil production in Peru is one of the lowest in the analyzed countries and comes from mature deposits that are constantly decreasing and receive little investment.

3.62 Bolivia comes next with an oil rent of US\$3.91/barrel in the analyzed period. Natural gas production in Bolivia has been increasing; in 2003 it reached the amount of 952 MMPCD, the equivalent to 60 million barrels/year, almost five times the oil production. The fall in the average unit rent in Bolivia during the last years can be explained by lower royalty rates in the new natural gas deposits in Tarija (now equivalent to 18 percent rather than 50 percent as paid by the capitalized oil companies exploiting old fields). Moreover, natural gas generates a unit rent higher than that of oil and in the case of capitalized companies, the value received for capitalization is not included in the computation of the rent.<sup>9</sup> Nevertheless, it is noteworthy that the total amounts collected by Bolivia for royalties and other rent concepts has been increasing, from US\$119 million in 1999 to nearly US\$270 million in 2003 due to the increase in natural gas production.

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<sup>7</sup> It is important to differentiate this concept from the government take, which is the percentage of the profits received by the country in relation to total profits, understanding profits as gross revenues minus production costs (CAPEX and OPEX).

<sup>8</sup> From June 2004, Camisea started paying royalties for the supervised gas entering the pipe.

<sup>9</sup> The amount received at the time of capitalization of the companies Andinas and Chaco was in excess of US\$200 million.

**Table 3.8: Oil Rent per Barrel in the Analyzed Countries**

	1998	1999	2000	2001	2002	2003	Total
<b>Bolivia</b>							
Oil Production (MB/day)	38.0	33.0	31.0	36.0	36.0	38.0	
Oil Production (MMBbls)	13.9	12.1	11.3	13.2	13.1	13.9	
Gas Production (MM PCD)	520.0	484.0	550.0	692.0	861.0	952.0	
Gas Production (MMBoe)	32.8	30.5	34.6	43.6	54.2	60	
TOTAL Prod (MMBoe)	46.7	42.6	45.9	56.8	55.3	73.9	321.2
Oil Rent ( MMUS\$)	157.1	138.8	225.0	259.4	208.4	266.7	1255.4
Oil Rent per barrel (US\$/Boe)	3.36	3.26	4.90	4.57	3.77	3.61	3.91
<b>Colombia</b>							
Oil Production (MB/day)	754	816	688	604	578	540	
Oil Production (MMBbls)	275.2	297.8	251.1	220.5	211.0	197.1	
Gas Production (MM PCD)	610	503	574	597	602	594	
Gas Production (MMBoe)	38.4	31.7	36.2	37.6	37.9	37.4	
TOTAL Prod (MMBoe)	313.6	329.5	287.3	258.1	248.9	234.5	1437.4
Oil Rent ( MMUS\$)	706	893	1359	1363	1202	N/a	5523
Oil Rent per barrel (US\$/Boe)	2.25	2.71	4.73	5.28	4.83	N/a	3.84
<b>Ecuador</b>							
Oil Production (MB/day)	376	373	399	404	392	421	
TOTAL Prod (MMBoe)	130.6	128.8	139.7	140.1	134.4	144.8	818.4
Oil Rent ( MMUS\$)	554	976	1786	1155	1278	1733	7482
Oil Rent per barrel (US\$/Boe)	4.24	7,58	12.78	8.24	9.51	11.97	9.14
<b>Peru</b>							
Oil Production (MB/day)	115.1	104.1	98.6	95.9	95.9	90.4	
Oil Production (MMBbls)	42	38	36	35	35	33	
Gas Production (MM PCD)	39	40	33	36	43	50	
Gas Production (MMBoe)	2.5	2.5	2.1	2.3	2.7	3.2	
TOTAL Prod (MMBoe)	44.5	40.5	38.1	37.3	37.7	36.2	234.3
Oil Rent ( MMUS\$)	111.8	198.0	324.7	212.6	253.0	258.7	1358.8
Oil Rent per barrel (US\$/Boe)	2.51	4.89	8.52	5.70	6.71	7.15	5.80

3.63 Colombia has received the lowest unit rent with US\$3.84/barrel as average oil rent for the analyzed period.<sup>10</sup> Its highest share was in 2001, when oil rents were on average US\$5.28/barrel. In Colombia, natural gas production is important, having achieved an average of 36.7 MMB for the period. It is noteworthy that oil production in Colombia has fallen sharply from its all-time record of 297.8 MMB in 1999 to 197.1 MMB in 2003, a 33 percent fall.

### **Preliminary Conclusions**

3.64 The main conclusions reached from the analysis of oil rent collection are:

- In the analyzed countries, agreements with foreign companies are the instruments that channel foreign investment into the hydrocarbon industry. In the 1990s, important reforms have been made to the hydrocarbon laws in most Latin American countries. This has been the case of Bolivia, Colombia, Ecuador, and Peru. The reform has essentially involved measures aimed at increasing the competitiveness of the countries, giving more incentives to risk capital, in order to prevent its migration to other regions in the world. Moreover, Latin American countries have to compete with countries having major oil reserves, such as Eastern Europe, China, and so forth, which a few years ago did not allow foreign investment.
- There are several kinds of oil contracts (partnership agreement, joint venture agreement, license agreement, production sharing contract, service contract, among others). The common feature of the agreement (excluding the service contract) is that oil companies pay royalties to the state in different manners, according to the countries, which is analyzed in this study. Another common feature is that in all these countries oil companies pay income tax.
- There are two state-owned companies that take part in oil exploration and exploitation, ECOPETROL and PETROECUADOR. In Bolivia and Peru, during the second half of the 1990s, the oil deposits exploited by YPF and PETROPERU were privatized. In Colombia and Ecuador, state-owned companies pay royalties, too.
- In Bolivia, the contractor companies pay income taxes. In Colombia, ECOPETROL pays income taxes, as do the contractors. In Ecuador, all the revenues of the state-owned company, discounting its costs, are part of the revenues of the National General Treasury; the contractor companies pay income tax. In Peru, private companies with upstream and downstream operations pay income tax. The state-owned company PETROPERU pays income tax for its downstream operations.
- In Bolivia, Colombia, and Peru an autonomous agency has been established to negotiate oil agreements with private companies. In all

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<sup>10</sup> In the case of Colombia, the data on oil rents is for the 1998–2002 period.

three countries, this autonomous negotiating agency also executes and supervises the oil agreements. In Ecuador, the agency in charge of negotiating oil agreements is the Special Committee for Biddings (CEL), with the participation of PETROECUADOR. The agency in charge of supervising and managing the obligations of the contractor is PETROECUADOR (rather than the CEL).

- In Bolivia and Colombia, a single agency is in charge of collecting and distributing royalties (although in Colombia, besides ECOPETROL, the National Royalties Committee is a distributing agency). In Ecuador, two agencies collect and distribute royalties (BCE and PETROECUADOR). In Peru, the collecting agency is PERUPETRO but the distributing agency is the Ministry of Economy and Finance; however, the MEF entrusts PERUPETRO to dispense the checks to be distributed among the regional and local agencies that receive the oil royalties (Canon).
- In Colombia, royalties are included in the Constitution and have been ratified by specific laws. In Bolivia, Ecuador, and Peru, royalties are established by law. In Colombia, Ecuador, and Peru, the Constitution provides that in those territories where natural resources are exploited, such territories will have the right to participate in the rents received by the state. In Bolivia, the different participation modes in oil rents are established in the Hydrocarbons Law.
- In all the analyzed countries, the collection of royalties exceeds 60 percent of the total collected under oil rents during the 1998–2002 period. In Bolivia, Ecuador, and Peru, the amount so collected is around 90 percent of the total. In Colombia, the amount collected under royalties is somewhat smaller, that is, 62 percent.
- The largest collection under income tax in the 1998–2002 period occurred in Colombia, being 36 percent of the total. The state-owned company ECOPETROL is the main source of revenues. Colombia is followed by Peru with 13 percent. In the case of Bolivia, income tax collection is rather low; it only reaches 5 percent of the total oil rents for the 1998–2002 period. In the case of Ecuador, data is only available for 2002 (US\$23 million).
- Other items of the oil rent—the amount collected under Patents and Penalties is smaller. In Bolivia, it reaches 9 percent of the total for the 1998–2002 period. In Colombia, the amount collected under this heading is below 1 percent. In Colombia, the item Social Aid is important. It encompasses the Social Aid Programs established in the Environmental Impact Surveys. Moreover, this item includes the Voluntary Social Investment Programs carried out by the oil companies in cooperation with territorial agencies and other institutions in order to comply with their social responsibility programs. In Peru, small amounts are aimed at training programs (CAREC). In Ecuador, the item Other Revenues

accounts for 12 percent of the oil rents collected in the country, a very important amount. These revenues are mainly related to the pre-assigned amounts by law.

- Even though figures are strictly comparable, Ecuador obtained the highest oil rent for the 1998–2000 period. It is followed by Peru, Bolivia, and Colombia, with 29, 23, and 21 percent, respectively. However, it is noteworthy that the small reinvestment by PETROECUADOR in the last years increases its oil rent since assets depreciations (which reduces oil rent) are very small. In the case of Bolivia and Peru, oil rents would be higher if the revenues from capitalization and privatization, respectively, were considered. In the case of Bolivia and Colombia, oil rents includes significant amounts of natural gas production, which usually has a unit value lower than that for oil, which makes the total rent (expressed in relation to the international price of oil) smaller.

# 4

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## The Distribution of Oil Rents

### General Criteria

4.1 Once oil revenues have been collected, attention is focused on its administration, especially on how they are distributed and used. The most serious problems exist in this area. For instance:

- *Lack of transparency*—Qualified accounting procedures and independent audits are nonexistent, especially at the level of regional governments.
- *Misuse of resources*—new resources exceed, at least at the start of the projects, the capacity of absorption of the national and/or regional economy. Many times, the government itself lacks the capacity to guarantee its own investment in an efficient way.
- *Cyclic destabilization*—as a consequence of the incapacity to forecast new discoveries of reserves, increases in production, and, above all, variations in prices, oil rents generate destabilizing situations for the national and/or regional economy.
- *Loss of competitiveness due to the “Dutch Disease”*—as a result of unexpected and fast increase in hydrocarbon exports, it is common to see an uptrend in the costs of noncommercial domestic products in oil-producing developing countries.

4.2 Nevertheless, a number of means have been designed and are being applied to deal with the problems resulting from “oil bonanza.” These include, maybe as an essential measure, the use of part of the revenues in budget structures, while the surplus is accumulated in the so-called “oil funds,” which can be savings or investment funds or just stabilization funds.

4.3 To succeed in administering oil rents, it is necessary to start from a policy of disciplined budget management within the context of an integrated budget with concrete objectives and subject to democratic control. For this, it is necessary to have:

- A *management plan* adequately articulated and of public knowledge, detailing the management procedures and the purposes of the funds, as well as their priority uses



- *Institutional capacity* of the government agencies that have relations with management (ministries, central bank, congress)
- *Transparency and accountability*—in the streams of oil revenues, with public knowledge, as well as the identification of those accountable for their management
- *Sound macroeconomic work scheme* in management, for planning purposes as part of an integrated budget
- *Inclusion*—to attain sustainable policies and procedures for oil revenues management, it is necessary to have the stakeholders' approval (government, private sector, financial institutions, NGOs, local communities, and so forth).

4.4 The most important criteria include the search for transparency and sustainable development and a reasonable management of externalities.

4.5 The analysis of the process of oil rent collection and distribution must confront the problem of the lack of transparency and in certain cases of corruption in the sector. As preliminary information, this section presents the opinions of the consultants that worked on the national reports, and Annex 5 contains the published indexes of NGOs with respect to transparency in the studied countries as references.

4.6 Different initiatives exist that promote transparency in information about the payment by private companies to the national governments and about the use of such resources. One of the most important initiatives, which should be supported, is the “Extractive Industries Transparency Initiative” (EITI), promoted by the Primer Minister of the United Kingdom, Tony Blair, at the World Summit on Sustainable Development held in Johannesburg in September 2002. This initiative encourages the governments, private and state-owned extractive companies, international organizations, NGOs and other stakeholders to work together voluntarily in order to promote transparency (see Annex 6).

4.7 Regarding *sustainability* (Conrad and Clark, 1997), it is acknowledged that the objective of achieving “sustainable development” is related to both equity and economic efficiency. It must be underlined that economic efficiency is not enough to achieve “sustainable development.”

4.8 Another aspect that must receive priority attention within the scope of “sustainable development” is to know “what to do after the closure of the hydrocarbon deposit or deposits,” since the abandonment of an operation leaves an expensive social and environmental liability. The life of a deposit intensively exploited does not exceed 25–30 years.

4.9 It should be noted that the economic benefits for putting an extractive project on stream usually occurs at a national macroeconomic level rather than at a local level. This is because the population surrounding the area where the deposit being exploited usually does not perceive an improvement in living conditions and suffers the consequences, especially once the deposit's useful life is completed.

4.10 The externalities generated in the companies/population relationship (even more in the case of indigenous peoples) occur when an economic agent (oil company) develops an activity that influences the welfare of others (indigenous community). This is true especially in the case of oil exploitation that is carried out in the territories of indigenous communities, where the environment will be altered and positive or negative externalities will occur, depending on the effects.

**Table 4.1: Problems Found in the Analyzed Countries According to the Consultants' Reports**

**In Colombia**, the consultant's report states that there have been serious corruption problems: *"...it is evident that oil rent can often be a curse rather than a blessing. In Colombia, waste and misappropriation of resources from royalties have been detected. These resources end up in the pockets of chief executives to the detriment of the territorial agencies."*

**In Bolivia**, the consultant's report states that serious administrative problems exist: *"...It is not possible to determine the efficiency and cost-effectiveness in the use of resources from the upstream hydrocarbon sector, except that they have been managed in the same manner as resources from any other sources. Criticism regarding the municipal administration in general terms is equally valid in this case: (1) low budget execution (UDAPE's estimate is 50 percent); (2) weak institutional development due to technical and administrative deficiencies, lack of compatibility between annual plans and programs and annual budgets, political intervention of the municipal councilmen, high staff turnover, lack of transparency in the administrative processes; (3) inadequate instrument design such as regulations and procedures, inflexibility and complexity in administrative processes"*

**In Ecuador**, the consultant states that: *"the rent distribution system is a long way behind the systems in other Andean countries, since, for instance, no resources are allocated to social funds. The allocation to institutions out of the budget control averages in other countries 2 percent, while in Ecuador it is the majority. This reality shows a lack of transparency and generates an inefficient administration of oil rents."*

**In Peru**, the consultant states that there is scarce information on the use of resources, but does not mention corruption: *"There are several information restrictions about the use of royalties by municipal governments. Only since 2003 are such institutions incorporated into the National Public Budget, which implies the elaboration and submittal of standardized information submitted in a systematic and compulsory manner to the National Bureau of Public Budget, as it is done by the regional governments. At the level of the hydrocarbon subsector, there is no administrative unit in charge of supervising the use of such resources to allocate funds to the native communities and to be used to preserve the environment."*

4.11 Improper management of community relations, without adequate consultation processes and without the communities' effective involvement in the project and its benefits will result in a conflicted and polarized social environment due to the industry's presence. A common result is a society or a community that demands

compensation for the exploitation of the resources existing in its territory, and also demanding indemnification for the environmental impacts generated by the extraction activity.

4.12 The Amazon Basin is inhabited by a number of indigenous peoples who are sensitive to the impacts of hydrocarbon activities. Consequently, greater effort is needed to adequately mitigate the impacts caused by these activities, as well as to allow the indigenous peoples to participate in the benefits generated by exploiting hydrocarbons, which may permit the launch of appropriate development plans.

4.13 Social responsibility in relation to the peoples in the zone is one of the main tools to change this perception. This practice is beneficial not only for the local community but also for the company since a number of positive externalities are generated for companies that improve their everyday interaction with the local population, institutions, and authorities.

4.14 Considering this, it is suggested that a specific compensation (royalty, tax, or other means) should exist to benefit the regions, provinces, cities, villages, and such where hydrocarbons are exploited directly.

### **Considerations Related to the Distribution between the Central Government and the Regions**

4.15 A characteristic feature of the oil industry is the high concentration of hydrocarbon reserves in an area, province, or region and the relatively short duration of the exploitation period compared to the duration required for a sustainable development process. Moreover, there is a problem of volatility and fluctuation in the international prices, which makes the management of a consistent decentralization policy more complex and, within the policy, the definition of appropriate guidelines for the distribution of oil rents.

4.16 From an economic perspective, the following issues must be considered for the distribution of oil rents:

- *Compensations.* Regional governments must have access to oil rents in order to offset the costs of oil activities, such as road construction, environmental damages, increased costs of goods and services, health problems among the employees and/or diseases spread by them.
- *Volatility in revenues.* National governments with higher budgets, access to credit markets, sound monetary policies, and technical capacity can handle the high volatility of oil revenues.
- *Adequate oil taxation system.* Regional governments usually demand immediate payment at the start of production; this can only be made if royalties are used, which tend to make the taxation system in the sector regressive.
- *Ringfencing.* In general terms, the companies have the right to report the losses of an unsuccessful project with the profits from successful projects. This cannot be done efficiently if taxes are collected at the regional level.

- *Administrative duplication.* If both the national government and the regional governments must establish agencies to collect and control the collection of taxes and their use.
- *Fiscal differences.* They can be of a vertical nature if, in relation to their needs, oil-producing regions receive higher rents than the central government; or of horizontal nature if the excess of rents in the oil-producing regions creates public services, tax deductions, and possibly subsidies that cannot be granted in regions that do not produce oil.
- *Misuse of resources*—the programs and projects in oil-producing regional governments can lose their social value very quickly.

4.17 Except for the first consideration, related to compensation, from a strictly economic perspective, the evaluation of the other considerations would indicate that oil rents should be managed by the central government, without any earmarking for the regional governments. However, the political reality stated in the Constitution and in the laws of these countries leads to the need to establish a system to distribute rents among the national government and the oil-producing regions. The most important political considerations include:

- Regardless of the state sovereignty on natural resources, the legal frameworks existing in the Andean region stipulate the right of the regions to benefit directly from a portion of oil rents. On top of this, the ILO Convention No. 169, ratified by the countries under study provides support to the extension of this benefit to the indigenous peoples.
- Failure to distribute oil rents may create serious tensions in the federal countries or in regions where major ethnic differences prevail or where indigenous peoples and other settlers surviving in given regions have not received significant benefits linked to the presence of the national state in many years.
- The persistent suspicion on the part of the regional government that the amount of benefits ascribed to them is not fully and timely transferred by the national government.

4.18 Considering the inefficiencies originated by distributing rents to the oil-producing regions, it is indispensable to complement the distribution policies with actions aimed at training the regional institutions that receive rents so that they will have investment plans with sustainable projects compatible with the development of infrastructure at the national level, as well as adequate means for the control and audit of disbursements.

### **Fiscal Transfers of Royalties to Regional and Local Governments in the Analyzed Countries**

4.19 In order to evaluate transfers linked to the distribution of rents, it is appropriate to consider how the allocation of funds takes place, either as a “block grant,” that is, a grant delivered as a whole, without determining the specific use or the

destination project or program, or as a “specific grant” if the law also defines the destination of the royalties. There is also a difference between “automatic grants”—received without the need of any arrangements, and “discretionary grants” which must be subject to a priori approvals from the authorities in charge of rent management.

4.20 In general terms, it can be said that:

- Block grants are preferred by the communities but not by the central government (which prefers specific grants).
- For central governments, automatic grants are a good choice, since discretionary grants are open to political interference and arbitrariness. For regions and provinces, automatic grants are preferred because they provide a fixed income and avoid having to negotiate a budget transfer with an uncertain amount yearly.

4.21 Of the analyzed countries, Bolivia, Colombia and Peru grant to the departments or regions a fixed percentage of the royalties from exploiting hydrocarbon resources. In Ecuador the rent distributed is a smaller percentage and takes place through projects and programs supporting earmarked amounts and through the Institute for Ecodevelopment of the Amazonian Region (ECORAE).

### ***Bolivia***

4.22 The departmental royalties are directly transferred by YPFB to the oil-producing departments (11 percent) and to the departments receiving them as compensation (1 percent). These percentages are not based on a technical study of the needs of the departments but are the consequence of the historic conditions of the sector laws and/or the negotiation of agreements. For instance, the 11 percent of royalties provided by Law 10.170 of 1972 was maintained in Law 1.194 of 1990 and Law 1698 of 1996.

4.23 In the case of Bolivia, the transfer of royalties can be considered as a specific and automatic transfer. Nevertheless, in Bolivia legal means exist that make it possible to offset regional rents. They include the budget means to modulate the transfers of additional resources to provinces increasing the amounts given to those that do not have oil royalties.

### ***Colombia***

4.24 Law 756 of 2002 provides that royalties are transferred by ECOPETROL to the oil-producing departments (47.5 percent), municipalities (12.5 percent), ports (8 percent), and the National Royalties Fund (32 percent). In this case the allocation of shares is made through specific grants. Likewise, since the share is provided by law, they can be considered automatic grants.

### ***Ecuador***

4.25 This country has royalties paid by foreign companies (around 30 percent on average) and revenues earned by PETROECUADOR for its oil-related activities. The former are collected by Ecuador’s Central Bank and the latter by PETROECUADOR.

These agencies give the collected amounts directly to TGN and to some organisms defined by law (National Defense Council, FAE, and Oil Stabilization Fund). The funds given to TGN are later distributed by it to a great number of final beneficiaries.

4.26 Since the Ecuadorian law does not stipulate specific purposes for the shares allocated to the different agencies, they can be defined as block grants. It is noteworthy that TGN allocates the shares to different budget items as a part of its budget allocation means. In this case, TGN oil revenues take the form of a general distribution.

4.27 Likewise, since the shares granted to the different agencies represent a fixed percentage of the collected amount (even though the amount varies because the costs incurred by PETROECUADOR and the pipeline transportation costs must be deducted prior to connection), the allocation of shares in this country is also made through automatic grants.

### **Peru**

4.28 Royalties are variable and negotiated in each agreement. As for the shares (Canon) received by the oil-producing regions, they represent a fixed percentage of the gross value of oil production in the region, as defined by law. In the case of the hydrocarbon production in the Northwestern, Northeastern and Central Eastern deposit, 10 percent (Canon) goes to the producing regions and 2.5 percent (SobreCanon) goes to neighboring regions, but only to those stipulated in a law passed by the Congress.

4.29 In the producing regions, the Canon and SobreCanon are subdivided in shares for the regional governments, the municipalities, and the universities. Recent studies have found that the criterion in force for the use of these revenues is 20 percent for current expenses and 80 percent for investment expenses (without specifying the area where investment should be made),<sup>11</sup> thus these are specific grants.

4.30 These are also automatic grants, since the percentages defining the amounts to be transferred are previously determined percentages (10.0 and 2.5 percent) of the gross value of production, as provided in law (there is one law for each of the four producing regions). The share (Canon) received by regions and municipalities is not based on a technical study of their need but is the result of the contracting conditions.

### **Preliminary Conclusions Regarding the Decentralization Process**

4.31 This section leads to the following preliminary conclusions:

- The decentralization processes show different types of fiscal transfers.
- The central and regional governments (receivers) have different approaches to the type of transfer that should be made.
- Upon the analysis performed (see table), it can be said that the allocation of royalties and shares (Canon in Peru) to the different regions has the following features:

<sup>11</sup> See Dammert, Manuel (2002): *El Canon como fuente de financiamiento para el desarrollo regional y local*, Cuadernos PNUD, Serie Desarrollo Humano, Lima, April.

- In all cases, automatic grants are used.
- Specific grants are better than block grants.
- The four countries have automatic grants. Three countries have specific grants and one has block grants (Ecuador).

**Table 4.2: Fiscal Decentralization—Types of Transferences**

	<i>Bolivia</i>	<i>Colombia</i>	<i>Ecuador</i>	<i>Peru</i>
Block grants	No	No	Yes	No
Specific grants	Yes	Yes	No	Yes
Discretionary grants	No	No	No	No
Automatic grants	Yes	Yes	Yes	Yes
Fixed grants	No	No	No	No
Open grants	No	No	No	No

*Source:* Prud'homme R. and Anwar S. (2002)

- A pending task is to determine how informed the receivers are about the benefits and what is the existing level of transparency and what could be done at the level of the information about revenues and their use in order to improve transparency and include more effective means of public audits.

### **Distribution Analysis for the Period 1998–2002**

4.32 Table 4.3 shows the distribution of the average oil rent during the 1998–2002 period in the analyzed countries. Ecuador received the highest oil rent with US\$1.318 million, followed by Colombia with US\$1.1 million. Bolivia and Peru are almost in a tie behind Colombia and Ecuador. It can be said, in general terms, that the collection of oil rents is closely related to the volume of hydrocarbon exploitation in these countries.

4.33 The destination of the average oil rent varies among countries. In Ecuador, the central government receives 80 percent, followed by Bolivia with 72 percent. Peru is third with 59 percent, followed by Colombia with 36 percent. So, the Central Government of Colombia receives the lowest percentage of oil rents. Therefore:

- The country with the most decentralized destination of oil rents is Colombia, with 64 percent (including, on the one hand, departments and municipalities, and, on the other hand, the National Royalties Funds and Social Aid funds).
- Bolivia is second, with 48 percent allocated to hydrocarbon-producing departments and municipalities.
- It is followed by Peru with 40 percent (including departments, municipalities, regional universities, as well as training and social aid).

In the case of Ecuador, the decentralized participation is very small, since it only reaches 2 percent of the total. Nevertheless, part of the amounts that go to the central government is allocated later to decentralized agencies, but a detailed analysis of these amounts is not available.

**Table 4.3: Country-Specific Distribution of the Average Rent in 1998–2002  
(in US\$ million and percentage)**

	<i>Bolivia</i>		<i>Colombia</i>		<i>Ecuador</i>		<i>Peru</i>	
	<i>MM\$</i>	<i>%</i>	<i>MM\$</i>	<i>%</i>	<i>MM\$</i>	<i>%</i>	<i>MM\$</i>	<i>%</i>
Central Government	102	52	397	36	1064	81	130	59
Distributed to Regions and Municipalities	95	48	688	62	30	2	88	40
Social Aid			18	2				
Training							1	1
Funds					156	12		
Others					68	5		
<b>TOTAL</b>	<b>197</b>	<b>100</b>	<b>1102.4</b>	<b>100</b>	<b>1318.0</b>	<b>100</b>	<b>219</b>	<b>100</b>

4.34 Figures are shown below for Bolivia, Colombia, Ecuador and Peru. In these figures, oil rents have been broken down in order to determine the evolution in the last years of the allocations of oil rents to the central governments and to regional and local governments, and decentralized agencies.

#### ***Bolivia***

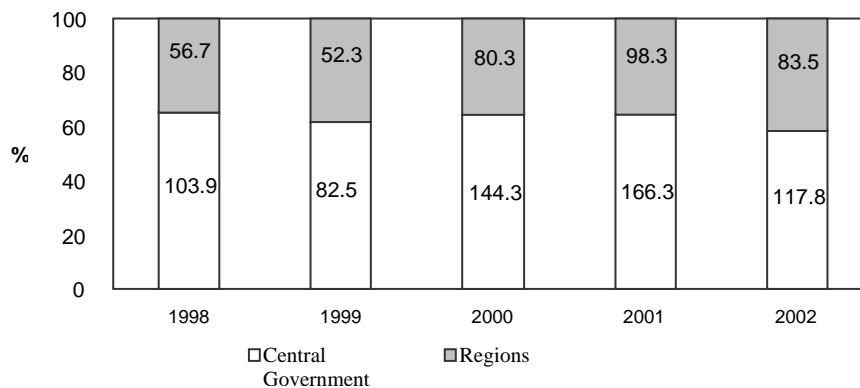
4.35 In the 1998–2002 period, it can be clearly seen that although the central government receives the bulk of the oil rents, its share has been decreasing. It fell from 77 percent in 1998 to 65 percent in 2002.

4.36 If Law 1689 of 1996 is maintained, this trend will become more pronounced, since the Law provided that the central government should receive only 31 percent of the royalties from existing fields and it would receive no royalties from the new fields (Tarija gas). However, regional and local governments continued receiving a royalty of 18 percent in all cases, that is, from fields existing before Law 1689 and from new fields (particularly those exploiting the Tarija gas).

4.37 This situation is going to change with the new Hydrocarbons Law being discussed in Congress, since it provides for a gradual increase in the central government revenues until the revenues reach the 50 percent level in force until 1996 again.



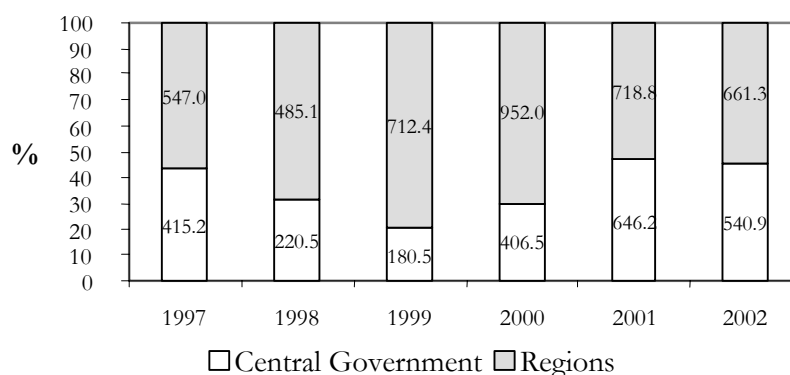
**Figure 4.1: Bolivia—Share of the Central and Regional Governments in Oil Rents (% and Million US\$)**



### Colombia

4.38 As for Colombia, it has been already said above that the central government receives a lower percentage from oil rents. It is clearly seen in the period from 1997 to 2000 because its share in oil rents falls from 43 percent to 30 percent. Nevertheless, in 2001 and 2002 the central government's share improved due to the higher profits of ECOPETROL and the increase in the income tax paid by the contracting companies.<sup>12</sup>

**Figure 4.2: Colombia—Share of the Central and Regional Governments in Oil Rents (% and Million US\$)**



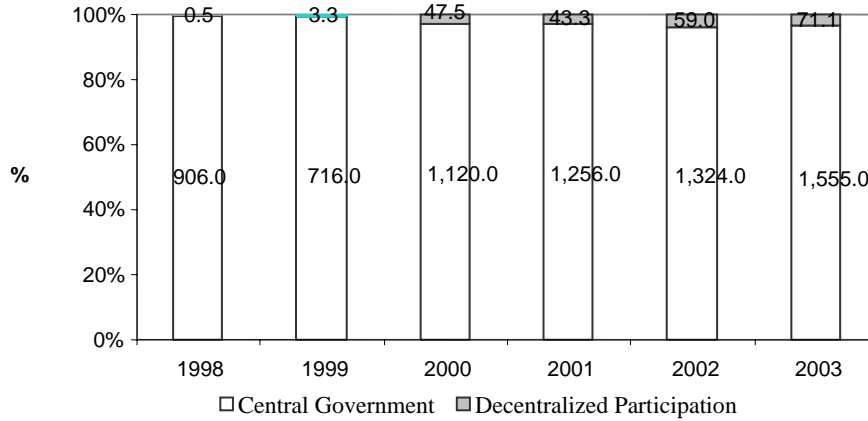
<sup>12</sup> ECOPETROL profits went from US\$406 million in 2000 to US\$615 million in 2001, but amounted to US\$474.5 million in 2002. However, income tax on contractors in 2000 shows no figures in the consultant's report. In 2001 and 2002, income tax collection amounted to US\$23.8 and US\$63.7 million, respectively.

4.39 *Conclusion:* The central government’s share could increase in the next years due to: 1) the increase in the income tax, 2) if the next joint venture agreements include royalties below 20 percent (to be distributed in a decentralized manner).

**Ecuador**

4.40 In Ecuador, the central government’s share is the highest among the four countries, since it exceeds 97 percent every year. It can be seen that the central government’s share decreases very slightly from 2000 to 2003, reaching 96.5 percent. In other words, despite the wide earmarking system, rent distribution is not aimed at regional governments or municipalities in Ecuador. Earmarking is made to institutions or agencies in charge of specific projects.

**Figure 4.3: Ecuador—Share of the Central and Regional Governments in Oil Rents (% and Million US\$)**

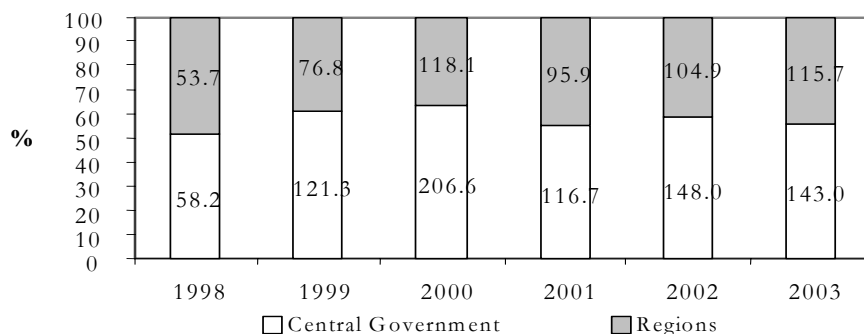


**Peru**

4.41 In Peru, the central government’s share in the distribution of oil rents is higher than the share of regional and local governments and decentralized agencies. However, in the last years it shows a slight downward trend. It must be remembered that in Peru there has been no increase in the exploitation of oil and gas in the last years.

4.42 This has changed beginning in August 2004 with the Camisea project coming onstream. The regional government’s share in the distribution of oil rents will be higher because while the current oil-producing regions receive 12.5 percent of the gross value of their production, the Cusco Region will receive as share (Canon) 50 percent of the royalties to be paid by the contracting consortium (37.24 percent).

**Figure 4.4: Peru—Share of the Central and Regional Governments in Oil Rents (% and Million US\$)**



### Preliminary Conclusions

4.43 In the analyzed countries, a trend is observed toward the decentralization of oil rent management, although the trend is not homogenous:

- In *Bolivia*, the central government's share fell from 77 percent to 65 percent between 1998 and 2002. It should keep falling since the central government does not receive any more than 32 percent royalty on the new agreements. However, the Congress is discussing (October 2004) a new Hydrocarbons Law that would change this situation.
- In *Colombia*, the central government's share fell from 43 percent to 30 percent between 1997 and 2000. In 2001, it increased and then fell again. In the coming years, revenues could increase again due to the combined effect of a higher income tax collection and lower royalties (the destination of which is decentralized).
- In *Ecuador*, the central government's share is the highest among the analyzed countries. Nevertheless, this share could diminish because the production of the state-owned company is stagnant.
- In *Peru*, the central government's share has remained unchanged but it should fall in the coming years as the gas production increases, because this production will significantly increase the decentralized collection allocated to Cusco (Canon).

### Analysis of Oil Rent Distribution by Country

#### *Bolivia*

4.44 Table 4.4 summarizes the behavior of the distribution of oil rents resulting exclusively from upstream operations among the direct beneficiaries as provided by law, which during the 1998–2002 period are: the National Treasury (TGN), YPF, the

departmental prefectures, municipalities, universities.<sup>13</sup> Using 2002 as a reference, the total oil rents generated by upstream operations were US\$201 million, which were directly distributed as follows: 58.5 percent to the TGN and 5.3 percent to YPFB. The portion of the royalties directly allocated to the regions, 36.2 percent, had the following destinations:

- |    |  |       |
|----|--|-------|
| a) | Departmental prefectures                                   | 33.8% |
| b) | 314 local municipalities throughout the national territory | 1.9%  |
| c) | Local public universities                                  | 0.5%  |

4.45 According to the laws in force, a portion of the resources directly allocated to the TGN are indirectly transferred again to the departments (9 prefectures and 314 municipalities) via the education and health budgets and through the development funds for social programs and infrastructure projects. Of the US\$72.7 million directly collected by the nine departments (prefectures, municipalities, and universities), the distribution was: La Paz 1.4 percent, Cochabamba 25.7 percent, Santa Cruz 32.9 percent, Tarija 26.6 percent, Oruro 0.23 percent, Potosi 0.42 percent, Chuquisaca 4.6 percent, Beni 5.5 percent, and Pando 2.7 percent. It is estimated that the rent in favor of Tarija will substantially increase in the future since most of the new gas reserves to enter into production are located there.

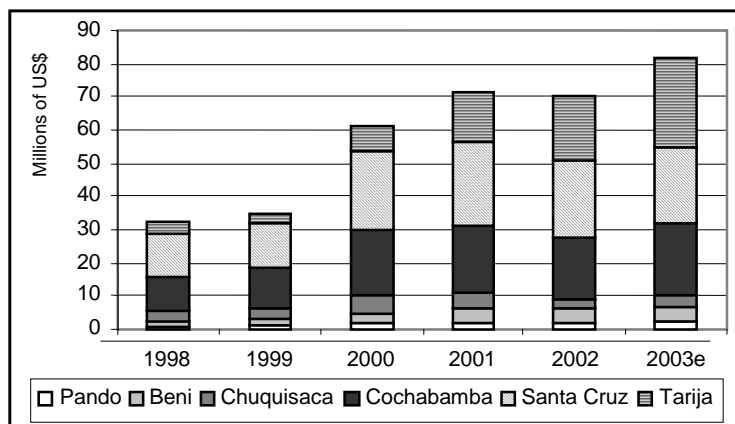
**Table 4.4: Bolivia—Distribution of Oil Rents Resulting from Upstream Operations**

	1998		1999		2000		2001		2002	
	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%
YPFB	14.6	9	12.0	9	10.5	5	13.4	5	10.7	5
TGN	103.9	65	82.5	61	144.3	64	166.3	63	117.8	59
Prefects	34.8	22	34.0	25	62.3	28	71.9	27	68.1	34
Municipalities	5.8	4	5.1	4	6.1	3	10.3	4	3.8	2
Universities	1.5	1	1.3	1	1.5	1	2.6	1	0.9	1
<b>TOTAL</b>	<b>160.6</b>		<b>134.8</b>		<b>224.6</b>		<b>264.5</b>		<b>201.3</b>	

Source: Ministry of Economy

4.46 Figure 4.5 helps to underscore the imbalance among departments in relation to the distribution of royalties, which are the main source of direct benefits for the departments as a consequence of hydrocarbon production. The regulations provide that of the 12 percent of royalties, 11 percent are allocated to the producing department and 1 percent to Beni and Pando. The amount collected under this item was higher from 2000 and the posterior growth is having an increasing impact in favor of the Department of Tarija. It is felt that in the coming years, just considering the agreement for exports to Brazil, Tarija could double its revenues from royalties.

<sup>13</sup> The Consultant that carried out the study of the Bolivian case says: "This table is not an official publication but an own elaboration applying the regulations in force. For the distribution of the co-participation aimed at municipalities, the population criteria were used."

**Figure 4.5: Bolivia—Distribution of Royalties by Departments**

Source: Data from Bolivia Consultant

4.47 In order to mitigate these imbalances among departments in terms of royalties, the Departmental Compensation Fund has been established. It determines the departments with per capita royalties below the national average and transfers to them compensatory grants through the TGN. This compensation is obtained from the Special Hydrocarbons Tax (IEHD).

4.48 Per capita royalty in 2002 was estimated at US\$13.5, a figure that is multiplied by the population in order to calculate the compensation amount until an upper limit of 10 percent of the current revenues from the IEHD (about US\$22 million in 2002) is reached. The Departments that received this benefit in 2002 were: La Paz (73 percent), Potosí (21 percent), Chuquisaca (4 percent), and Oruro (2 percent).

4.49 In spite of the existence of this fund, conflicts are expected in the future due to the increasing requirements on the TGN to finance national programs and projects. These conflicts will take place between producing and nonproducing departments, between municipalities within each department, and for direct benefits demanded by the indigenous and native communities. These are issues for which breakthroughs are required in the regulations on the distribution of oil rents. In order to deal with these conflicts, the governmental transfer system is to be strengthened. Currently, the regulations in force consider:

- The policy of co-participation in the national revenues (Popular Participation Law, Administrative Decentralization Law, and Municipalities Law), and
- The National Compensation Policy through the Single Funding Directorate (DUF) for the coordination of Investment and Development Funds (National Fund for Productive and Social Investment [FPS], National Fund for Regional Development [FNDR], and HIPC II Fund based on the foreign debt relief program).

### Distribution of Royalties in the Producing Departments

4.50 The royalties in the producing departments, 11 percent plus the National Compensatory Royalty, are distributed as follows:

- 11 percent directly to the prefectures of the producing departments (Santa Cruz, Tarija, Cochabamba, Chuquisaca).
- 1 percent to the prefectures of the departments of Beni and Pando, 2/3 and 1/3, respectively.

4.51 Once the money from royalties is received, it becomes part of the Intergovernmental Transfer System, which includes:

- Policy on departmental revenues, expressed in the legal framework for the sources of mining, hydrocarbon, and forestry royalties.
- Policy on municipal revenues, expressed in the Municipalities Law, which provides that 100 percent of the own revenues generated by the municipalities are used by them in their development programs and projects.
- Policy on co-participation in national revenues, expressed in the Popular Participation Law (1994), the Administrative Decentralization Law (1995), and the Municipalities Law (1999), in order to correct the vertical imbalances among government levels.
- Policy on compensation, expressed in the National Compensation Policy and the Investment and Development Funds.
- Transfer of resources from the National General Treasury (TGN), which are granted to departments and municipalities,

4.52 Therefore, the sources of departmental resources are:

- Departmental royalties
- Resources from the departmental compensation fund
- The 25 percent Special Hydrocarbons Tax (IEHD), provided that the limit of 10 percent of the IEHD is not exceeded (50 percent as a function of the number of inhabitants and 50 percent in equal amounts for the 9 departments)
- The amounts granted in the general budget of the nation for expenses in personal health services, education, and social aid
- TGN transfers
- Internal and external credits
- Disposition of goods under their responsibility
- Other local revenues.

Resources obtained from the three first sources must be used as 85 percent for public investment and as 15 percent for administrative expenses. Resources obtained from the last two sources must be used 100 percent for public investment.

4.53 In conclusion, in Bolivia it is not possible to establish a direct correspondence between sources and uses of resources generated by upstream activities in the hydrocarbons sector, because they are mixed with other sources of departmental and municipal resources. The regulations do not provide specific requirements on the distribution of the oil rents within a department or among ethnic groups or any other possible distribution criteria. It is not possible to establish the efficiency and cost-effectiveness of the resources generated by upstream activities in the hydrocarbon industry, except that they are managed like resources from any other sources.

### **Colombia**

4.54 Table 4.5 summarizes the behavior of the distribution of oil rents exclusively originated from upstream activities, in terms of their direct beneficiaries according to law, during the 1997–2002 period. These beneficiaries include the central government, the departments and municipalities in the producing and nonproducing zones, and the National Royalties Fund and social aid. In 2002, 45 percent went to the central government, while the remaining 55 percent was distributed in a decentralized manner.

**Table 4.5: Colombia—Distribution of Rents and Royalties (US\$millions)**

	1998		1999		2000		2001		2002	
	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%
Central Government	220.5	43	180.5.0	20	406.5	30	646.2	47	540.9	45
Producing Departments	174.5	25	233.2	26	383.1	28	336.3	25	295.2	24
Nonproducing Departments			33.0	4	26.0	2			5.9	1
Producing Municipalities	65.7	9	95.6	11	149.7	11	178.2	13	165.6	14
Nonproducing Municipalities	43.3	6	62.2	7	34.3	3	0.7		1.6	
Corporations	1.1		1.4		1.9		1.4		1.5	
Investment Funds	9.2	1	11.8	1						
National Royalties Fund	163.4	23	266.1	30	337.6	25	193.4	14	177.5	15
Social Aid	27.9	4	19.6	2	19.4	1	7.1	1	13.6	1
TOTAL	705.5		893.1		1,358.5		1,363.1		1,202.2	

Source: Ministry of Economy

4.55 Royalties in Colombia, through the different contracting modes, are received mostly by ECOPETROL in kind and this state-owned company markets the product. Likewise, with the settlements made by the Ministry of Energy and Mines, the company makes the corresponding payments to the different territorial agencies and draws the surplus of direct royalties not allocated to such territorial agencies in favor of the National Royalties Fund.

4.56 In Colombia, royalties are distributed in steps as a function of gradual criteria based on the average quantity of daily barrels produced by each municipality or district. The rationale of such distribution criteria is to avoid the situation where there are

large deposits and thus a great quantity of money would be concentrated in a few territorial agencies. Considering what has been mentioned above, for instance in those places where the average oil production is in the range of 0 to 100,000 barrels per day, royalties are distributed as follows:

- Producing departments: 47.5 percent
- Producing municipalities or districts: 12.5 percent
- Port municipalities or districts: 8 percent
- National Royalties Fund (FNR): 32 percent

4.57 In Colombia better defined rules for the distribution and use of royalties exist. The efficiency of use will be seen in the next chapter.

### ***Ecuador***

4.58 In Ecuador, the oil rents collected by PETROECUADOR and the Ecuadorian Central Bank have been broken down in to four major items: central government, beneficiary institutions, funds (mainly FEIREP), and decentralized participation agencies, which are outlined below.

1. *Central government:* The main destination within the central government is its budget, which in turn distributes oil rents to other agencies based on criteria set in laws and a decree issued by the executive power. The contribution of the oil industry to the state's general budget is significant, averaging 28 percent. The distribution of oil rents has become increasingly complicated with time, due to the high level of earmarking for each segment of revenues, namely, royalties, production ex consortium, service contracts, pipeline fees, and so forth.
2. *Beneficiary institutions:* These agencies are made up of a wide range of institutions, whose regulation and participation is rather hard to determine due to the complexity of the Ecuadorian legislation. Tables 4.6 and 4.7 show the beneficiary institutions and the origin of the oil fund distributed in Ecuador. The classification of oil revenues is made up of 30 apparent sources of revenues. From the analysis, it has been determined that the resources could be reduced to eight actual sources corresponding to the type of agreements, activities of PETROPRODUCCION, derivatives exports, domestic sales, and transportation. The reason for this wide classification is the multiple earmarking that has been legally established throughout the years, keeping even revenues headings that do not correspond with the current reality.



**Table 4.6: Ecuador—Oil Revenues Headings—Central Government**

1	Income tax on service companies	18	Exports from marginal fields
2	Income tax on specific service companies	19	Marketing of service companies
3	Additional per exported barrel or crude oil	20	Oil derivatives exports
4	Royalties crude exports:	21	Domestic sale of oil derivatives
5	—From PETROECUADOR	22	Release of debt resources
6	—From state participation	23	Oil transportation fee by SOTE oil investment fund
7	—From marginal fields		
8	PETROECUADOR exports ex-consortium	24	— From pipeline transportation and exports
9	PETROECUADOR exports northwestern exports state participation	25	—From sale of derivatives
10	—With city	26	Stabilization and economic and social development
11	—With YPF	27	Oil surplus
12	—With Canada Grande	28	Others unspecified
13	—With Keer McGee	29	Law 24 (corpei)
14	—With Occidental	30	Oil stabilization fund
15	—With Vintage Oil		
16	—With Perez Company		
17	—With Lumbaqui oil		

Source: State Budget, 2002

Table 4.7: Ecuador—Oil Rents Distribution System

	<i>Beneficiaries</i>	<i>Direct Export</i>	<i>Royalties</i>	<i>Derivative export</i>	<i>SOTE Fee</i>	<i>5 Sucres Bl. Exp.</i>	<i>Derivative Int. Sales</i>	<i>Taxes Besides Sote+Prod.</i>	<i>Decree 337</i>
<b>1.</b>	<b>Central Government</b>	XXX	XXX	XXX	XXX	XXX	XXX		XXX
	1.1. Direct Collection	X	X	X	X	X	X		X
	1.2. Ministry of Public Health	X							
	1.3. Ministry of Labor	X							
	1.4. Law 02	X	X	X					
	1.5. Law 18	X	X						
	1.6. 100% of 15% Royalty		X						
	1.7. 10% Oil Investment	X		X	X		X		
	1.8. Economic Stabilization Agreement 107			X					
	1.9. Agriculture Viability Law	X		X					
<b>2.</b>	<b>Decentralized Agencies</b>	XXX	XXX	XXX				XXX	
	2.1. ISSFA ( LAW 169 )		X						
	2.2. FAE		X						
	2.3. Defense Council	XX	XX						
	a. J.D.N. 8% Export	X							
	b. J.D.N. Other	X	X						
	2.4. Amazon Development (Law 20)							X	
	2.5. Public Universities Share	X							
	2.6. Private Universities	X							
<b>3.</b>	<b>State-Owned Companies</b>	XXX	XXX	XXX	XXX		XXX		
1.	PETROECUADOR	XXX	XXX	XXX	XXX		XXX		
	Total Costs PETROECUADOR:	XX	XX	XX	XX		XX		
	a. Cost Refunding	X	X	X	X		X		
	b. Services Costs	X							
	c. Special Service Participation Costs.	X							
	d. 10% Oil Investments								
2.	FERUM (Solidarity Fund)		X						
<b>4.</b>	<b>Sectional Agencies</b>	XXX	XXX	XXX				XXX	
1.	FODESEC	X							
2.	Provincial Councils			X					
3.	Esmeraldas Development	X	X						
4.	Napo Esmeraldas and Sucumbios Share		X					X	
	Law 40								
<b>5.</b>	<b>Financial Sector</b>								
1.	State-owned Bank	X							
2.	BEV	X							
3.	Central Bank	X							
5.	IECE	X							
<b>6.</b>	<b>Oil Stabilization Fund</b>	X	X	X					

Source: State Budget, 2002

The lack of transparency in managing resources from the state budget has been subject to strong criticism. However, since 2003, the earmarking of oil royalties for the armed forces has been eliminated

3. *Funds*—as one of the efforts to have a fund for economic contingencies, the oil Stabilization Fund was created. It accumulates resources when the crude oil price exceeds US\$20/bbl. Recently, the resources of this fund have undergone a new earmarking process. Finally, with the expectation of an increase in oil production after the putting on stream of OCP, a Fund for Stabilization, Social and Productive Investment and Reduction of Public Debt (FEIREP) has been established. Its objective is to repurchase the public foreign debt at market value and to stabilize the oil revenues aimed at education and health.
4. *Decentralized Participation Agencies*: These agencies are:
  - Fund for the Ecological Development of the Amazon Region in Ecuador (Law 20)
  - Substitutive Rents for Napo, Esmeraldas, and Sucumbios (Law 40)
  - Fund for the Development of the Provinces in the Amazon Region (Law 122 as amended)
  - Provinces Napo, Esmeraldas, and Sucumbios
  - Province Esmeraldas

4.59 Details regarding these agencies are included in this section.

4.60 The following table shows the distribution of oil revenues from 1998 to 2002. Regarding this structure, it can be observed that the central government had a share of 83 percent in 2002. The next item is Funds (FEIREP), with 9.7 percent of the total. This item has had a very changing behavior in the analyzed period. The same is true for the item other (beneficiaries). In 2002, beneficiaries received US\$61 million and the decentralized participation increased, reaching US\$59 million.

**Table 4.8: Ecuador—Distribution of Oil Revenues**

	1998		1999		2000		2001		2002	
	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%
Central Government	906.0	98	716.0	71	1,120.0	69	1,256.0	87	1,324.0	83
Decentralized Participation	0.5		3.2		47.5	3	43.3	3	59.0	3
Funds-FEIREP	2.0		251.0	25	317.0	20	54.0	4	155.0	10
Others	16.6	2	37.2	4	131.9	8	93.9	6	60.8	4
<b>Total</b>	<b>925</b>		<b>1,007</b>		<b>1,616</b>		<b>1,447</b>		<b>1,599</b>	

### Analysis of the Distribution of Decentralized Participation Rents

4.61 Table 4.9 shows the distribution of the decentralized participation rents appearing in the previous table. As it can be seen, the total distributed under this item of specific rents to provinces and communities has been growing every year. It has passed from an almost insignificant share in 1998 to US\$59 million in 2002. The largest share is received by ECORAE, with 81 percent of the total in 2002. It is followed by Law 40 and Law 122, with 6.1 percent and 10.3 percent, respectively.

**Table 4.9: Ecuador—Distribution of Specific Rents for Provinces (Million US\$)**

	1998	1999	2000	2001	2002
ECORAE		1.7	38.5	35.8	48.1
Substitutive Rents for Napo, Esmeraldas, and Sucumbios (Law 40)		0.5	5.6	3.0	3.6
Law 122		0.2	2.3	2.5	6.1
Provinces of Napo, Esmeraldas and Sucumbios	0.41	0.84	1.14	1.14	1.23
<b>TOTAL</b>	<b>0.41</b>	<b>3.24</b>	<b>47.54</b>	<b>42.34</b>	<b>59.03</b>

#### a) ECORAE

4.62 The Institute for the Ecological Development of the Amazon Region, ECORAE, was established in 1992 by Law 010 (later came Law 020). This agency is in charge of planning and facilitating the sustainable human development of the Amazon Region in Ecuador. The annual growth of ECORAE's share is provided in its creation law, where the following is stated: "ECORAE has fixed revenues based on a given numerical value equal to US\$0.10 per each barrel of oil sold (regardless of the sale prices). As from 1998, ECORAE will receive an increase of US\$0.05 per dollar every year per each barrel of oil sold until reaching a maximum of US\$0.50" (Law 20 on the establishment of ECORAE). The ECORAE Law also provides that these funds will be distributed as follows: 20 percent for the provincial councils in the Amazon Region and 60 percent for the provincial municipalities in the Amazon regions. The remaining 10 percent will be granted to a regional fund managed by ECORAE.

#### b) Substitutive Rents for Napo, Esmeraldas, and Sucumbios (Law 40)

4.63 In 1989, Law 40 created substitutive rents for the provinces of Napo, Esmeraldas, and Sucumbios. Subsequently, through other laws and reforms, it was determined that the provinces of Orellana and Pastaza would also benefit from the rents established by Law 040. The funds for substitutive rents come from the payment of US\$0.05 per barrel transported through the Trans-Ecuadorian Oil Pipeline, SOTE. The companies must deposit this amount in the Central Bank, which is responsible for transferring the resources to the corresponding provinces.

4.64 According to the law "in all these provinces, oil is exploited, transported, and refined, and its commercialization has generated revenues for the national budget used in the execution of works that have benefited the entire country; consequently, it is

the state's obligation to compensate these provinces with rents to which they are entitled in order to promote the integrated and sustained development of their inhabitants." Also Article 240 of the political constitution provides that the state will give priority to sustainable development and ecological conservation in order to maintain the biodiversity of the Amazon provinces and will adopt policies to compensate for less development and to strengthen national sovereignty.

**c) Law on Funds for the Development of the Eastern Provinces (Law 122)**

4.65 This fund was established based on a tax on the total amount invoiced to PETROECUADOR or its affiliate companies by service companies within the jurisdiction of each Amazon province. This tax is equal to 24 percent for local companies and 45 percent for foreign companies. The amounts collected through the enforcement of this law are deposited every month in the special account called Fund for the Development of the Provinces of Sucumbios, Napo, Morona Santiago, and Zamora Chinchipe, opened for this purpose in the Ecuadorian Central Bank. The rents obtained by these sectional agencies through the enforcement of this law must be exclusively used for urban and rural infrastructure works.

4.66 The Central Bank, without the requirement of a previous or explicit order, must deliver to each province within the first 10 days of every month a proportional part of the amounts collected, according to the following distribution scheme:

- In the provinces of Sucumbios, Napo, Morona Santiago, and Zamora Chinchipe, 50 percent for the Provincial Council, 20 percent for the municipality of the provincial capital city, and the remaining 30 percent for the other municipalities in the province in equal parts.
- In the province of Pastaza: 50 percent for the provincial council, 35 percent for the Municipality of Pastaza, and 15 percent for the Municipality of Mera.

***Peru***

4.67 Table 4.10 summarizes the behavior of the distribution of oil rents originated exclusively from upstream operations, showing their direct beneficiaries according to law during the 1998–2002 period. The beneficiaries are the central government, the regions and municipalities that receive oil royalties share (Canon), and a small amount is aimed at Social Aid and Training (CAREC). In 2003, 55 percent was received by the central government and the remaining 45 percent was distributed in a decentralized manner.

4.68 Oil rents received by the central government are comprised of the rents from royalties and income tax paid by the oil-producing companies. They also include the amount received by PERUPETRO, the state agency in charge of negotiating the oil agreements. It is noteworthy that in Peru the royalties paid by the oil companies are variable, since they depend on the negotiation of each agreement. Subsequently, the Canon, for example, on average equivalent to 44 percent of the royalty, is distributed to the regions, municipalities, and universities where oil is extracted. The funds for the

Canon come from the royalties paid by the oil-producing companies. The percentages and the modes of allocation of the Canon are detailed below.

4.69 The fund for training (CAREC) accounted for 0.4 percent of the total. These funds are paid by the oil companies according to the negotiations with the state agency PERUPETRO in each agreement.

4.70 Until 2000, data are available on the social aid item, which in the Peruvian case is related to expenses made by contractors, compensation, and indemnification funds, and funds granted to the Peruvian Amazon Institute. These funds are very small (see table). There is no information from 2001.

**Table 4.10: Peru—Distribution of Oil Rents from Upstream Operations**

	1998		1999		2000		2001		2002	
	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%	MMUS\$	%
Central Government	58.2	52	121.3	61	206.6	64	116.7	55	148.1	59
Canon	51.6	46	74.9	38	116.5	36	94.8	95	103.8	41
Social Aid	0.3		0.4		0.3					
CAREC	1.8	2	1.5	1	1.3		1.1		1.1	
<b>Total</b>	<b>111.8</b>		<b>198.1</b>		<b>324.7</b>		<b>212.6</b>		<b>253.0</b>	

#### **Distribution of Canon (Regional Participation)**

4.71 In Peru, the producing regions receive royalties known as Canon, namely a percentage of the gross value of the oil production in their region. These regions (formerly departments) are: Loreto, Ucayali, Piura, and Tumbes. In addition to these, there is the Province of Puerto Inca in Huanuco (due to some minor oil production in Aguas Calientes) and the Cusco region that has started receiving royalties from the production of the Camisea gas. It must be emphasized that the royalties collected by the government exceed the canon distributed among the producing regions. The “surplus” is returned by PERUPETRO to the public treasury.

4.72 The Oil Canon is allocated, according to the law, to the regional governments, local governments, and universities in the region. Table 4.11 outlines the percentages of distribution by regions, which do not show a homogeneous methodology.

4.73 As in the case of Bolivia, the Oil Canon transferred to the producing regions is mixed with other grants transferred by the public treasury to the region. Nevertheless, the regions and municipalities keep accounts that record specifically the current expenses and investment projects in which the Oil Canon is used (the same is not true for universities). This could make it possible to measure its impact.

**Table 4.11: Peru—Legal Provisions and Distribution of the Canon and Sobrecanon**

<i>Beneficiaries</i>	<i>%</i>	<i>Base Calculation (production)</i>
LORETO (Decree Law N° 21678) Regional Government Universidad Nacional de la Amazonía Peruvian Institute for Amazonia Municipal Councils	52.0 5.0 3.0 40.0	Canon and Sobrecanon on production from Loreto
UCAYALI (Law N° 23350) Regional Government Universidad Nac. De Ucayali Peruvian Institute for Amazonia Municipal Councils	52.0 5.0 3.0 40.0	Canon and Sobrecanon on production from Ucayali
PIURA (Law N° 27763) Regional Government District and Provincial Municipalities where production is located. Other District and Provincial Municipalities in the department. Public University. Pedagogic and Technological Institutes.	20.0 20.0 50.0 5.0 5.0	Participation in the production from Piura and Off-shore
TUMBES (Law N° 27763) Regional Government District and Provincial Municipalities where production is located. Other District and Provincial Municipalities in the department. Public University. Pedagogic and Technological Institutes.	20.0 20.0 50.0 5.0 5.0	Participation in the production from Piura and Off-shore
PTO. INCA HUANUCO (Province) Municipal Councils	100.0	Participation in the production from Aguas Calientes
CUSCO (Law N° 27506 and Law 28077) Local, municipal, or district governments where the natural resource is located Local governments of the province where the natural resource is located Local governments, excluding those in the provinces where the natural resource is located Regional governments where the natural resource is located	10.0 25.0 40.0 25.0	50% of the royalty and 50% of the income tax

## Preliminary Conclusions

4.74 From the perspective of environmental sustainability, which can be affected by the presence of negative externalities in the companies-population relationship, through which indigenous communities are affected, the payment of compensations to the population by the companies is justified. The mitigation of the environmental impacts that may be generated by the hydrocarbon-related activities must be considered in the production costs.

4.75 In order to follow the path toward sustainable development, a part of the rents must be used in the producing regions themselves. This can be more clearly observed in Colombia and Ecuador, where grants are concentrated in the communities. In Colombia, the indigenous communities directly benefit from the royalties corresponding to municipalities, and indirectly through the National Royalties Fund for Environmental Sanitation. In Ecuador, specific rents are distributed for provinces and communities, through which, the items “Aid to Communities” and “OCP–Community Support” have gained importance since 2002.

4.76 Although it is true that the allocation of oil rents to each receiving agency in each country fits with the theoretical definitions of “automatic grants” (all four countries) and specific grants (in Bolivia, Colombia, and Peru), it has not been possible to verify that the economic and technical criteria that define them are the most adequate. Indeed, each country has different approaches to the model for the distribution of oil rents.

4.77 The lack of economic studies analyzing the effects that the criteria for the distribution of oil rents in each country prevents decisionmakers from having the tools that would allow them to assess the economic and social impact of the oil rent distribution adequately.

4.78 It is noteworthy that in Colombia no impact surveys carried out by government agencies and research center, were found but it is not known if their conclusions and recommendations have been considered by the decisionmakers. In Peru, an independent study (PNUD) has been conducted on the use of oil rents in the northern regions of the country but, as in the case of Colombia, it is not known if its conclusions have been considered by the decisionmakers.

4.79 An important factor in the analysis of the oil rent distribution is establishing how the rents are distributed among the central government and the decentralized agencies. Regarding the analyzed countries, in three of them (Bolivia, Ecuador, and Peru), the central government received over 59 percent, while in Colombia the central government received 36 percent.

4.80 Analyzing the oil rent distribution in recent years (1998–2000 period), although a trend toward a reduction in the central government’s share is observed (except for Colombia), it does not have the same characteristics in all the countries.

- In *Bolivia*, in the 1998–2000 period, the central government’s share fell from 75 percent to 65 percent. This was a result of Law 1689 of 1996, which eliminated the 32 percent royalties directly received by the central



government, but which maintained the 18 percent given to the departments. This could change with the new Hydrocarbons Law currently being discussed in this country.

- In *Colombia*, the central government's share fell from 43 percent in 1997 to 30 percent in 2000. In 2001, it increased and then fell again. Oil rents in Colombia come from two main sources: the income tax (that goes to the central government) and the royalties (that are distributed in a decentralized manner). In the last two years, the high prices have increased the income tax paid by the companies. However, the new legislation will reduce the royalties paid by oil companies. From these two elements, it can be projected that the central government's share will tend to increase rather than diminish.
- In *Ecuador*, the central government's share is the highest in the four analyzed countries, since it exceeded 97 percent for all years. From 2000 to 2002, it can be seen that the central government's share diminishes very slightly, reaching 96.5 percent. The trend will be for the shares to diminish further, since the share of PETROECUADOR in oil production is increasingly lower, while the production of private companies has increased.
- In *Peru*, the central government's share has remained unchanged but it will diminish in the near future since its share in oil rents from the Camisea gas royalties will be lower than that obtained from the oil agreements, while the share of regional and local governments will increase.

4.81 Except for Ecuador, the main decentralized agencies receiving oil rents are the regional governments (or departments), the local governments (municipalities), and the universities. Oil rents are also received, although in lower amounts than those mentioned above, by funds, social aid, and training. In this context, it is important to observe the transfers aimed at the regions (part of the rents plus regular budget transfers).

#### ***Decentralized Oil Rents in Bolivia***

4.82 Oil royalties of 11 percent and 1 percent are directly distributed to nine departments (prefectures, municipalities, and universities). Additionally, a part of the royalties collected by the central government is indirectly transferred again to the departments (9 prefectures and 314 municipalities) via education and health budgets and through development funds for social programs and infrastructure projects.

4.83 Hydrocarbon royalties received by the departments are part of the Intergovernmental System Royalties, which include rents received from other sources. Public investment must use 85 percent of the hydrocarbon royalties and administrative expenses, 15 percent.

4.84 There is an imbalance in the oil rents distribution, since the producing departments (Santa Cruz, Cochabamba, Tarija and Chuquisaca) receive a much higher proportion than Beni and Pando. Of the 12 percent royalties directly allocated, the

former receive 11 percent and the latter 1 percent. This imbalance will increase as the natural gas production in Tarija increases.

4.85 To mitigate these imbalances among departments, the Departmental Compensation Fund was created. It determines that those departments with per capita royalties below the national average will receive a compensating transfer by the TGN. Beneficiary departments in 2002 were La Paz, Potosí, Chuquisaca, and Oruro.

4.86 Despite the existence of this fund, conflicts are expected in the future as a consequence of this unequal distribution. To deal with them, the government has planned to strengthen the government transfer system, modifying the legal framework.

### ***Decentralized Oil Rents in Colombia***

4.87 All the collected royalties (not long ago royalties were 20 percent of the total value of oil production) are distributed in a decentralized manner. Oil rents directly distributed in a decentralized manner in Colombia amounted to US\$661 million in 2002, which accounts for 55 percent of the total. The bulk (68 percent) went to producing departments and municipalities, and port municipalities or districts, while the remaining went to the National Royalties Fund (32 percent).

4.88 The National Royalties Fund (FNR) is aimed at balancing the resources from oil rents in Colombia. The FNR resources are redistributed to the following destinations throughout the Colombian territory:

- 15 percent to Gas and Power Projects
- 15.5 percent to Specific Projects (submitted by the territorial agencies)
- 58.5 percent to Own Resources for Projects
- 1 percent to operational expenses
- 10 percent to Corporación del Río Grande de la Magdalena, "CORMAGDALENA."

### ***Decentralized Oil Rents in Ecuador***

4.89 In Ecuador, the central government collects over 90 percent of the oil rents. The central government distributes these oil rents via the republic's budget and a complicated earmarking mechanism (beneficiaries). Over the last years, the government has established the Fund for Stabilization, Social and Productive Investments, and Public Debt Reduction (FEIREP), which receives a major portion of the oil rents.

4.90 Oil rents allocated to decentralized participation are low, although they have grown in the past years. The main destination (80 percent of the total decentralized participation) is ECORAE, an institute that distributes the resources among provincial municipalities and councils in the Amazon region and then delivers the remainder to a regional fund. There are also substantial rents for the producing provinces (Law 040) and development funds for eastern provinces (Law 122).

4.91 Finally, PETROECUADOR and the private oil companies transfer resources to several community aid activities and make grants in the zones of influence of

their activities, although they are not accounted as part of the oil rents. The private companies in charge of the construction of the Crude Oil Pipeline (OCP) also transfer funds to projects in the communities within their working zones.

### ***Decentralized Oil Rents in Peru***

4.92 In Peru, the percentage of oil rents distributed in a decentralized manner was 44.3 percent this year. The central government collected 55.3 percent and 0.4 percent was used for training funds (CAREC).

4.93 Five regions (formerly departments) out of 24 receive a Canon (royalties share) from oil rents. Loreto and Piura receive the highest percentages of Canon, followed by Tumbes and Ucayali. The Huanuco Region receives a very small percentage. The Oil Canon received by the regions is transferred, according to the percentages provided by law, to the regional governments, municipalities, universities, and education institutes. Through the Camisea Project, the regional government of Cusco has started to receive a Canon equal to 50 percent of the royalties and 50 percent of the income tax and will also benefit from a price on well mouth below US\$1/MMBTU. The remaining regions do not receive Oil Canon as no redistribution or reallocation mechanisms exist in the country.

4.94 As in the case of Bolivia, oil royalties transferred to the producing regions are mixed with other transfers that the public treasury makes to the region. Nevertheless, the regions and municipalities keep accounts that specifically detail the current expenses and investment projects on which the oil royalties (Canon) are used (this is not done by universities). These accounts could help to measure their impact.

# 5

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## The Use of Oil Rents

### Background

5.1 The decisions on the use of oil rents are within the domain of public expenses and finance and, in general terms, within the macroeconomic policies designed in each country. Nevertheless, it would be desirable to have prior coordination of the priority uses planned for oil rents between the central government and the regional government.

5.2 The actual expenses will depend on several factors, starting with transparent management of resources. The use of oil rents cannot escape the priorities governing the development plan of the country as a whole and the region in particular. In order to measure their priority, expenses must be part of the national budget. It is considered that in all countries priority must be given to investments rather than to current expenses. The priority of investments implies the need to have medium and long-term development plans.

5.3 Besides taking into account the priorities in terms of new infrastructure, it is very important to apply effective control systems for budget execution and to have, in the case of surplus, efficient saving means. There is no reason for a country or region to spend all its oil revenues in the budget of a single year. The revenues from hydrocarbon projects are not consistent with the capacity of the national or regional economies to absorb them.

### Use of Oil Rents by Countries

#### *Bolivia*

5.4 There is no specific regulation governing the local fiscal expenses. The only requirement is that the prefectures or municipalities must use 85 percent of transfers for investments and up to 15 percent for current expenses. In Bolivia, local participation is made effective through supervision mechanisms in the prefectures, municipalities, departmental councils, municipal councils, and surveillance councils.

5.5 It is not possible to make a direct correspondence between sources and uses of the local fiscal expenses, since the resources generated by the upstream activities in the hydrocarbon industry appear mixed with other sources of resources in the accounts of departments and municipalities. There are no specific regulations on the distribution

of oil rents within a department or among ethnic groups, or based on any other possible distribution criteria. There are no regulations providing control and audit means for expenses made, either.

5.6 It is possible; however, to establish some kind of correspondence between the resources from upstream activities in the hydrocarbon sector that is, to observe the magnitudes and uses of the resources in social expenses. Table 5.1 summarizes the social expense structure in Bolivia by types of expense. Table 5.2 summarizes the structure of social expenses in favor of poor people also by types of expense. Both tables consider the 2001–2002 period. Table 5.3 summarizes the municipal resources used by departments in year 2002.

**Table 5.1: Bolivia—Social Expenses, 2001-2002**

<i>Sector/Type of Expenses</i>	<i>2001 (Millions of US\$)</i>	<i>2002 I (Millions of US\$)</i>	<i>2001 (% of GDP)</i>	<i>2002 I (% of GDP)</i>
Current Expenses	1,102.4	1,110.5	13.79	13.96
Health	249.4	240.7	3.12	3.03
Education	472.6	478.7	5.91	6.02
Social Management	1.2	1.1	0.02	0.01
Pensions	356.4	365.7	4.46	4.60
Private Pension Funds	22.8	24.3	0.29	0.31
Capital Expenses	428.3	459.7	5.36	5.78
Health	49.4	57.9	0.62	0.73
Education	107.3	117.6	1.34	1.48
Basic Sanitation	74.5	50.5	0.93	0.63
Urban Development	64.4	65.4	0.81	0.82
Rural Development	132.7	168.3	1.66	2.12
Total Social Expenses	1,530.7	1,570.3	19.15	19.74
Health	298.8	298.6	3.74	3.75
Education	579.9	596.3	7.26	7.49
Basic Sanitation	74.5	50.5	0.93	0.63
Urban Development	64.4	65.4	0.81	0.82
Rural Development	132.7	168.3	1.66	2.12
Social Management	1.2	1.1	0.02	0.01
Pensions	356.4	365.7	4.46	4.60
Private Pension Funds	22.8	24.3	0.29	0.31

**Table 5.2: Bolivia—Pro-Poor Social Expenses, 2001-2002**

<i>Sector/Type of Expenses</i>	<i>(Millions of US\$)</i>		<i>(% of GDP)</i>	
	<i>2001</i>	<i>2002</i>	<i>2001</i>	<i>2002</i>
Current Expenses	550.0	539.0	6.88	6.77
Health	215.0	208.4	2.69	2.62
Education	333.7	329.4	4.18	4.14
Social Management	1.2	1.1	0.02	0.01
Capital Expenses	428.3	459.7	5.36	5.78
Health	49.4	57.9	0.62	0.73
Education	107.3	117.6	1.34	1.48
Basic Sanitation	74.5	50.5	0.93	0.63
Urban Development	64.4	65.4	0.81	0.82
Rural Development	132.7	168.3	1.66	2.12
Total Social Expenses	978.3	998.7	12.24	12.55
Health	264.4	266.3	3.31	3.35
Education	441.0	447.1	5.52	5.62
Basic Sanitation	74.5	50.5	0.93	0.63
Urban Development	64.4	65.4	0.81	0.82
Rural Development	132.7	168.3	1.66	2.12
Social Management	1.2	1.1	0.02	0.01

**Table 5.3: Bolivia—Municipal Resources Used by Departments, 2002**  
(Millions of US\$)

<i>Departments</i>	<i>Number of municipalities</i>	<i>Co-participation</i>	<i>HIPC II</i>	<i>Total</i>
Chuquisaca	28	10.9	5.3	16.2
La Paz	75	47.7	14.3	62.0
Cochabamba	44	29.1	8.7	37.8
Oruro	34	8.1	3.3	11.4
Potosí	38	14.8	5.9	20.7
Tarija	11	7.8	2.9	10.7
Santa Cruz	50	39.5	8.3	47.8
Beni	20	7.2	4.4	11.7
Pando	15	1.0	2.3	3.3
<b>Total Bolivia</b>	<b>315</b>	<b>166.2</b>	<b>55.5</b>	<b>221.7</b>
Capital cities	9	65.6	7.7	73.3
Other municipalities	306	100.6	47.8	148.4

*Source:* UDAPE, preliminary data

5.7 From this information, it can be concluded that the hydrocarbons industry contributed to these results in the magnitude of resources transferred according to the regulations in force. If the social impact of oil rents were measured by the quantity of resources directly reaching the municipalities, the result would be poor. It would be better if the programs and projects indirectly funded through oil rents collected by the TGN (Treasury) were considered. So, in 2002:

- The portion of oil rents assigned to the TNG and the departments (prefectures, municipalities, and universities) was US\$190.7 million, which accounts for about 12.1 percent of the social expenses (current and capital expenses) and 19.1 percent of the pro-poor social expenses.
- The portion of oil rents assigned to the 314 municipalities, however, was only US\$2.9 million, which accounts for about 1.7 percent of the resources received by the municipalities under tax co-participation in 2002 and 1.3 percent of the budget executed by the 314 local municipalities in 2002.

5.8 In short, in Bolivia, it is not possible to determine the effectiveness and efficiency in the use of resources from upstream activities in the hydrocarbon industry, except to establish that they might have been managed in the same manner as resources coming from other sources. Regarding this, criticism of municipal management is equally valid in general terms.

- Low budget performance (the Economic Planning Unit [UDAPE] estimates it at 50 percent),
- Weak institutional development due to technical and administrative deficiencies, lack of compatibility between annual plans and programs and the budget, political intervention in the municipal councils, high staff turnovers, lack of transparency in administrative processes, and
- Inadequate design of instruments in terms of regulations and procedures, inflexibility and complexity in administrative procedures.

5.9 In this regard, a recent initiative on effectiveness and efficiency from the Single Fund Directorate was the elaboration of Institutional Adjustment Programs (PAI) for Municipal Governments. These programs are being elaborated for the departmental prefectures.

5.10 The PAI will provide institutional and financial information about all the municipal governments in terms of obtained results, making it easier for the national agencies to have indicators of the institutional situation of each municipality and the possibilities of improving the municipal management. Having a PAI and having signed PAI agreements will allow a municipal government to have access to resources transferred from the Social and Productive Fund (FPS) and to credits from the National Regional Development Fund (FNDR) aimed at funding technical aid projects identified by the municipality itself to improve its institutional and financial capacities and to finance investments within the municipal scope.

5.11 Within this context, the PAI is an instrument that will allow the municipal government to:

- Analyze its financial situation and to determine strategies and actions for improvement.
- Know its reality and based on this to define those activities needed to improve its administrative organization, financial management, tax administration, and service rendering.
- Prevent administrative problems and to maintain sound finances and sustainable levels of indebtedness.

From the perspective of the society, the PAI tries to be a mechanism for transparency, spreading information about all the municipal governments and about all the commitments they have with their citizens and with the financial organizations, so that decision can be made on the policy changes and so that the countries and institutions that are Bolivia's partners can have timely information in order to provide Bolivia with "focused" support.

5.12 PAI indicators encompass four areas of municipal management: financial administration, institutional organization, tax management, and basic municipal management:

- In the financial administration area, the analyzed indicators include current indebtedness, indebtedness capacity, municipal risk, expense performance, own resources/tax co-participation ratio, municipal investment features, and cash flow planning.
- In the institutional organization area, the analyzed indicators include degree of organization, quantity of human resources, relationship between officers and neighbors, capacity to manage purchase of goods and contracting of services.
- In the tax management area, the analyzed indicator is per capita tax burden.
- In the area of municipal management of public services, including drinking water, sewerage, urban cleaning, markets, slaughterhouses, cemeteries, and bus terminals, the analyzed indicators include service coverage and quality, definition of tariffs and fees, saving capacity and outlooks.

5.13 In the recent debate held in Bolivia about the development of the natural gas industry, it has been clearly seen that the population is not aware of the distributed amounts of oil rents and that such amounts could increase with the natural export project. Likewise, in the debate about the referendum and the new law for the industry, the issue of management and use of oil resources is considered critical. Indeed, not only in Bolivia but in general terms and throughout the continent it is not possible to discuss an oil project without giving the population enough information about the scope of the project and, above all, the benefits that it will generate. The information mechanisms must be

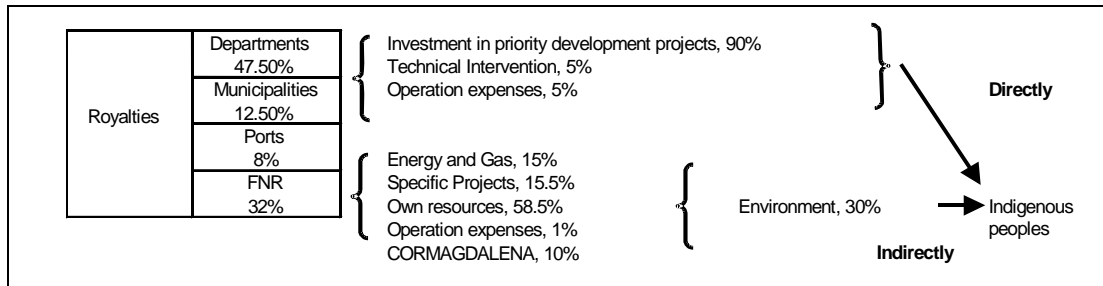


improved, introducing transparency concepts and optimizing the communication of all this to the population.

### Colombia

5.14 The regulations on royalties determine how these resources must be invested by the different benefiting territorial agencies, taking into consideration that most of the resources must be used for investment in priority projects that must be included in the General Development Plan for the Department or in the Development Plans for the Municipalities. The graph below shows the adopted distribution.

**Figure 5.1: Colombia—Distribution of Royalties**



Source: Colombia Consultant's Report (2003).

5.15 The distribution among the different beneficiaries is analyzed below, according to the general case, where the production of a municipality or district ranges from 20,000 to 50,000 barrels/day and is a valid average for the Colombian case.

5.16 *Producing departments.* According to Article 14, Law 141 of 1994, the resources from royalties and monetary compensation allocated to the producing departments will have the following uses:

- 90 percent must be used in priority projects, of which not less than 50 percent must be included in the development plans of those municipalities in the same department that do not receive direct royalties. A single municipality cannot receive more than 15 percent. In any case, those projects benefiting two or more municipalities will be given priority.
- 5 percent must be used for the technical supervision of the projects executed with these resources.
- 5 percent must be used for operational expenses.

**Table 5.4: Colombia—Use of Resources from Royalties—Law 756 Article 13**

	<i>Department</i>	<i>Municipalities</i>
<b>90%</b> Investment in priority development plans	45% Health, education, drinking water and sewerage for non-receivers of royalties (max. 15% in a single municipality)	75% Environmental sanitation, health, education, drinking water, sewerage and other basic public services
	+15% until minimum coverage is reached	
	Others are investments in social infrastructure according to development plan: roads, parks, sport centers, cultural house	Other are investments in projects included in the municipal development plan
<b>5%</b>	Technical supervision	
<b>5%</b>	Operational expenses	

5.17 *Producing municipalities.* According to Article 15, Law 141 of 1994, the resources from royalties and monetary compensations allocated to the producing departments will have the following uses:

- 90 percent must be invested in municipal development projects contained in the development plan, giving priority to those for environmental sanitation, and those for the construction and expansion of the services of health, education, electricity, drinking water, sewerage and other basic public services;
- 5 percent must be used for the technical supervision of the projects to be executed with these resources; and
- 5 percent must be used for operational expenses; of this percentage, 50 percent can be used to pay management and administration costs incurred by the national agencies in charge of the collection and distribution of royalties and compensations, provided that these resources do not come from hydrocarbon projects.

5.18 As long as the municipal agencies do not reach minimum coverage levels in the required sectors, they will allocate at least 75 percent of their total share for this purpose. In the annual budget, the resources from royalties that are being used for this purpose must be clearly delineated.

5.19 *Ports in producing regions.* Sea and river ports through which hydrocarbons are transported receive 8 percent of the collected royalties. Law 756 of 2002 states:

*Sea Royalties.* Royalties and compensations collected for the transportation of natural nonrenewable resources or their derivatives by sea port municipalities in the departments of Cordova and Sucre<sup>1</sup> will be distributed within the following area of influence as follows:

- Municipalities in the Department of Sucre—50%
- Municipalities in the Department of Cordoba—50%

All the resources must be invested by the benefiting territorial agencies according to Article 15, Law 141 of 1994.

*River royalties.* For the distribution of the share in royalties and compensations corresponding to each of the fluvial municipalities based on the shipping of natural nonrenewable resources and their derivatives, the committee, within a year after the enactment of this Law must determine the allocation procedure, considering the following criteria:

- Transported volumes
- Environmental impact
- Unsatisfied basic needs
- Influence zone

5.20 *National Royalties Fund (FNR)*, 32 percent. The resources from the FNR are redistributed to the following uses:

- 15 percent to gas and power projects
- 15.5 percent to specific projects (submitted by the territorial agencies) (see paragraph 5.85 for how this 15.5 percent is redistributed)
- 58.5 percent to own resources for projects
- 1 percent to operation expenses
- 10 percent to Corporación del Río Grande de la Magdalena, “CORMAGDALENA.”

5.21 The resources received by the FNR must be redistributed to the power and gas sector (15 percent); specific projects (15.5 percent); and/or they must be used as own resources for priority projects (58.5 percent). This means that the resources must be aimed at the promotion of mining, the preservation of the environment, and the funding of regional investment projects defined as priority projects in the development plans of the different territorial agencies.

5.22 According to the law on royalties in order to guarantee a fair distribution of the resources, the National Royalties Committee must consider the following criteria for the allocation of such resources, besides those with a specific destination:

- Regional balance based on the National Index for Unfulfilled Needs (NBI);
- Harmonic development of the country and the different regions;
- Environmental, social, and economic impact of the projects;

- Effects caused on the territorial agency as a consequence of the exploration, transportation, management and shipping of natural resources;
- Funding of regional development plans; and
- Population density.

5.23 *Oil rents directly received by the indigenous communities.* In Colombia, according to the law in force, the indigenous communities can have access to oil rent resources either directly or indirectly.

*Directly.* Article 11, Law 756 of 2002 provides that: Whenever nonrenewable natural resources are exploited in an indigenous resguardo or at a point located not further than five kilometers around the indigenous resguardo zone, 5 percent of the value of the royalties to be paid to the department due to such exploitation, and 20 percent of the royalties to be paid to the municipality shall be allocated to investment in the zones where such indigenous communities are settled and shall be used in the terms provided in Article 15 of Law 141 of 1994.

*Indirectly.* Through the allocation made by the National Royalties Fund for Environmental Sanitation. The law provides that two-thirds of the resources allocated to environment preservation will have the following use: “At least 20 percent will be channeled to the funding of environmental sanitation in the Amazonia, Chocó, Archipiélago de San Andrés, Providencia and Santa Catalina, the Grande Swamp at Santa Marta, the Sauso Pond at the Cauca Valley, the Guájaro impoundment in the Atlantic, the Tayrona National Park, the Tota Lagoon and the Sapayá Swamp, as well as the environmental sanitation and sustainable development in lands of the indigenous resguardos located in zones with special environmental significance.”

5.24 Furthermore, Law 334 of 1996, which partially amended Law 141 of 1994 in relation to the issue of indigenous people, gives the indigenous resguardos the opportunity to submit projects to the National Royalties Committee.

### **Methodologies to Evaluate the Impact of Royalties Distribution**

5.25 To establish what has been the use of resources from royalties, the first source of information has been the data from the National Planning Department of Colombia related to the National Royalties Fund. Information about the use of royalties that go directly to the producing departments, municipalities, and ports was not found.

5.26 Three studies on the distribution impact have been reviewed:

1. *The first study is a working document made by the Territorial Development Directorate at the National Planning Department of Colombia.*<sup>14</sup> In this study, a comparative analysis is made of the distribution of the FNR resources from 1998 to 2000, which allows the progress to be characterized in terms of fairness in their allocation. To make the comparison, three assessment criteria are used: (a) the municipal

<sup>14</sup> See Colombia, Departamento Nacional de Planeación (2000).

development index; (b) the department development index; and (c) the unsatisfied basic needs (NBI).

In order to analyze the fairness in the distribution of the FNR resources during the study period, Lorenz curve was used, which shows the cumulative percentage of a set of units (for example, companies or households) and the cumulative percentage of the total amount of a variable (for example, employment or income) that such units receive.

The findings of this study are: (i) the distribution of the FNR resources in 1998 was not equal among the different groups of municipalities in the country according to their poverty level measured by the NBI index;<sup>15</sup> (ii) in 1999 the situation was different since progress was evident in the distribution of resources, benefiting mainly the poorest municipalities;<sup>16</sup> and, (iii) in 2002, the distribution of resources among municipalities was progressive.<sup>17</sup>

2. *The second study was made by Lozano (1998).*<sup>18</sup> He develops a statistical model of local public choice, with which he evaluates the determinants for public expense in the Colombian municipalities and assesses the impact of transfers (which could be royalties, for instance) on the Colombian municipalities.

The author's hypothesis is that unconditioned transfers have the highest effects on the community welfare, since in the case of normal goods; freely used aid can be translated into a higher level of consumption of public and private goods.

Nevertheless, if the purpose of the transfer is to promote the consumption of certain basic public goods, such as drinking water or health or education services, conditioned transfers are more effective since they encourage more consumption by making these goods relatively cheaper.

3. *The third study was made by Fedesarrollo (2001) (Gavria A. y Zapata, Juan González).* The authors evaluate the social and economic impact resulting from oil development in the department of Casanare from 1985 to 2000. The study comprises a summary of the evaluation of the main economic variables in the department: aggregate production, social and demographic indicators, employment, wages, housing and public services.

<sup>15</sup> The authors found that the decile of the municipalities with the lowest poverty levels received about 30 percent of the resources, while the decile with the highest poverty levels received about 10 percent of the resources.

<sup>16</sup> Regarding this, the authors found that the decile of poorest municipalities received 14 percent of the resources. The poorest 30 percent received 33 percent of the FNR resources. The poorest 50 percent received 48 percent of the resources, while the decile of municipalities with lowest poverty levels received about 16 percent of the FNR resources.

<sup>17</sup> The authors found that the poorest 20 percent of municipalities received 27 percent of all the resources: Likewise, the poorest 40 percent received 42 percent of all the distributed resources. Nevertheless, the least poor 20 percent received almost 30 percent of the resources.

<sup>18</sup> Lozano, I (1998) *Las transferencias intergubernamentales y el gasto local en Colombia*.

These indicators are compared with those corresponding to departments and municipalities similar in terms of size and economic development before the oil boom. Particular emphasis is given to effects of royalties on the size and structures of the municipal and departmental budgets.

As methodology, the study uses the Fedesarrollo Social Survey in order to calculate the social and economic impact of the investment and projects, assessing thereby the evolution of living conditions in the municipality or region.

Its main conclusions state that in Colombia the oil industry activity has a positive impact on the economy, improving the social indicators and the finances in the producing departments and municipalities. Nevertheless, it must be mentioned that this study also found some negative impacts and that other studies question the management of royalties by the municipalities. Likewise, other negative impacts exist, such as the deterioration of the public order due to the presence of armed groups and their pressure against public and private activities.

## ***Ecuador***

5.27 The management of resources from the oil industry since the beginning in the early 1970s has been inadequate and politically oriented, turning the collection and allocation of resources into a real labyrinth as years went by. The governments have found in oil revenues an endless supply of resources to meet fiscal needs of any type. In addition, the estimate of revenues for the state budget has considered high prices for oil,<sup>19</sup> in some years bringing the expenses into line with this estimate. This situation is highly risky in times of low prices due to the fiscal deficits that may occur, and at the same time it has not allowed sensible management of the increasing public expenses.

5.28 The management of these resources has become increasingly complicated since the beneficiaries of oil rents have multiplied without a standard distribution pattern. The constant distribution matrix shown in Table 5.11 details the types of share in oil rents according to the type of revenues received by the different beneficiaries. Having this kind of distribution as a starting point, it is very difficult to evaluate the rents that have been received.

5.29 In the case of Ecuador, it is important to state that a significant portion of the rents goes to subsidies for oil derivatives that have not been transparent. With the recent increase in the prices of oil and its derivatives, the net effect of the taxes paid by the consumers and of the implicit subsidies currently in force in the sale of fuels, there is a fiscal cost estimated during the years of this study at over US\$300/year.<sup>20</sup> This figure includes the generalized subsidy to LNG, and lower subsidies such as those for diesel and fuel oil. The only product that is actually collecting taxes is gasoline.

<sup>19</sup> The price used for the state budget is the price of Eastern crude oil, which is the WTI price less a quality differential.

<sup>20</sup> As from a year ago, subsidies have started to be explicitly calculated. Their amount for 2004, a year with exceptionally high prices, exceeds US\$550 million.

5.30 *The use of resources in a decentralized manner*—almost all the Ecuadorian production comes from the Amazon region. In order to promote the development of this region, the ECORAE was established. In Article 4 of the law creating it, it is provided that the sectional agencies must use at least 80 percent of the allocated resources to finance roads and environmental sanitation projects in their corresponding territories; especially those projects included in the Master Plan for the Ecologic Development of the Amazon Region.

**Table 5.5: ECORAE**

“ECORAE was initiated by the inhabitants themselves. It is aimed at generating a space for the participation of all the stakeholders in the definition of policies and strategies aimed at the integrated development of the region, giving priority to the growth needs and the technical solution to the most demanding problems and as a way to overcome the local or particular interests.

Nevertheless, this objective was remarkably diminished due to the dispersion of the stakeholders, the short-term political vision, and the lack of implementation of the proposed targets. So, ECORAE became a short-term management space in charge of small projects.

The recovery of a comprehensive, integrated vision of the six eastern provinces and their 550,000 inhabitants to confront and solve economic, social, political, institutional, environmental, and cultural problems can only result from a commitment of the entire country. A change in the state attitude and the oil companies is needed, but, above all, a consensus in the decisions to be made by the Amazon stakeholders.

Therefore, in order to fulfill its mission, ECORAE considers it necessary to strengthen and adapt its operation to the current and new requirements for the development of the Amazon Region.”

*Source:* ECORAE web site, [www.ecorae.org](http://www.ecorae.org)

5.31 *Other decentralized social means*—Besides the transfers mentioned above, there are other transfers to the local governments, even though information make an analysis is not available. They include:

- Substitutive rents for Napo, Esmeraldas, and Sucumbios—Law 40 provides that these rents “will be used for sustainable development and ecological preservation in order to maintain the biodiversity in the Amazon provinces and for the adoption of policies aimed at offsetting their lesser development and at strengthening the national sovereignty.” No other information is available.
- Law on the Fund for the Development of the Eastern Provinces—Law 122 provides that “the rents obtained by these sectional agencies in compliance with this law will be used exclusively in urban and rural infrastructure works.” No other information is available.

5.32 *Oil Stabilization Fund*—Beginning in 1999, the obligation was established that oil revenues, either unexpected or exceeding those initially expected in the state

budget approved by the National Congress, would make up the Oil Stabilization Fund. Although most of the funds are allocated to FEIREP and investment projects are managed by the central government (such as, construction of the Amazon trunk highway), amounts are also allocated to be fully invested in some provinces.

5.33 Resources from the Oil Stabilization Fund are allocated as follows:

- 45 percent to the Fund for Stabilization, Social and Productive Investment, and Reduction of Public Debt (FEIREP)
- 35 percent to finance the construction of the Amazon Trunk Highway
- 10 percent to finance integrated development projects in the provinces of Esmeraldas, Loja, Carchi, El Oro, and Galápagos. Of this percentage, 30 percent goes to the Fund for Emergency Social Investment (FISE)
- 10 percent to the National Police Force during a five-year period. At least 50 percent must be invested in the Amazon region.

5.34 *Fund for Stabilization, Social and Productive Investment, and Reduction of Public Debt (FEIREP)*. In June 2002 the FEIREP was established under the administration of an international market trustee. The fund's main resources are:

- State revenues from crude oil transported through the Heavy Crude Oil Pipeline (OCP), provided that they do not result from a lower use of the SOTE for light oils
- Budget surplus from the central government
- 45 percent of the amount collected in the Oil Stabilization Fund

5.35 The FEIREP resources are to be used as follows:

- 70 percent to repurchase public foreign debt at market value and for the repayment of the debt with the Ecuadorian Social Security Institute (IESS)
- 20 percent to stabilize oil revenues until reaching 2.5 percent of the GDP and to take care of legally declared emergencies
- 10 percent to promote human development through health and education

5.36 The current administration has clearly defined the oil resources that must be allocated to the FEIREP, stating that any shares in oil under 23 degree API belonging to the state will be allocated to the Fund, regardless of the transportation system used. The table below shows the estimated production of companies producing oil under 23 degrees API for this year and their corresponding contribution to FEIREP.

5.37 Tables 5.6 and 5.7 provide the basis for estimating the revenues for FEP and FEIREP during the 2004–2007 period, based on two scenarios. The first scenario considers a decrease in PETROECUADOR production and moderate investment by private companies. The second scenario considers no decrease in PETROECUADOR's current production and a higher investment by companies. The OCP pipeline started operating in November 2003 and consequently the figures for that year should correspond



to the results achieved in such a short time of operation. Price projection is very conservative: US\$20 per barrel of Napo Crude and US\$24 per barrel of Eastern Crude.

**Table 5.6: Ecuador—FEIREP—Projection Contributions for 2004 of the Main Oil Companies**

<i>Companies</i>	<i>Areas</i>	<i>Quality</i> ° API	<i>Production</i>		<i>Price</i> \$/bbl	<i>Contributions</i>	
			<i>Bbl/day</i>	<i>% part</i>		<i>Mbbl</i>	<i>Mm\$</i>
PERENCO	Bloque 21	17.5	19,827	16.62	20	1,203	21.0
PERENCO	Bloque 7	21.5	4,000	19.22	20	281	4.9
ENCANA	Bloque 14	18.9	4,000	12.50	20	183	3.2
ENCANA	Bloque 17	18.4	4,000	12.50	20	183	3.2
OCCIDENTAL	Bloque 15	18.8	28,156	16.85	20	1,732	30.3
OCCIDENTAL	Limoncocha	22.4	5,304	58.80	20	1,138	19.9
OCCIDENTAL	Eden Yuturi	20.8	50,000	21.55	20	3,933	68.8
REPSOL	Bloque 16	15.0	70,000	23.49	20	6,002	105.0
REPSOL	Bogui Capiron	18.3	6,376	14.73	20	343	6.0
AEC	Tarapoa	22.3	59,045	30.21	20	6,511	113.9
<b>TOTAL</b>						<b>21,506</b>	<b>376</b>

5.38 Of the total fiscal contributions, the state should have received at least US\$253 million for the Oil Stabilization Fund in 2003, considering the extra revenues from the differential in the oil price between the high levels achieved during the year and the prices of US\$24 and US\$18 per barrel for the Eastern and Napo crude oils, respectively, that had been considered in the state budget. However, the state did not increase the amount of the Oil Stabilization Fund during 2003 but proceeded to close the deficits existing in the Fund since 1999.

5.39 It is noteworthy that although according to law the FEIREP should be capitalized with all the state revenues from the transportation of crude oil through the OCP pipeline, provided that the revenues do not result from a lower use of the SOTE.<sup>21</sup> The discussion about whether crude oil owned by the state should be transported or not through the OCP, has been solved in the sense that the state's share in crude oils under 23 degrees must go to FEIREP. Undoubtedly, computed like this, this fund has a direct relationship with the production levels of private companies.

5.40 Considering that 45 percent of the FEP is allocated to FEIREP and that, as a whole, 70 percent of the FEIREP will be aimed at reducing the foreign debt, the state, with this new manner of calculation, could accumulate at least US\$350 million to pay the foreign debt in 2004. If this figure is compared to the foreign debt of the country, which at market value amounts to about US\$4.5 million, an 8 percent reduction would be

<sup>21</sup> For the computation of the FEIREP revenues, an increase in the State's share in the production of companies is considered as of August 2003 (155,000 BPD), deducting the transportation costs and the ECORAE tax.

achieved in the debt this year while, in the period until 2007, the reduction would be 45 percent. Undoubtedly, if the international prices of oil remain at high levels, the funds to be accumulated at the FEIREP will have a very important impact.

**Table 5.7: Ecuador—FEP & FEIREP Capitalization**

	2003	2004	2005	2006	2007	<i>TOTAL</i>
<b>National production (bbl/day)</b>						
Scenario 1	396,636	514,239	501,318	508,058	517,058	
Scenario 2	396,636	530,527	554,132	584,028	588,028	
Eastern						
Crude Price (\$/bbl)	24.00	24.00	24.00	24.00	24.00	
Napo Crude Price (\$/bbl)		20.00	20.00	20.00	20.00	
<b>State share under 23 degree API (bbl/day)</b>						
Scenario 1		58,921	59,459	59,867	61,087	
Scenario 2		58,921	62,187	63,187	63,737	
<b>FEP (Million \$)</b>						
Scenario 1	0	271	240	246	255	<b>1,012</b>
Scenario 2	0	307	325	372	373	<b>1,377</b>
<b>FEIREP Computation (Million \$)</b>						
Scenario						
1(*)	n-d	376.4	379.8	382.4	390.2	<b>1,528.7</b>
Scenario						
2(*)	n-d	376.4	397.2	403.6	407.1	<b>1,584.3</b>
<b>Total FEIREP(**)</b>						
Scenario 1		498.5	487.7	493.3	504.7	<b>1,984.2</b>
Scenario 2		514.6	543.6	570.9	575.0	<b>2,204.0</b>

(\*) According to the new regulations, all the state share in crude oil under 23 degrees is considered.

(\*\*) The total amount capitalized by the FEIREP is equal to the state share in companies producing oil under 23 degrees API and the 45 percent of FEP.

## **Peru**

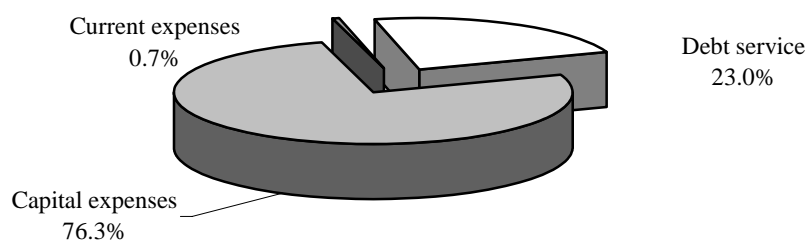
5.41 The analysis of the use of the Canon and Sobrecanon is limited by the lack of information from local governments, since there is no controlled and systematic recording of such information. According to the budget regulations, only beginning in 2003 will such institutions be incorporated into the National Public Budget, and then it will be possible to have a systematic recording of such data. The remarks below are based on information about the regions, which until 2002 received over 50 percent of the Canon and Sobrecanon. These regions are Piura, Tumbes, Loreto, Ucayali, and the province of Puerto Inca (in the Huanuco region).

5.42 In 2002, such departments used, as a whole, 76.3 percent of such resources for capital expenses, 23.0 percent for current expenses, and 0.7 percent for debt service. In the last four years, a positive trend is observed toward higher use of the resources from

the Canon and Sobrecanon to finance capital expenses. In 1998, the percentage aimed at this purpose had been 66.4 percent compared to 76.3 percent in 2002.

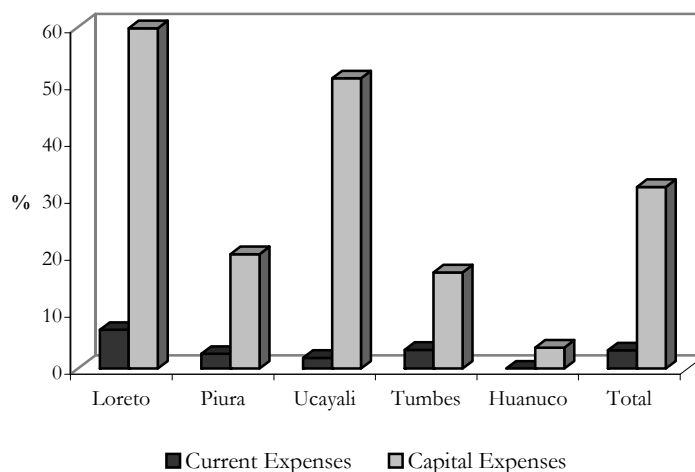
5.43 As for the importance of Canon and Sobrecanon in the funding of the total expenses in such departments, these resources accounted for 10.5 percent of such expenses in 2002; this level has been maintained relatively unchanged in the last three years. As for each department, such participation ranged from a maximum of 20.9 percent in Loreto to a minimum of 0.8 percent in Huanuco.

**Figure 5.2: Peru—Distribution of Canon and Sobrecanon by Expense Types**



Source: Peru Consultant's Report (2003)

**Figure 5.3: Peru—Participation of the Canon and Sobrecanon in the Financing of Departments**



Source: Peru Consultant's Report (2003)

5.44 As for the role of the Canon and Sobrecanon in funding each expense type, it can be seen that the highest participation in funding capital expenses occurs in Loreto, with a 59.8 percent share, while the lowest occurs in Huanuco with 3.8 percent. As for current expenses, the participation ranges from 6.9 percent in Loreto to 0.0 percent in Huanuco.

5.45 Regarding the use of the Canon and Sobrecanon by work types, the Ministry of the Presidency provided the following information:

**Table 5.8: Peru—Destination of the Canon and Sobrecanon Funds (US\$ millions)**

	1995	1996	1997	1998	1999	2000
Road Construction	14.51	0.59	26.65	12.72	19.90	11.88
School Construction	11.54	13.64	11.06	6.52	4.96	5.83
Electrification	1.58	4.18	1.90	0.42	0.57	1.49
Health Care	6.24	4.87	3.82	1.87	2.94	5.28
Social Aid	3.04	2.85	5.30	12.43	2.77	6.38
Agriculture	6.09	2.14	0.58	0.76	1.10	1.63
Other social related projects	7.69	6.23	5.27	4.40	6.57	14.84
<b>Total</b>	<b>50.68</b>	<b>34.49</b>	<b>54.59</b>	<b>39.11</b>	<b>38.82</b>	<b>47.34</b>

5.46 *Case Study in the Piura and Tumbes Regions.* There is a UNDP report titled *Canon as a Source of Funding for Local and Regional Development*, Cuadernos PNUD, Serie Desarrollo Humano, No. 1, April 2002. This work analyzes in detail the use of Canon and Sobrecanon in two of the four Peruvian Regions that receive Canon and Sobrecanon: Piura and Tumbes, respectively.

5.47 The study makes it possible to conclude that in Peru the use of the Canon has a separate accounting, which allows the expenses and investments to which this resource is allocated to be identified. It is noteworthy that in many cases the Canon and Sobrecanon cofinance expenses and investments. The study criticizes how the Oil Canon is being used. The general conclusions on the use of Canon in Piura in the report mentioned above are:

- A high percentage of the Canon is used to finance administrative expenses. In the analyzed period, the Canon was used to finance 35 percent of these expenses in the Transitory Council for Regional Administration (CTAR, currently the Regional Government).
- A high percentage of the Canon is used to finance current expenses. In the analyzed period, the Canon was used to finance 81 percent of these expenses.
- As for capital expenses at the CTAR, it can be seen that in the analyzed period they were financed up to 40 percent by the Oil Canon.
- It has been verified that the CTAR tends to use the Oil Canon to finance current expenses, an item that includes administrative expenses, overhead expenses, and other nonproductive expenses.
- In the analyzed period, the Canon accounts for 15 percent on average of the total investment budget of the provincial municipality, which has its own tax sources.

- The provincial municipality makes discretionary use of the Canon. While from 1996 to 1998, 100 percent of the Canon allocated to investment was used, in 1999 and 2000, this use fell to 35 percent and 71 percent, respectively, and consequently there are unused balances in those years. It is noteworthy that in 1997, 42.6 percent of the Canon was used to repay investment debt.
- At the CTAR and the municipalities, the investments made with Canon resources correspond to general and permanent investment in regional and municipal works, without a specific sense that could make it possible to relate them with their source in the manner of a compensation that should be transformed into assets for strategic development projects.
- At the CTAR, the Canon has substituted the central government transfers for investments. This goes directly against the original sense of the Canon, which expressly stated that in no case should the Canon be used to substitute such transfers.

### **Fairness Criteria for the Distribution of Shares**

5.48 It is important to analyze the methodology in order to know if this rent is fairly distributed among the territorial beneficiaries, that is, if parameters such as GDP, poverty, population, natural and environmental resource base are considered.

5.49 In *Bolivia*, the share in royalties is used with the following criteria:

- The policy of co-participation in the national revenues (Law on Popular Participation, Law on Administrative Decentralization, and Municipalities Law) in order to correct the vertical unbalances among the government levels; and
- The National Compensatory Policy implemented through the Single Fund Directorate (DUF) to coordinate the Funds for Investment and Development (National Fund for Productive and Social Investment [FPS], National Fund for Regional Development [FNDR], and Fund HIPC II based on the foreign debt relief program).

5.50 The fairness criteria in the distribution of funds to each of the municipalities are not clear from the analysis of the available data. It is not known if criteria such as population density, unsatisfied basic needs, or others are considered.

5.51 In *Colombia*, Law 756 set the destination of the funds transferred to the producing departments, municipalities and ports, as well as those allocated to the National Royalties Fund. In the case of producing departments, Article 13 of Law 756 provides that: “as long as the departmental agencies do not achieve the minimum coverage in indicators of infant mortality, basic health and education, and drinking water and sewerage, the corresponding departmental agency must allocate at least 60 percent of its total royalties to such purposes. In the annual budget, the resources from royalties allocated to the sectors mentioned above must be clearly differentiated.”

5.52 Similar provisions are given for producing municipalities and ports, as well as for the National Royalties Fund. Consequently, fairness criteria do exist.

5.53 In *Ecuador*, each of the institutions to which a portion of the oil rents is transferred has criteria set by its creation law. With the information available, it is not possible to define the fairness criteria (if any) at the ECORAE, the “Substitutive Rents for Napo, Esmeraldas, and Sucumbios,” or those related to “Derivatives Exports,” “Communities Support,” or those from “OCP—Community Support.”

5.54 As in the case of Bolivia, “the fairness criteria in the distribution of funds to each of the municipalities are not clear from the analysis of the available data. It is not known if criteria such as population density, unsatisfied basic needs or others are considered.”

5.55 In *Peru*, Oil Canon and SobreCanon are distributed among the regional governments, municipalities, universities, and research institutes, following established criteria for their use. Regarding this, separate, specific accounts are kept that break down the projects where these funds are used.

5.56 Not long ago, the amount of the funds to be distributed was decided according to the population density, which was detrimental, in many cases, to the poor zones with low populations, especially the hydrocarbon-producing zones, which are usually rural zones with wide territories and scarce population.

5.57 Currently, new criteria have been established for the distribution of the natural gas Canon, which could also be applied to the Canon and SobreCanon. However, they are opposed by the towns that are receiving this share because, throughout history, when changes have been made in the Canon or SobreCanon distribution procedures, these changes have allegedly had detrimental effects on these towns. These criteria are:

- Specific allocation for the province where the resource is located, directly benefiting the zone that owns the resource.
- Distribution of the part that goes to the remaining provinces in the department where the resource is located is made on the basis of indicators such as poverty, satisfaction of basic needs, and population density. This is better than the original approach, which only considered population density, and was detrimental for the zone owning the resource, because it usually was a rural zone with a small population.

### **Interpretation of Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries and the Participation of Indigenous Peoples in Oil Rents**

5.58 The International Labor Organization (ILO) provides that the Conventions agreed between countries and executed by them are international juridical instruments. Bolivia, Colombia, Ecuador, and Peru have executed this Convention and thereby they have assumed the commitment and obligation to enforce it, since upon ratification by their Congresses it became a national law. In the case of Convention No. 169 of 1989, ILO states that: “Convention No. 169 is the only international juridical instrument in

force fully concerned with the Indigenous Peoples. It is an International Treaty binding on the signing countries that have ratified it.”

5.59 In the Convention’s text, the obligations of the government and the rights of the indigenous peoples are clearly defined. The Convention provides, among other aspects, that the governments shall:

- Define the groups to which the Convention is applicable based on objective criteria (language, kinship, customs, and such) and the self-identification of the indigenous peoples.
- Ensure that indigenous peoples benefit equally from the rights and opportunities granted to the national community.
- Promote the full realization of the social, economic, and cultural rights of these peoples with respect for their social and cultural identity, their customs and traditions, and their institutions.
- Assist the indigenous peoples to eliminate socioeconomic gaps that may exist between them and other groups of the national community.
- Respect the customs and customary laws of the indigenous peoples when applying national laws, even when imposing criminal penalties.
- Establish adequate means and procedures for consulting indigenous peoples.
- Guarantee that, whenever possible, studies are carried out, in cooperation with the peoples concerned, to assess the social, spiritual, cultural, and environmental impact on them of planned development activities. The results of these studies shall be considered as fundamental criteria for the implementation of these activities.
- Promote the institutions and initiatives of indigenous peoples.

5.60 More specifically, in relation to the sharing of the benefits of oil rents, Article 15 is the most relevant and provides that: “The rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management, and conservation of these resources. In cases in which the State retains the ownership of mineral or sub-surface resources... The peoples concerned shall wherever possible participate in the benefits of such activities, and shall receive fair compensation for any damages which they may sustain as a result of such activities.”

5.61 Only in the case of Colombia do legal regulations exist that directly provide funds to the indigenous communities. In the other countries, the National Consultants’ reports do not provide information on legal regulations aimed at enforcing the provisions of ILO Convention 169.

5.62 In Peru, the distribution of oil rents, or Canon and SobreCanon, is made as a function of the political division of the country (regions, municipalities). Therefore, as communities belong to a given district, they depend on the decisions of local authorities,

unless the territorial limits of the community coincide with those of a district and they have their own municipality. In the case of Camisea, based on the new provisions<sup>22</sup> that could be used as a model in the future, and regardless of what could be received from oil rents via the Canon allocated to the districts, a fund has been created with contributions from the IDB, the state, and the companies. Its objective is to help, upon elaboration of a project portfolio, to develop indigenous communities within the provisions of Convention 169. In addition, the companies, as a compensation for the use of indigenous lands, have also developed project portfolios for the use of such funds.

5.63 So, in relation to the enforcement of Convention 169, the following questions are relevant:

- Based on what criteria can these benefits be estimated? Is it possible to consider that those benefits must become the tool for implementing development plans aimed at generating jobs and avoiding the migration of indigenous youth and the subsequent disappearance of certain peoples in the medium term?
- Regarding the departmental and municipal royalties, what is the importance of planning and, above all, of coordination of all the details so that efforts will not be duplicated and groundless expectations will not be created?

5.64 The information from the consultants gives partial data on this particular issue.

- In *Bolivia*, the consultant's report states that: "The regulation has no specific requirements on the distribution of oil rents within a department or among ethnic groups or any other distribution criteria. The regulation does not provide either control or audit mechanisms for the expenses made."
- In *Ecuador*, the consultant's report states that: "There is no special transfer of oil rents directly allocated to communities in the zone where the resource is located. Nevertheless, there are funds to provide support to the communities, mainly as donations and works. Both PETROECUADOR and the private companies engaged in the exploration and exploitation of hydrocarbons constantly contribute with their resources to different community support activities in the influence zones of their operations."

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<sup>22</sup> In September 2003, Law 28077 was enacted (amending Canon Law 27056). In Article 5 it provides that 10 percent of the total collected oil rents will be allocated to the local governments of the district municipality or municipalities where the natural resource is located. Law 28077 substitutes the former methodology that included these zones as just others within the department and consequently were subject to a distribution based on their population density, which was detrimental for the usually wide and little populated producing zones. The Law now provides that "Canon shall be distributed among the regional and local governments according to the distribution indicators set by the Ministry of Economy and Finance based on population and poverty criteria linked to the unsatisfied basic needs and infrastructure deficit." Nevertheless, since this Law has been just recently enacted, the consultant does not provide additional information to show that the regulations for the enforcement of the Law have been implemented. The Regulations of this Law do not appear at the Ministry of Energy and Mines web site.



This support, mainly in the form of donations and works, corresponds to the payment of indemnifications and social compensations.”

- In *Colombia*, a direct allocation exists as previously analyzed in this chapter.
- In *Peru*, the consultant’s report only states that CAREC training funds exist. These funds do not have as beneficiaries, in principle, the indigenous communities, since they are aimed at research and training activities in the hydrocarbon subsector, in which students and professionals linked to the hydrocarbon industry in Peru take part. Nevertheless, currently representatives of the indigenous peoples are taking part in training activities on environmental issues and supervision, in order to know their rights and obligations related to oil-producing activities. An example of this is the support provided to indigenous community leaders for their attendance and active participation in tripartite dialogs promoted by EAP and other international events, where these issues have been discussed and where they can exchange opinions with indigenous representatives from other countries.

### **New Legal Provisions for the Elaboration of Participative Budgets and Transparency in Information**

5.65 Currently, different countries in the region are preparing different approaches that are aimed at obtaining higher and better levels of transparency and participation in the formulation and implementation of the budgets from the central government and regional and local governments.

5.66 A good example is the Peruvian case. Law 27086 on Information Transparency and Accessibility enacted in 2002 (similar laws could exist in the analyzed countries but we have no information available). This Law regulates the right of the citizens to be informed on the activities of the public agencies, including the Budget of the Republic. This information is published on the web site of the Ministry of Economy and Finance, so that any citizen can have access to it.

5.67 Moreover, Law 28056 enacted on July 15, 2003, Framework Law for Participative Budget, provides that the budget is a mechanism for a fair, rational, efficient, cost-effective, and transparent allocation of public resources aimed at strengthening the state-civil society relationship.

*Article 1*—to do this, the regional and local government must promote the development of *means and strategies to promote participation in the planning of their budgets*, as well as the surveillance and supervision of the management of public resources.

*Article 2*—This Law is aimed at establishing a provision that will guarantee effective participation of the civil society in the participative planning of the budget, *which must be carried out in accordance with the agreed development plans of the regional and local governments, as well as the supervision of the management.*

*Article 3*—The Law tries to include the expectations and needs of the society in the budgets and promote their implementation through priority programs and projects, so that they can meet the strategic objectives of integrated and sustainable human development. Likewise, it tries to optimize the use of resources through an adequate social control of public activities.

*Article 9*—The Law provides surveillance means for the participative budget, which must allow *access to public information*, accountability, and capacity development.

*Article 10*—the regional and local governments are bound to use the means they have available to *provide adequate and timely information to the citizens about the process of participative planning of the budget and about the implementation of public expenses*.

*Article 11*—the heads of the regional and local governments are bound to explain periodically to the participative budget committees the progress in the resolutions adopted during the participative planning, as well as in the total budget of the governments.

*Article 12*—The Ministry of Economy and Finance, through the National Budget Directorate, in coordination with the regional and local governments, plans and implements training activities aimed at those taking part in the participative budget in order to improve their capacities for participative planning and surveillance.

## **Preliminary Conclusions**

5.68 The actual use of oil rents has not been subject to comprehensive analyses in the countries under study. In principle, the use of oil rents should not bypass the priorities included in the development plan of the country in general and the region in particular. In most cases, laws and regulations give priority to investment rather than current expenses, which should result in medium and long-term plans. However, in practice, these plans do not exist or are very general and consequently priorities for investment in new infrastructure are not defined. Moreover, it is critical to implement effective control systems.

5.69 In *Bolivia*, the legal regulations provide that prefectures and municipalities must use 85 percent of their fiscal transfers in investments and up to 15 percent in current expenses. However, although this regulation is in force at the general level, there is no specific regulation on the local fiscal expense, because this is how the participation of the local population in prefectures, municipalities, departmental councils, municipal councils, surveillance councils and other local supervision mechanisms is implemented.

5.70 In *Bolivia*, oil rents transferred to prefectures and municipalities get mixed with other sources of departmental and municipal resources. Therefore, it is not possible to establish a correspondence between sources and uses of oil rents. It is not possible either to determine the effectiveness and efficiency in the use of resources generated by the upstream activities in the hydrocarbon industry, except that they are managed in the same manner as resources from any other sources.

5.71 In order to solve the effectiveness and efficiency problem, Institutional Adjustment Programs (PAI) have recently been elaborated for the municipal governments and the same will be done with the departmental prefectures. The PAI will provide institutional and financial information about the management and results obtained by the municipal governments, making it possible to have indicators determining the situation and allowing the formulation of alternatives to improve municipal management. Moreover, those municipal governments that execute a PAI Agreement will have access to additional financial resources.

5.72 In *Colombia*, legal regulations establish how the royalties are used in departments and municipalities, considering that the bulk of resources must be used to invest in priority projects included in the general development plan of the department or in the development plans of the municipalities.

5.73 There are legal provisions that regulate the use of royalties in: 1) producing departments; 2) producing municipalities; 3) producing ports. In all these cases, the regulations provide that most of the royalties, usually over 90 percent, must be used in investment expenses, 5 percent in technical supervision for the projects being implemented with these resources, and 5 percent in operation expenses.

5.74 In the case of National Royalties Fund (which receives 32 percent of the collected royalties), the funds are allocated according to an established pattern. In Colombia, the law sets the criteria that the National Royalties Committee must consider to allocate funds. So, it provides that besides the criteria mentioned above in relation to a specific use, the following aspects must be considered: regional balance based on the National Index for Unfulfilled Needs (NBI); harmonic development of the country and the different regions; environmental, social, and economic impact of the projects; effects caused on the territorial agency as a consequence of the exploration, transportation, management, and shipping of natural resources; funding of regional development plans; and population density.

5.75 In Colombia, a number of studies exist about the use of oil rents. The employed methodologies can serve as the basis for studies in other countries.

5.76 In *Ecuador*, the management of resources from the oil industry since the beginning in the early 1970s has been inadequate and politically oriented. The governments have found in oil revenues an endless supply of resources to meet fiscal needs of any type.

5.77 The classification of oil revenues includes 30 alleged sources of revenues. From their analysis, it is concluded that they could be reduced to just eight actual sources according to the type of agreement, activity of PETROPRODUCCION, derivatives export, domestic sale, and transportation. The reason for this wide classification is the wide earmarking legally established throughout the years, even maintaining items that do not correspond to the current reality.

5.78 As for the decentralized use of resources, the amount distributed in 2002 reached US\$93 million, which is a small figure considering the total amount collected as oil rents. The largest amount is transferred to ECORAE (63 percent of the total amount in 2003). The law governing this agency provides that the sectional agencies must use at

least 80 percent of the allocated resources in financing roads and environmental sanitation projects in their corresponding territories, especially those included in the Master Plan for the Ecological Development of the Amazon Region. Nevertheless, there is no detailed information on the use of these resources.

5.79 Then comes Law 122 (Funds for the Development of the Eastern Provinces of Sucumbios, Napo, Morona Santiago and Zamora Chinchipe) with 7.5 percent of the total amount in 2003. The Law provides that the rents transferred to these sectional agencies must be used exclusively in urban and rural infrastructure works. The funds come from the tax imposed on the total amount invoiced to PETROECUADOR or its affiliate companies by service companies, either local or foreign, 2.5 percent and 4.5 percent tax, respectively, within the jurisdiction of each Amazon province.

5.80 In *Peru*, Oil Canon and SobreCanon are mostly used to finance capital expenses in hydrocarbon-producing regions. In 2002, such regions used, as a whole, 76.3 percent of the expenses made with such resources to finance capital expenses, 23.0 percent to finance current expenses, and 0.7 percent to finance debt service. In the last four years, a positive trend is observed toward higher use of the resources from Canon and SobreCanon to finance capital expenses. In 1998, the percentage for this purpose was 66.4 percent compared to 76.3 percent in 2002.

5.81 The analysis of the use of the Canon and SobreCanon is limited by the lack of information from local governments, since there is no controlled and systematic recording of such information. According to the budget regulations, starting only from 2003 such institutions will be incorporated into the National Public Budget, and then it will be possible to have a systematic recording of such data.

5.82 Nevertheless, it must be said that in *Peru* the regional and local governments keep separate accounts on the use of Canon and SobreCanon, which allows identifying the expenses and investments in which they are used if specific studies are to be made. It is noteworthy that in many cases the Canon and SobreCanon cofinance expenses and investments together with the transfers from the central government and the own resources of the regional and local governments.

5.83 As for the importance of the Canon and SobreCanon in the financing of total expenses in such departments, these resources accounted for 10.5 percent of such expenses in 2002; this level has remained relatively unchanged in the last three years. As for each department, such participation ranged from a maximum of 20.9 percent in Loreto to a minimum of 0.8 percent in Huanuco.

5.84 A study on the use of Canon and SobreCanon in the regions of Piura and Tumbes (one of the few studies on this subject in the country) found that, although the larger absolute amounts finance investment expenses, the use of the Canon and SobreCanon resources to finance current expenses has a high proportion.

5.85 These countries do not have a homogeneous methodology for the distribution of oil rents with fairness criteria that is, taking into account parameters such as contribution to the GDP, poverty levels, population levels, natural resource base, and environment preservation.

- In *Bolivia*, the transferred royalties are used according to different national laws (Law on Popular Participation, Law on Administrative Decentralization, and Municipalities Law) and other legal provisions. The consultant has not detailed the distribution criteria provided by law and consequently it is not known if criteria such as population density, unsatisfied basic needs, and others are considered.
- In *Colombia*, fairness criteria are considered in a very explicit manner. Law 756 sets the amounts to be distributed in a decentralized manner. In the case of producing departments, Law 756 provides that as long as minimum coverage levels are not achieved in relation to indicators such as infant mortality, basic coverage in health and education, drinking water and sewerage, at least 60 percent of the total royalties must be allocated to such purposes.
- In *Ecuador*, with the available information, it is not possible to determine the fairness criteria.
- In *Peru*, not long ago, the size of the funds to be distributed was decided according to the population density, which was detrimental, in many cases, to the poor zones with little population, especially the hydrocarbon-producing zones, which are usually rural zones with wide territories and scarce population. Currently, new criteria have been established for the distribution of the natural gas Canon, which could also be applied to the Oil Canon and Sobrecanon. These criteria consider a specific transfer to the province where the resource is located, directly benefiting thereby the zone that owns the resource. The distribution of the resources that go to the remaining provinces is made according to indicators such as poverty, satisfaction of basic needs, and population density. This is better than the original approach, which only considered population density.

5.86 *ILO Convention 169* is an international juridical tool in force that clearly states the rights of the indigenous peoples and the obligations of the governments. It is an international treaty legally binding all the signing countries that have ratified it, including Bolivia, Colombia, Ecuador, and Peru.

5.87 The Convention explicitly states that the indigenous peoples have the right to participate in the use, management, and preservation of resources developed in their territories. The interested peoples must participate, as far as possible, in the benefits resulting from such activities and receive a fair indemnification for any damages generated by such activities.

5.88 Only in Colombia do legal provisions exist that allocate funds directly to the indigenous communities. In the other countries, the reports from national consultants do not provide information about legal regulations aimed at enforcing the provisions in *ILO Convention 169*.

5.89 In Ecuador, funds are allocated to support communities, including indigenous communities. However, these funds do not come from a law but from contributions made by the private exploration and exploitation companies to several

community support activities in the influence zones of their operations. This support, mainly in the form of donations and works, corresponds to the payment of indemnifications and social compensations.

5.90 In Peru, the new Canon Law (Law 28077) provides that 10 percent of the amount collected as oil rents must be allocated to the district municipality or municipalities where the natural resource is located. This provision is very important for the development of the indigenous peoples. On the other hand, in the case of Camisea, besides the provisions in the new Canon Law, a fund has been established with the contributions of the IDB, the state, and the companies. This fund will be used to elaborate and implement a portfolio of projects. So, the development of indigenous communities will be promoted as provided by ILO Convention 169.



## Bibliography

- Andersen y Meza. *The Natural Gas Sector in Bolivia: An Overview*. Universidad Católica Boliviana, Instituto de Investigaciones Socio-Económicas, Bolivia, 2001.
- Arango, Raúl y Sánchez. *Los pueblos indígenas de Colombia en el umbral del nuevo milenio*. Departamento Nacional de Planeación. Republica de Colombia, 2004.
- Ardaya, Rubén. *Bolivia: La necesaria evaluación del desempeño municipal*. VIII Foro Descentralista, Lima, 2004.
- Banco Mundial. *Bolivia—Manejo de los Ingresos Fiscales Provenientes de la Exportación de Gas Natural - Draft - September 2004*.
- Barja, Mover. *Distribución de la Renta petrolera generada por el Upstream: El caso de Bolivia*, draft. Octubre 2003.
- Censo Nacional de Bolivia, 2001.
- Censo Nacional de Ecuador, 2001.
- Colombia, Departamento Nacional de Planeación. *Análisis comparativo de la distribución de los recursos del Fondo Nacional de Regalías por categorías de desarrollo municipal y departamental y por niveles de pobreza 1998–2000*. Documentos para el Desarrollo Territorial no. 40, Bogotá, Diciembre 2000.
- Conrad, Jon M.; Clark, Colin W. *Natural Resource Economics: Notes and Problems*, Cambridge University Press, 1995.
- Davis J. M., Ossowski R., and Fedelino A. *Formulation and Implementation of Fiscal Policies in Oil Producing Countries*. IMF, Washington DC (USA), 2003.
- Davy A., McPhail K., Sandoval F. *BPXC's Operations in Casanare, Colombia: An Evaluation of the Social Concerns Taking into Account the Development Decisions*. In draft. World Bank, Washington DC, USA), 1998.
- Dammert, Manuel. *El Canon como fuente de financiamiento para el desarrollo regional y local*. Cuadernos PNUD, Serie Desarrollo Humano, Lima, Abril, 2002.
- ECOPETROL. Régimen de Regalías de Hidrocarburos. Dirección de Relaciones Externas, Bogotá, 2000
- Encuesta Nacional de Hogares del Perú, 2001.
- ESMAP. Banco Mundial. *Capacitación de pueblos indígenas en la actividad petrolera: La experiencia Boliviana*. Report 244/01. Setiembre 2001.
- Banco Mundial. *Perú—Reforma y Privatización en el Sector Hidrocarburos*, Report 216/99SP, Julio 1999.
- Banco Mundial.: *EAP—Estudio Comparativo sobre la Distribución de la Renta Petrolera*, Technical Paper 020. Febrero 2002.



Gaviria A. y Zapata, Juan González. *Assessment of the Economic and Social Impact from Oil-Related Activities in the Department of Casanare 1985-2000*. Documento de FEDESARROLLO (Colombia), 2001.

Glave, Manuel y Kuramoto, Juana. *Minería, Minerales y Desarrollo Sustentable en Perú*, en *Minería, Minerales y Desarrollo Sustentable en América del Sur*, CIPMA—IDRC/MPRI, Santiago de Chile, 2002.

Kuramoto, Juana. *Las aglomeraciones productivas alrededor de la minería: El caso de Minera Yanacocha S.A.* GRADE, Lima, 2000.

Kuramoto, Juana y Silva, Alfredo. *Canon Minero y descentralización*, Ediciones Labor, Lima. Diciembre 2002.

León, Guadalupe. *¿Etnicidad, pobreza y exclusión de los indígenas inmigrantes en Quito, Guayaquil y Tena?*, en *Exclusión social y estrategia de vida de los indígenas urbanos en Perú, México y Ecuador*. Jorge Uquillas, Tania Carrasco y Martha Rees editores. Banco Mundial, 2003.

Lozano, Ignacio. *Las transferencias intergubernamentales y el gasto local en Colombia*. Banco República, Bogotá, agosto, 1998.

Manco Zaconetti, Jorge. *Globalización Capital-Trabajo: Minería*. Universidad Nacional Mayor de San Marcos, Lima, Noviembre, 2003.

Mayorga Alba, Eleodoro. *Ecuador: Nota de Política Petrolera—in An Economic and Social Agenda for the new Millenium*. Washington D.C., May 2003

Mora, Carlos y Zarzar, Alonso. *¿Comunidades Nativas en la Amazonía Peruana?*, en *Amazonía Peruana: Comunidades Indígenas, Conocimientos y Tierras Tituladas*. Atlas y Base de Datos. GEF/PNUD/UNOPS. Lima, Perú, 1997.

Moreno Badillo, Lira. *Descentralización en el Ecuador*, en *Consejo Nacional de Modernización del Estado del Ecuador*, Quito, 2003.

Paris, Edga. *Actualización del Estudio sobre la Distribución de la Renta Petrolera en Colombia*. Septiembre 2003.

Pasco-Font, Alberto. *Gran minería y la comunidad*. Documento de Trabajo No. 27, mimeo, GRADE, Lima, 1999.

Pérez, Luis. *Estudio de la Distribución de la Renta petrolera en el Perú*. Octubre 2003.

Prud'homme, Rémy & Shah, Anwar. *Centralization v. Decentralization: The Devil is in the Details*. presentado al Seminario de Minas Gerais (completar), 2002.

Tratado de Cooperación Amazónico. *Amazonía sin Mitos*. Comisión Amazónica de Desarrollo y Medio Ambiente. Editorial Oveja Negra. Colombia, 1994.

Velásquez, Fabio. *Colombia: ¿De regreso a un esquema centralista?*. VIII Foro Descentralista, Grupo Propuesta, 29 y 30 de marzo del 2004, Lima, 2004.

Wood Mackenzie. *Global Oil and Gas: Risks and Rewards*. Economics Benchmarking Study. February 2002.

Yépez, Horacio. *Estudio sobre la Distribucion de la Renta Petrolera: Ecuador*. Diciembre 2003.

Zapata, Juan Gonzalo, Arregocés Alejandro. *Planning the Development of Municipalities with Booms of Nonrenewable Natural Resources*. Fundación para la Educación y el Desarrollo- Colombia, January 2001.

Zarzar, Alonso. *Tras las huellas de un antiguo presente*. Serie Documentos de Trabajo # 3. Defensoría del Pueblo del Perú. Lima, Perú, 2000.

## **Government Sources**

### **Bolivia**

Ministry of Foreign Trade and Investment

Ministry of Mining and Hydrocarbons

UDAPE Economic Planning Unit.

YPFB

### **Colombia**

National Planning Department (2000).

ECOPETROL: [www.ecopetrol.com.co](http://www.ecopetrol.com.co)

Ministry of Energy and Mines: [www.minminas.gov.co](http://www.minminas.gov.co)

### **Ecuador**

Central Bank of Ecuador

National Council for State Modernization

Institute for the Ecologic Development of the Amazon Region in Ecuador, ECORAE:  
[www.ecorae.org](http://www.ecorae.org)

Ministry of Energy and Mines of: [www.menergia.gov.ec](http://www.menergia.gov.ec)

Heavy Crude Oil Pipeline: [ocpecuador.com](http://ocpecuador.com)

Petroecuador: [www.petroecuador.cpm](http://www.petroecuador.cpm)

### **Peru**

Ministry of Energy and Mines: [www.minem.gob.pe](http://www.minem.gob.pe)

Perupetro: [www.perupetro.com](http://www.perupetro.com)

Petroperú: [www.petroperu.com](http://www.petroperu.com)

## **Other Sources of Information**

World Bank. *EAP—Estudio Comparativo sobre la Distribución de la Renta Petrolera*. ESMAP Technical Paper No. 020, February 2002.

Argentine Newspaper “Página Digital”. June 28, 2003.

<http://www.paginadigital.com.ar/articulos/2003/2003quint/noticias8/1110227-6.asp>

World Economic Forum at Davos: [www.weforum.org](http://www.weforum.org)

Regional Report: Mining, Minerals and Sustainable Development in South America. (Web site “Minería, Minerales y Desarrollo Sustentable.” <http://www.mmsd-la.org/informes/index.html>).

Extractive Industries Transparency Initiative (EITI): [www.eitransparency.org](http://www.eitransparency.org)

Latinobarómetro: [www.latinobarometro.org](http://www.latinobarometro.org)

OLADE: [www.olade.org.ec](http://www.olade.org.ec)

US Energy Information Administration: [www.eia.doe.gov](http://www.eia.doe.gov)

Transparency International: [www.transparency.org](http://www.transparency.org)

# Annex 1

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## The Energy, Environment and Population Program

A1.1 The Energy, Environment and Population Program (EAP)<sup>23</sup> is an initiative launched in 1999 by the governments, local and regional indigenous organizations, the oil industry, and international funding and cooperation agencies in response to the challenge of developing a hydrocarbon industry compatible with the basic objectives of sustainable development in the Sub-Andean Basin.

A1.2 The establishment and execution of the EAP Program was possible due to the active participation of the different involved stakeholders: governments, indigenous peoples, and oil industry, as well as the different supporting organizations that have collaborated in an unconditional manner with the development of the project. These institutions include the Latin American Organization for Energy (OLADE), the World Bank, the Coordinating Organization of the Indigenous Organizations in the Amazon Basin (COICA), and the Regional Association of Oil and Gas Companies from Latin America and the Caribbean (ARPEL).

A1.3 The EAP Program has received contributions from the Carl Duisberg Gesellschaft Foundation, the Andean Corporation for Development, the University of Calgary, the Inter-American Development Bank, the Canadian International Development Agency, ECOPETROL, and the Committee for Management of Training Resources (CAREC), Peru.

A1.4 Its main objective is to improve the relationship among the different stakeholders: government, industry, and indigenous peoples, in order to create the conditions that will make it possible to continue developing the oil industry in the Amazon Basin in a manner compatible with sustainable development principles. The tripartite dialog has allowed the advance of the EAP Program, which has the following working areas: information, regulations, and training. Moreover, in the tripartite meetings the terms of reference for specific studies of common interest have been established.

A1.5 In May 2002, the Fourth Tripartite Meeting of the Program was held in the city of Cusco, Peru. In this meeting a first report was presented on the distribution of oil rents in four countries: Bolivia, Colombia, Ecuador, and Peru. In November 2002, the Fifth Tripartite Meeting was held in Iquitos, Peru, together with two successive meetings:

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<sup>23</sup> To obtain more information on the EAP Program, please visit its web site at <http://www.olade.org.ec/redeap>

the Third Training Module, with which the first training stage at EAP was completed, and a workshop for reviewing the reference documents on regulation. Proposals were discussed on how to continue the training, improving the information systems, and new activities.

A1.6 In October 2003, the Sixth Tripartite Meeting was held in Quito, Ecuador. The purpose of this meeting was to continue the tripartite dialog that had been started and to review the work done in each of the different subjects dealt with by the EAP: information, regulations, training, rents distribution, social and environmental monitoring, as well as the benefits received by the different stakeholders. In the meeting, proposals were analyzed for a new approach to the EAP Program, according to the criteria of each stakeholder. In this meeting, the writing of the document *Framework for Regulation* was completed and the terms of reference for this comparative study on oil rents distribution were agreed.

A1.7 In January 2004, the indigenous organizations grouped in COICA decided to get off the program temporarily, stating that their fight for the recognition of their ancestral rights and territoriality were not considered highly enough by the members of the Program. Later, in conversations with OLADE and upon confirming the interest in continuing in the Program expressed by the companies that are members of ARPEL, COICA has made it known that after its meeting in late July 2004, it is interested in changing the format of the tripartite dialogs so that more concrete issues are dealt with, especially those related to the compensation of the indigenous peoples and their participation in oil rents.

# Annex 2

## Hydrocarbon Operations and the Habitat of Indigenous Peoples

Figure A2.1: Colombia—Areas of Hydrocarbon Operations

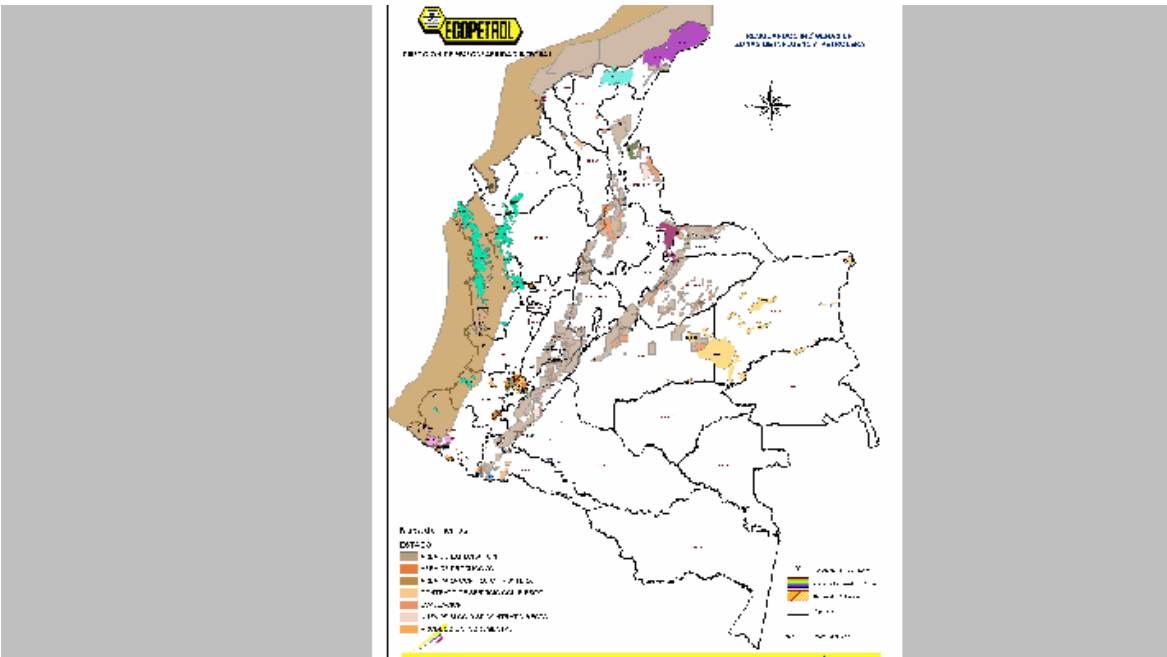


Figure A2.2: Colombia—Indigenous Territories

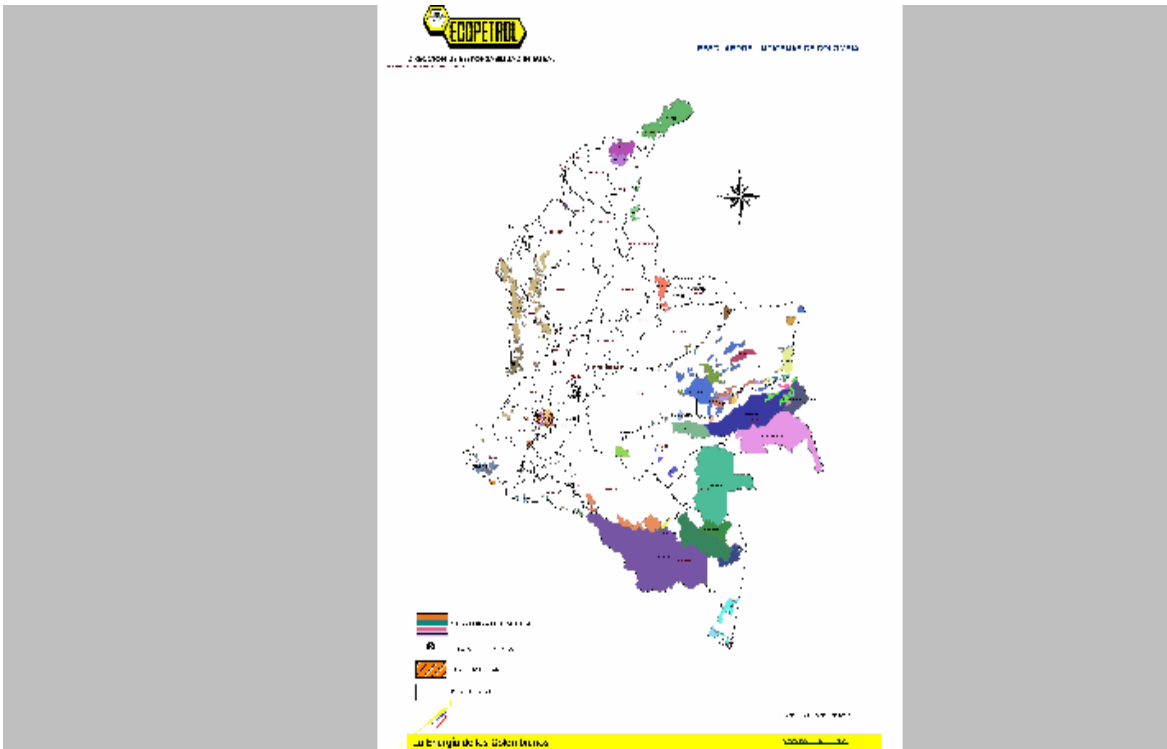


Figure A2.3: Bolivia—Areas of Oil Exploration and Exploitation and Indigenous Territories

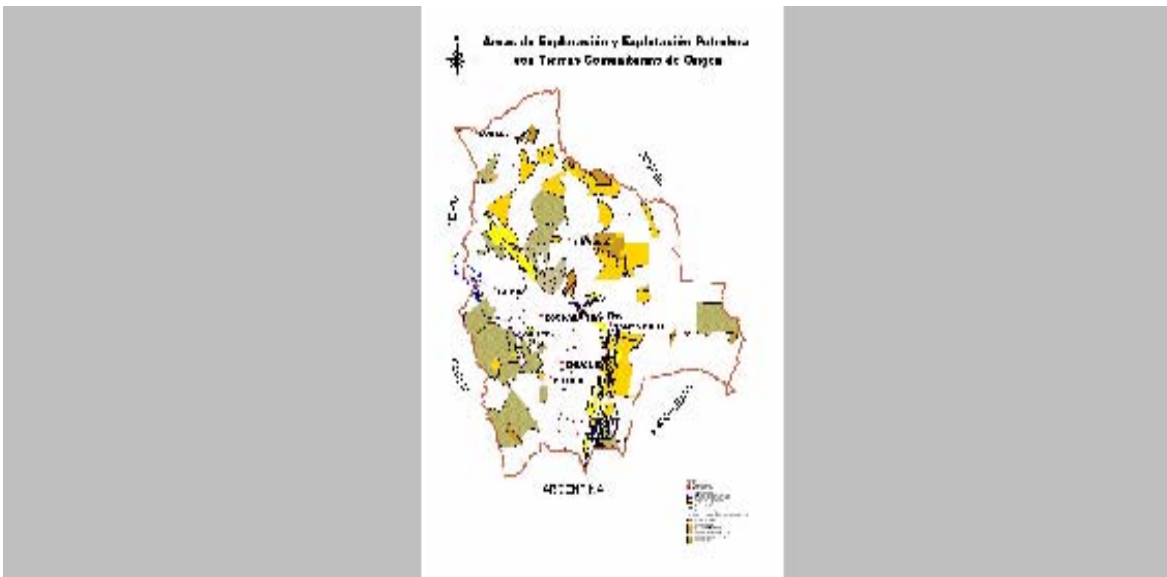
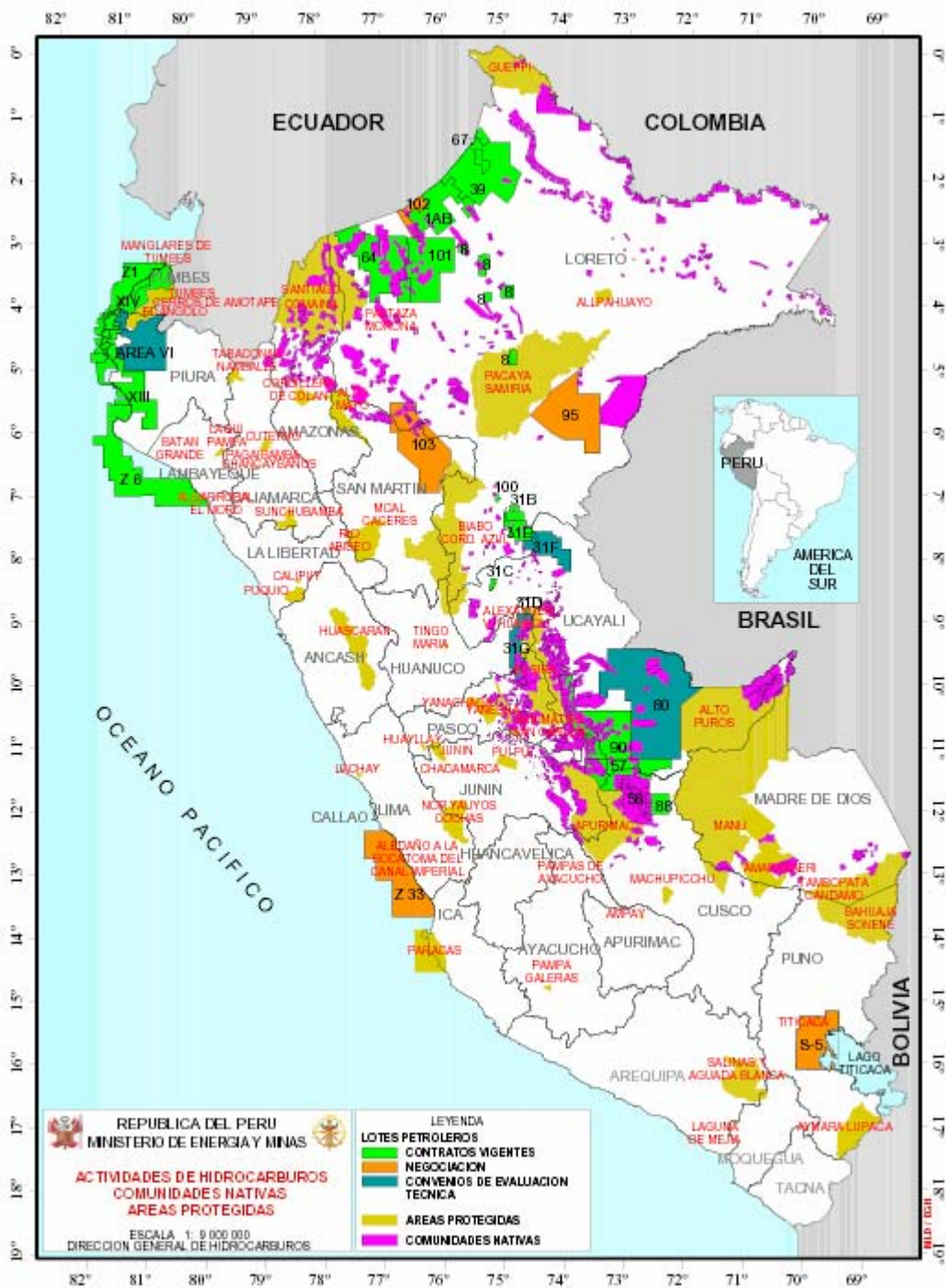


Figure A2.4: Perú—Areas of Oil Operations and Native Communities







# Annex 3

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## Legal Regulations Establishing Royalties and Participations

### Bolivia

#### *Law 1689—Chapter ii: Royalties*

**Article 50.** YPFB participation and the corresponding royalties referred to in subparagraph e) Article 18 hereof, shall be as follows:

1. A departmental participation called royalty, equal to 11 percent of the gross hydrocarbon production at the wellhead, payable to the department where production is originated.
2. A national compensatory royalty of 1 percent of the gross hydrocarbon production at the wellhead, payable to the departments of Beni and Pando, according to the provisions of Law 981 dated March 7, 1998.
3. Participation in favor of YPFB equal to 6 percent of the gross hydrocarbon production at the wellhead, to be transferred to the National Treasury after deducting the amount needed to cover the budget for agreement administration approved by YPFB.

The producing departments and the Departments of Beni and Pando shall receive the departmental royalties and the national compensatory royalties, respectively, in U.S. dollars or the equivalent in local currency, according to the following valuation criteria:

- a) The wellhead oil prices:
  - i) For sales in the domestic market, shall be based on the reference prices of an international market basket of oils with quality and features similar to those of Bolivian oil, adjustable by quality criteria
  - ii) For export, shall be the actual export prices adjustable by quality criteria.
- b) The natural gas price shall be the weighted average price for export and for domestic market sales, adjustable by quality criteria.
- c) The only deduction to the value of products computed as referred to in subparagraphs a) and b) shall be the weighted average of the transportation fees in the

Bolivian pipelines, which shall remain at their current values until the production of hydrocarbons, in barrel equivalents, increases 10 percent over the production in 1995. From that moment, the Superintendent for Hydrocarbons at the Sector Regulation System (SIRESE) shall be responsible for regulating the corresponding fees.

In order to calculate the payments of:

- a) The YPFB participation according to paragraph 3 hereof,
- b) The National Complementary Royalties,
- c) The national participation according to subparagraph b)1 of Article 72, and
- d) The participation according to subparagraph a) 3 of Article 77,

The wellhead value of hydrocarbons shall be the international market value as determined in the exportation or domestic commercialization place, upon deduction of the transportation fee from the wellhead to the export or domestic commercialization place, respectively.

**Article 51.** A National Complementary Royalty is established on the Production of Existing Hydrocarbons equal to 13 percent of the value of the supervised production of existing hydrocarbons, which shall be computed and paid every month directly to the National Treasury by the producers.

**Article 52.** The patents and royalties system during the term of the joint venture agreements for the exploration, exploitation, and marketing of hydrocarbons shall remain unchanged.

## **Colombia**

**Constitution, Article 360**—the law shall define the condition for the exploitation of natural nonrenewable resources, as well as the rights that the territorial agencies have to them.

The exploitation of a natural nonrenewable resource shall result in an economic consideration in favor of the state in the manner of a royalty, without prejudice of any other rights or compensations to be agreed.

The departments or municipalities in whose territories the exploitation of natural nonrenewable resources is carried out, as well as the sea and river ports through which such resources or derivatives thereof are transported shall have the right to participate in the royalties and compensations.

**Article 361.** With the revenues from those royalties that are not allocated to the departments and municipalities, a National Royalties Fund shall be created, the resources of which shall be allocated to territorial agencies as provided by law. This fund shall be used for the promotion of mining, the preservation of the environment, and the financing of regional investment projects defined as priority projects in the development plans of the corresponding territorial agencies.

## Ecuador

**Hydrocarbons Law, Article 49<sup>24</sup>**—The state shall receive every month a royalty not below 12.5 percent on the gross production of crude oil measured at the storage tanks of the collection centers after separating water and foreign material, provided that the average monthly production of the corresponding month does not reach 30,000 barrels per day. The royalty shall increase until a minimum of 14 percent when the average production in a month reaches 30,000 barrels per day, and provided that it does not reach 60,000 barrels per day. It shall increase until a minimum of 18.5 percent when the average production for the month reaches 60,000 barrels per day or more.

The royalty percentages mentioned above shall be applied to the aggregate production of each company and its affiliate companies, subsidiary companies, and associated companies, as well as to the production of consortiums and de facto partnerships.

For the gas from free gas deposits and the products obtained thereof, a minimum royalty of 16 percent shall be paid every month. The measurement methods and impurities tolerances shall be defined in the regulations.

In the service agreements for exploration and exploitation of hydrocarbons, the contractors as operators of PETROECUADOR shall not be subject to the payment of royalties. Since all the production from the contractual area is owned by PETROECUADOR, it shall give to the National Treasury a percentage of the net production equal to the royalties in force.

In the joint venture agreements for exploration and exploitation of hydrocarbons, from the participation of the state in the production in the contractual area, a percentage equal to royalties corresponding to the beneficiaries shall be transferred.

## Peru

**Constitution. Article 77—Law 26221, Hydrocarbons Law**—the economic and financial management of the state is governed by the budget annually approved by the Congress. The structure of the public sector budget has two sections: central government and decentralized agencies.

The budget fairly allocates the public resources; their programming and implementation answer to criteria of efficiency in the satisfaction of basic social needs and decentralization.

The corresponding territorial agencies shall receive according to law an adequate participation (Canon) in the total revenues and rents obtained by the state through the exploitation of the natural resources in each zone.

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<sup>24</sup> It includes an article reformed by Law no. 101, published in Official Registry 306 August 13, 1982, and also the final interjection added by Law no. 44, published in Official Registry 326 of November 29, 1993.



# ANNEX 4

## Spreadsheets

### Bolivia

<i>Reserves / Production</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Oil and Condensates Reserves (proved and probable) (in MMB)	217.0	241.0	692.0	892.0	929.0	957.0
Natural Gas Reserves (proved and probable) (in trillions PC)	7.0	9.0	32.0	47.0	52.0	55.0
Oil Production (in thousands B/day)	38.0	33.0	31.0	36.0	36.0	38.0
Natural Gas Production (in MM PCD)	520.0	484.0	550.0	692.0	861.0	952.0
<b>1: Value of Upstream Oil Rent US\$ millions</b>	<b>135.9</b>	<b>120.8</b>	<b>203.8</b>	<b>231.6</b>	<b>198.8</b>	<b>253.5</b>
<b>Total Royalties</b>	<b>115.2</b>	<b>99.7</b>	<b>180.1</b>	<b>187.7</b>	<b>172.7</b>	<b>219.3</b>
Departmental royalties	34.8	34.0	82.2	71.9	68.1	97.0
Treasury Royalties	80.4	65.7	97.9	115.8	104.6	122.3
<b>Patents and penalties</b>	<b>12.7</b>	<b>13.9</b>	<b>14.6</b>	<b>20.1</b>	<b>16.8</b>	<b>21.9</b>
Income tax IUE						
Bolivianos. millions	16,708.0	22,901.0	25,782.0	112,047.0	42,930.0	31,575.0
US\$ millions	3.0	3.9	4.2	16.9	6.0	4.1
Income tax IUE RE						
Bolivianos. millions	27,323.0	18,774.0	30,433.0	45,570.0	23,601.0	63,065.0
US\$ millions	5.0	3.2	4.9	6.9	3.3	8.2
<b>Total income tax US\$ millions</b>	<b>8.0</b>	<b>7.2</b>	<b>9.1</b>	<b>23.8</b>	<b>9.3</b>	<b>12.3</b>
<b>2: IVA – IVA Reg. Compl. - IEHD - Other taxes in</b>						
Bolivianos and	117,256.0	105,145.0	131,226.0	183,937.0	68,922.0	101,065.0
US\$	21.2	18.1	21.2	27.8	9.6	13.2
<b>3: Total Taxes + Royalties (1+2=3) in US\$ millions</b>	<b>157.1</b>	<b>138.8</b>	<b>225.0</b>	<b>259.4</b>	<b>208.4</b>	<b>266.7</b>
<b>Distributed Rent in US\$ millions</b>	<b>160.6</b>	<b>134.8</b>	<b>224.6</b>	<b>264.6</b>	<b>201.3</b>	<b>256.2</b>
YPFB	14.6	12.0	10.5	13.4	10.7	7.9
TGN (Treasury)	103.9	82.5	144.3	166.3	117.8	144.8
Prefectures	34.8	34.0	62.2	71.9	68.0	97.0
Municipalities	5.8	5.0	6.1	10.3	3.8	5.1
Universities	1.5	1.3	1.5	2.6	0.9	1.3

**Colombia**

<i>Reserves / Production</i>	1995	1996	1997	1998	1999	2000	2001	2002	2003
Oil Reserves (proved) (in MMB)	2,950.0	2,798.0	2,577.0	2,477.0	2,289.0	1,971.0	1,842.0	1,631.0	1,542.0
Natural Gas Reserves (proved) (trillions PC)			6.9	6.9	6.6	4.5	4.5	4.2	4.0
Oil Production (thousands of barrels per day)		626.0	652.0	754.0	816.0	688.0	604.0	578.0	540.0
Gas Production (mmpcd)				610.0	503.0	574.0	597.0	602.0	594.0

Source: ECOPETROL

Value of Oil Rent in US\$ millions	747.4	830.4	962.2	705.5	892.9	1,358.5	1,363.2	1,202.2	-
(i) Royalties	492.5	525.5	523.3	457.2	693.0	932.6	711.73	647.5	-
(ii) Taxes	254.9	282.3	415.2	220.5	180.5	406.5	639.28	538.18	-
ECOPETROL Profits	212.6	208.7	193.2	195.8	158.9	406.5	615.48	474.46	-
Income tax	42.3	73.6	222.0	24.7	21.6	-	23.8	63.72	-
(iii) Social Aid		22.6	23.7	27.9	19.4	19.4	7.1	13.82	-
(iv) Patents and Penalties				0	0	0	5.12	2.69	-
(v) Training									-

Distribution in US\$ millions	747.4	830.4	962.2	705.5	892.9	1,358.5	1,363.2	1,202.2	-
(i) Central government	254.89	282.27	415.22	220.48	180.5	406.5	646.2	540.87	-
(ii) Decentralized participation	334.88	383.2	338.6	283.5	413.7	593.1	515.06	468.35	-
Prefectures	233.92	228.2	209.6	174.5	255.9	409.1	336.25	301.07	-
Municipalities	100.96	155.0	129.0	109.0	157.8	184.0	178.81	167.28	-
Universities									-
(iii) Funds	157.59	140.8	183.1	172.6	277.9	337.6	193.4	177.9	-
(iv) Social Aid		22.62	23.72	27.85	19.64	19.38	7.1	13.6	-
(v) Training									-
(vi) Corporations		1.6	1.6	1.1	1.4	1.9	1.4	1.51	-

## Ecuador

<i>Reserves / Production</i>	1998	1999	2000	2001	2002	2003
Oil and Condensates Reserves (proved and probable) (in MMB)	2,590.0	3,040.0	2,600.0	4,693.0	4,621.0	4,621.0
Natural Gas Reserves (proved and probable) (in trillions PC)	N/a	N/a	N/a	N/a	N/a	0.35
Oil Production (in MB/day)	376.0	373.0	399.0	404.0	392.0	421.0
Natural Gas Production (in MM PCD)	N/a	N/a	N/a	N/a	N/a	16.0
<b>Oil Production— MMBbls</b>						
PETROECUADOR	95.5	84.4	80.5	77.5	73.4	75.5
Private Companies	35.1	44.4	59.2	62.6	61.0	69.3
Total	130.6	128.8	139.7	140.1	134.4	144.8
<b>Production Value in US\$ millions</b>						
PETROECUADOR	892.0	1 276.0	2 006.0	1 472.0	1 619.0	1 982.0
25% Private companies	82.0	168.0	369.0	297.0	336.0	455.0
<b>Total value</b> 1/	974.0	1,444.0	2,375.0	1,769.0	1,956.0	2,438.0
<i>Average Export Price (US\$/B)</i>	9.34	15.12	24.92	18.99	22.06	26.26
Production costs PETROECUADOR						
Operation Costs E&P	203.0	160.0	201.0	236.0	297.0	307.0
<i>Unit Cost E&amp;P</i>	2.13	1.90	2.50	3.05	4.05	4.07
Administrative Costs	50.0	60.0	80.0	80.0	90.0	100.0
Transportation Costs	66.0	68.0	90.0	103.0	107.0	113.0
Crude from PETROPRODUCCION	60.0	60.0	76.0	86.0	89.0	92.0
25% crude from private companies	6.0	8.0	14.0	17.0	18.0	21.0
<b>Payment to Private Companies</b>	101.0	180.0	218.0	195.0	183.0	185.0
<b>Total cost</b> 2/	420.0	468.0	589.0	614.0	677.0	705.0
<b>Rent = value-costs</b>	554.0	976.0	1,786.0	1,155.0	1,278.0	1,733.0
<b>Collected revenues</b> 3/	925.9	1,010.5	1,663.1	1,490.7	1,658.0	2,050.2
<b>Distribution in US\$ millions</b>						
<b>(i) Central Government</b>	906.0	716.0	1,120.0	1,256.0	1,324.0	1,555.0
<b>(ii) Decentralized Participation</b>	0.5	3.3	47.5	43.3	59.0	71.1
ECORAE		1.7	38.5	35.8	48.1	57.0
ECORAE Fund						1.4
<b>(iii) Funds—FEIREP</b>	2.0	251.0	317.0	54.0	155.0	296.0
<b>(iv) Beneficiaries and Others</b>	17.0	37.0	131.0	94.0	61.0	57.0

## NOTES

1/ The value of the production received by the state equals the production volume of PETROECUADOR plus 25% of the production of private companies (25 percent equals the average of royalties plus taxes and shares received by PETROECUADOR from areas under agreements) MULTIPLIED by the annual average export price.

2/ The production cost is the sum of unit operation costs of Petroproducción plus the administrative costs corresponding to Petroproducción, plus the transportation cost for own production, plus the crude oil received from contractors, plus the payments for services provided to contractors.

3/ Revenues collected from the oil industry and distributed among the TGN and the beneficiary central government agencies and the decentralized participation include upstream oil rents plus the results of the PETROECUADOR operations, plus the taxes collected from the industry (upstream & downstream).



**Peru**

<i>Reserves / Production</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Oil Reserves (proved) (in MMB)	366.0	340.3	323.5	355.7	309.8	323.4	399.6	374.0	352.0
Natural Gas Reserves (proved) (in trillions PC)	7.0	6.9	6.9	8.8	8.6	8.6	8.7	8.7	8.7
Oil Production (MMB)	44.0	42.0	41.0	42.0	38.0	36.0	35.0	35.0	33.0
Natural Gas Production (in mmmpc)	10.0	9.0	9.0	14.0	15.0	12.0	13.0	16.0	18.0
Natural Gas Production (in MMPCD)	27.0	26.0	24.0	39.0	40.0	33.0	36.0	43.0	50.0

*Source:* MEM. Hydrocarbons Statistical Annual Report

<b>Value of Oil Rent in US\$ millions</b>	<b>160.3</b>	<b>213.1</b>	<b>170.7</b>	<b>111.8</b>	<b>198.0</b>	<b>324.7</b>	<b>212.6</b>	<b>253.0</b>	<b>258.7</b>
<b>Collection</b>									
(i) Royalties	159.2	196.4	154.9	101.3	165.8	265.6	190.5	223.0	257.7
(ii) Taxes	0.3	15.1	13.2	8.5	30.4	57.5	21.0	28.8	n.d.
(iii) Social Aid		0.4	1.1	0.2	0.4	0.3	0.0	0.0	n.d.
(iv) Patents and Penalties									
(v) Training	0.9	1.2	1.6	1.8	1.5	1.3	1.1	1.1	1.1

<b>Distribution in US\$ millions</b>	<b>160.3</b>	<b>213.1</b>	<b>174.2</b>	<b>111.8</b>	<b>198.0</b>	<b>324.7</b>	<b>212.6</b>	<b>253.0</b>	<b>258.8</b>
<b>(i) Central government</b>	<b>82.2</b>	<b>115.1</b>	<b>85.1</b>	<b>58.2</b>	<b>121.3</b>	<b>206.6</b>	<b>116.7</b>	<b>148.0</b>	<b>143.0</b>
Public Treasury	78.6	96.1	65.0	45.5	85.2	140.7	88.6	112.3	135.2
PERUPETRO	3.3	3.9	3.5	2.1	2.9	4.2	3.5	3.5	3.9
MEM			1.7	1.1	1.4	2.1	1.8	1.7	2.0
OSINERG			1.7	1.1	1.4	2.1	1.8	1.7	2.0
Income tax	0.3	15.1	13.2	8.5	30.4	57.5	21.0	28.8	n.d.
<b>(ii) Decentralized participation</b>	<b>77.3</b>	<b>96.5</b>	<b>86.5</b>	<b>51.6</b>	<b>74.9</b>	<b>116.5</b>	<b>94.8</b>	<b>103.8</b>	<b>114.7</b>
Prefectures	41.0	51.3	46.1	27.6	39.8	61.9	50.3	55.0	46.6
Municipalities	31.1	38.7	34.7	20.7	30.0	46.7	38.0	41.6	58.1
Universities	5.2	6.5	5.7	3.4	5.1	8.0	6.5	7.2	10.0
<b>(iii) Social Aid</b>	<b>0.0</b>	<b>0.4</b>	<b>1.1</b>	<b>0.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>n.d.</b>
Agreements with contractors	0.0	0.0	0.5	0.0	0.0	0.1			
Compensation			0.0	0.0	0.2	0.1			
Indemnification		0.3	0.4	0.1	0.1	0.0			
Institute for Peruvian Amazonia	0.0	0.0	0.1	0.1	0.1	0.1			
(iv) Funds									
(v) Training	0.9	1.2	1.6	1.8	1.5	1.3	1.1	1.1	1.1

# Annex 5

## Governance and Transparency

A5.1 In order to complete the analysis of the macroeconomic variables closely linked to the oil rent collection and distribution process, the problem of the lack of transparency and in some cases the presence of corruption in the sector must be analyzed. For this, it is important to have as preliminary information the opinion of the consultants that have carried out studies on national cases as well as the indexes published by nongovernmental organizations.

### Referential Indexes

A5.2 For some time, Transparency International has published a corruption perception index based on a rather wide sample of countries. The survey is made having as support the interviews with a great number of businessmen, financial investors, and officers from multilateral development organizations.

A5.3 The next table shows an index on the corruption perception in each analyzed country based on an 11-point scale. Here, Bolivia, Ecuador, Colombia, and Peru show, in this order, indexes that are closer to countries with the highest corruption perception, such as Nigeria, Cameroon, or Bangladesh and farther from countries with the lowest corruption perception, such as New Zealand, Denmark, or Finland. It is noteworthy that in the 1996–2003 period, the indexes in the analyzed Latin American countries do not show great variations.

**Table A5.1: Transparency International—Corruption Perception Indexes  
(by country, 1996–2003)**

	1996	1997	1998	1999	2000	2001	2002	2003
Bolivia	3.40	2.05	2.8	2.5	2.7	2	2.2	2.3
Colombia	2.73	2.23	2.2	2.9	3.2	3.8	3.6	3.7
Ecuador			2.3	2.4	2.6	2.3	2.2	2.2
Peru			4.5	4.5	4.4	4.1	4	3.7
	9.43	9.94	10	10	10	9.9	9.7	9.7
Maximum	New Zealand	Denmark	Denmark	Denmark	Finland	Finland	Finland	Finland
	0.69	1.76	1.4	1.5	1.2	0.4	1.2	1.3
Minimum	Nigeria	Nigeria	Cameroon	Cameroon	Nigeria	Bangla Desh	Bangla Desh	Bangla Desh
No. of countries	54	52	85	99	90	91	102	133

A5.4 However, the **World Economic Forum (Davos)** also carries out corruption analyses in countries. The following table shows the corruption perception indexes by businessmen in the analyzed countries. A 7-point scale is used, 7 being the lowest corruption and 0 the maximum corruption.

A5.5 In 2001, Peru has the highest corruption perception by businessmen, while in 2002 this position is occupied by Bolivia. Later, Colombia (2001 and 2002) and Peru (2002) show indexes above those for the Latin American region, that is, they have a lower corruption perception than the average in the region.

A5.6 For reference purposes, the corruption perception index for Western Europe is included.

**Table A5.2: World Economic Forum—Corruption Perception Index by Country**

	<i>2001</i>	<i>2002</i>
Bolivia	4.26	3.56
Colombia	4.73	5.14
Ecuador	3.91	3.67
Peru	2.31	5.21
Average for Latin America	4.37	4.52
Average for Europe	6.07	6.08

A5.7 As it can be seen, these corruption indexes show the perception of investors, risk consultants, and international officers. Nevertheless, it must be said that in all cases methodological criticism exists that challenges the results of these reports. They are included here only as a reference.

A5.8 Therefore, corruption appears within this context as a priority issue in the region, above criminality. As it is well known, corruption and poverty have a strong impact on attitudes toward democracy, while criminality does not have such a significant role in the legitimacy of the administration as they have in governance.

A5.9 This clearly defines the priorities in the democratic agenda, giving the fight against corruption a predominant position in the process to strengthen democracy, above the position given to health, education, and criminality. Public corruption undermines the two main dimensions of good governance: (i) the effective delivery of goods and services to the population (efficiency in the allocation of resources), and (ii) credibility and legitimacy in the exercise of power.

A5.10 Horizontal control mechanisms against corruption help to increase credibility and legitimacy of the political representation; but if these mechanisms are not well designed, they could affect the capacity of the public sector to provide services in a timely and efficient manner.

# Annex 6

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## Extractive Industries Transparency Initiative

A6.1 The Extractive Industries Transparency Initiative (EITI) was promoted by United Kingdom's Primer Minister, Tony Blair, at the World Summit on Sustainable Development held in Johannesburg in September 2002. The initiative encourages governments, private and state-owned extractive companies, international organizations, NGOs, and other stakeholders with interests in the sector to work together in a voluntary manner in order to develop a framework that promotes transparency in the payments and revenues related to natural resource management.

A6.2 Likewise, the initiative has incorporated deeper debates held in the G-8 on transparency and anti-corruption policies. In their last meeting in Evian, the G-8 countries have declared their decided resolution to fight corruption, one of the most serious obstacles for economic development, as well as the mismanagement of public revenues and disbursements. The G-8 has approved an action plan including the voluntary testing of an intensified approach to transparency in countries where the revenues from extractive industries (oil, gas, and mining) are substantial.

A6.3 In this sense, the goal of the EITI is to increase transparency in payments and revenues related to extractive sectors in countries with a great dependency on such sectors, through the design of a system for the promotion of transparency in the payments for extracting natural resources (oil, natural gas, and mining).

A6.4 The initiative is in line with the partial belief that a sound exploitation of natural resources must provide the basis for economic growth that will help to attain sustainable development. In this regard, the members of the Initiative assume a number of principles outlined in the box below.

A6.5 Therefore, the idea is that transparency about payments and revenues will increase the probability that revenues from the exploitation of natural resources be efficiently and fairly used and may be used by the government as an instrument for financial and macroeconomic planning. Moreover, transparency may be useful to reduce the risk of lack of investment or underutilization of resources, as well as to improve the corporate environment of developing and transition economies in order to attract higher levels of foreign direct investment.

A6.6 Consequently, the focus on extractive industries results from the importance of this type of industry in over 50 developing countries. There is a close correlation between countries that are rich in natural resources and countries with high

levels of poverty; there is also a number of factors that make the correct management of natural resources at the short and long term particularly difficult: the atypically large size of the generated revenues compared to the national revenues, the fluctuations in prices, and the finite nature of these resources.

**Table A6.1: Principles of the Extractive Industries Transparency Initiative**

- Regular publication of all material oil, gas and mining payments by companies to governments ("payments") and all material revenues received by governments from oil, gas and mining companies ("revenues") to a wide audience in a publicly accessible, comprehensive, and comprehensible manner.
- Where such audits do not already exist, payments and revenues should be the subject of a credible, independent audit.
- This approach is extended to all companies including state-owned enterprises.
- Civil society is actively engaged as participants in the design, monitoring and evaluation of this process and contributes towards public debate.
- A public, costed, time-bound action plan for all the above is agreed including targets and capacity building for each actor. Achievements are measured against these targets on a regular basis.

A6.7 Transparency, enhanced financial management, and detailed accountability help to achieve a better, more efficient, and fair use of resources that, in turn, help to maintain a sounder economy, which is the basis for sustainable development. There are internal benefits for the governments complying with high standards of transparency and accountability, since they give signs of good governance to civil society and the citizens in general. Governments would have access to better information on the payments made by and the revenues collected from local or foreign companies, guaranteeing thereby full compliance with fiscal regulations. Governments supporting the transparency and accountability principles will find it easy to achieve certification for foreign direct investment. The donors, international financial institutions, and other investors are more willing to offer financial and technical aid to countries committed to implementing a transparent public management of finances.

A6.8 Producing companies work with long-term investment horizons, which reward good governance and political stability. Transparency about payments and revenues reduces the risks of social unrest caused by the perception of wasting resources. Moreover, transparency about the payments made by the companies will show citizens the contribution that investors make to the national economy. Transparency can help to focus attention on the use of revenues by the national and regional governments, which assume the ultimate responsibility.

A6.9 State-owned companies will have local advantages from the perspective of reputation, in terms of good corporate governance, honesty, and social responsibility.

Their capacity to access markets will be increased, as well as their capacity to attract as member companies committed to transparency.

A6.10 There are also advantages for other stakeholders. Businessmen will be encouraged to have their partners committed to higher levels of transparency. Likewise, the countries hosting companies with foreign interests must have their own companies also characterized by their good reputation. This will allow them to have transparency in their transactions and to operate in politically stable countries.

A6.11 Likewise, since progress is achieved reducing corruption and money laundering, the financial sector will also need to demonstrate its commitment with good governance in the companies where they invest: this will become increasingly easier as transparency and accountability are better understood. The information spread throughout the country must provide a basis for citizens to force their governments to keep adequate accounting of the rents and their allocation to specific development projects.

A6.12 The question to be answered is to what extent it will be possible to implement the EITI principles in the region. So far, the only country that has shown some interest is Peru.



Joint UNDP/World Bank  
**ENERGY SECTOR MANAGEMENT ASSISTANCE PROGRAMME (ESMAP)**

**LIST OF REPORTS ON COMPLETED ACTIVITIES**

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
<b>SUB-SAHARAN AFRICA (AFR)</b>			
Africa Regional	Anglophone Africa Household Energy Workshop (English)	07/88	085/88
	Regional Power Seminar on Reducing Electric Power System Losses in Africa (English)	08/88	087/88
	Institutional Evaluation of EGL (English)	02/89	098/89
	Biomass Mapping Regional Workshops (English)	05/89	--
	Francophone Household Energy Workshop (French)	08/89	--
	Interafrican Electrical Engineering College: Proposals for Short- and Long-Term Development (English)	03/90	112/90
	Biomass Assessment and Mapping (English)	03/90	--
	Symposium on Power Sector Reform and Efficiency Improvement in Sub-Saharan Africa (English)	06/96	182/96
	Commercialization of Marginal Gas Fields (English)	12/97	201/97
	Commercializing Natural Gas: Lessons from the Seminar in Nairobi for Sub-Saharan Africa and Beyond	01/00	225/00
	Africa Gas Initiative – Main Report: Volume I	02/01	240/01
	First World Bank Workshop on the Petroleum Products Sector in Sub-Saharan Africa	09/01	245/01
	Ministerial Workshop on Women in Energy	10/01	250/01
	Energy and Poverty Reduction: Proceedings from a Multi-Sector And Multi-Stakeholder Workshop Addis Ababa, Ethiopia, October 23-25, 2002.	03/03	266/03
	Opportunities for Power Trade in the Nile Basin: Final Scoping Study	01/04	277/04
	Énergies modernes et réduction de la pauvreté: Un atelier multi-sectoriel. Actes de l'atelier régional. Dakar, Sénégal, du 4 au 6 février 2003 (French Only)	01/04	278/04
	Énergies modernes et réduction de la pauvreté: Un atelier multi-sectoriel. Actes de l'atelier régional. Douala, Cameroun du 16-18 juillet 2003. (French Only)	09/04	286/04
	Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshops held in Africa	01/05	298/05
Angola	Energy Assessment (English and Portuguese)	05/89	4708-ANG
	Power Rehabilitation and Technical Assistance (English)	10/91	142/91
	Africa Gas Initiative – Angola: Volume II	02/01	240/01
Benin	Energy Assessment (English and French)	06/85	5222-BEN
Botswana	Energy Assessment (English)	09/84	4998-BT
	Pump Electrification Prefeasibility Study (English)	01/86	047/86
	Review of Electricity Service Connection Policy (English)	07/87	071/87
	Tuli Block Farms Electrification Study (English)	07/87	072/87
	Household Energy Issues Study (English)	02/88	--
	Urban Household Energy Strategy Study (English)	05/91	132/91
Burkina Faso	Energy Assessment (English and French)	01/86	5730-BUR
	Technical Assistance Program (English)	03/86	052/86
	Urban Household Energy Strategy Study (English and French)	06/91	134/91
Burundi	Energy Assessment (English)	06/82	3778-BU
	Petroleum Supply Management (English)	01/84	012/84
	Status Report (English and French)	02/84	011/84



<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
Burundi	Presentation of Energy Projects for the Fourth Five-Year Plan (1983-1987) (English and French)	05/85	036/85
	Improved Charcoal Cookstove Strategy (English and French)	09/85	042/85
	Peat Utilization Project (English)	11/85	046/85
	Energy Assessment (English and French)	01/92	9215-BU
Cameroon	Africa Gas Initiative – Cameroon: Volume III	02/01	240/01
Cape Verde	Energy Assessment (English and Portuguese)	08/84	5073-CV
	Household Energy Strategy Study (English)	02/90	110/90
Central African Republic	Energy Assessment (French)	08/92	9898-CAR
Chad	Elements of Strategy for Urban Household Energy		
	The Case of N'djamena (French)	12/93	160/94
Comoros	Energy Assessment (English and French)	01/88	7104-COM
	In Search of Better Ways to Develop Solar Markets: The Case of Comoros	05/00	230/00
Congo	Energy Assessment (English)	01/88	6420-COB
	Power Development Plan (English and French)	03/90	106/90
	Africa Gas Initiative – Congo: Volume IV	02/01	240/01
Côte d'Ivoire	Energy Assessment (English and French)	04/85	5250-IVC
	Improved Biomass Utilization (English and French)	04/87	069/87
	Power System Efficiency Study (English)	12/87	--
	Power Sector Efficiency Study (French)	02/92	140/91
	Project of Energy Efficiency in Buildings (English)	09/95	175/95
	Africa Gas Initiative – Côte d'Ivoire: Volume V	02/01	240/01
	Energy Assessment (English)	07/84	4741-ET
Ethiopia	Power System Efficiency Study (English)	10/85	045/85
	Agricultural Residue Briquetting Pilot Project (English)	12/86	062/86
	Bagasse Study (English)	12/86	063/86
	Cooking Efficiency Project (English)	12/87	--
	Energy Assessment (English)	02/96	179/96
Gabon	Energy Assessment (English)	07/88	6915-GA
	Africa Gas Initiative – Gabon: Volume VI	02/01	240/01
The Gambia	Energy Assessment (English)	11/83	4743-GM
	Solar Water Heating Retrofit Project (English)	02/85	030/85
	Solar Photovoltaic Applications (English)	03/85	032/85
	Petroleum Supply Management Assistance (English)	04/85	035/85
Ghana	Energy Assessment (English)	11/86	6234-GH
	Energy Rationalization in the Industrial Sector (English)	06/88	084/88
	Sawmill Residues Utilization Study (English)	11/88	074/87
	Industrial Energy Efficiency (English)	11/92	148/92
	Corporatization of Distribution Concessions through Capitalization	12/03	272/03
Guinea	Energy Assessment (English)	11/86	6137-GUI
	Household Energy Strategy (English and French)	01/94	163/94
Guinea-Bissau	Energy Assessment (English and Portuguese)	08/84	5083-GUB
	Recommended Technical Assistance Projects (English & Portuguese)	04/85	033/85
	Management Options for the Electric Power and Water Supply Subsectors (English)	02/90	100/90
	Power and Water Institutional Restructuring (French)	04/91	118/91
Kenya	Energy Assessment (English)	05/82	3800-KE
	Power System Efficiency Study (English)	03/84	014/84
	Status Report (English)	05/84	016/84
	Coal Conversion Action Plan (English)	02/87	--
	Solar Water Heating Study (English)	02/87	066/87

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
Kenya	Peri-Urban Woodfuel Development (English)	10/87	076/87
	Power Master Plan (English)	11/87	--
	Power Loss Reduction Study (English)	09/96	186/96
	Implementation Manual: Financing Mechanisms for Solar Electric Equipment	07/00	231/00
Lesotho	Energy Assessment (English)	01/84	4676-LSO
Liberia	Energy Assessment (English)	12/84	5279-LBR
	Recommended Technical Assistance Projects (English)	06/85	038/85
	Power System Efficiency Study (English)	12/87	081/87
Madagascar	Energy Assessment (English)	01/87	5700-MAG
	Power System Efficiency Study (English and French)	12/87	075/87
	Environmental Impact of Woodfuels (French)	10/95	176/95
Malawi	Energy Assessment (English)	08/82	3903-MAL
	Technical Assistance to Improve the Efficiency of Fuelwood Use in the Tobacco Industry (English)	11/83	009/83
	Status Report (English)	01/84	013/84
Mali	Energy Assessment (English and French)	11/91	8423-MLI
	Household Energy Strategy (English and French)	03/92	147/92
Islamic Republic of Mauritania	Energy Assessment (English and French)	04/85	5224-MAU
	Household Energy Strategy Study (English and French)	07/90	123/90
Mauritius	Energy Assessment (English)	12/81	3510-MAS
	Status Report (English)	10/83	008/83
	Power System Efficiency Audit (English)	05/87	070/87
	Bagasse Power Potential (English)	10/87	077/87
	Energy Sector Review (English)	12/94	3643-MAS
Mozambique	Energy Assessment (English)	01/87	6128-MOZ
	Household Electricity Utilization Study (English)	03/90	113/90
	Electricity Tariffs Study (English)	06/96	181/96
	Sample Survey of Low Voltage Electricity Customers	06/97	195/97
Namibia	Energy Assessment (English)	03/93	11320-NAM
Niger	Energy Assessment (French)	05/84	4642-NIR
	Status Report (English and French)	02/86	051/86
	Improved Stoves Project (English and French)	12/87	080/87
	Household Energy Conservation and Substitution (English and French)	01/88	082/88
Nigeria	Energy Assessment (English)	08/83	4440-UNI
	Energy Assessment (English)	07/93	11672-UNI
	Strategic Gas Plan	02/04	279/04
Rwanda	Energy Assessment (English)	06/82	3779-RW
	Status Report (English and French)	05/84	017/84
	Improved Charcoal Cookstove Strategy (English and French)	08/86	059/86
	Improved Charcoal Production Techniques (English and French)	02/87	065/87
	Energy Assessment (English and French)	07/91	8017-RW
	Commercialization of Improved Charcoal Stoves and Carbonization Techniques Mid-Term Progress Report (English and French)	12/91	141/91
SADC	SADC Regional Power Interconnection Study, Vols. I-IV (English)	12/93	-
SADCC	SADCC Regional Sector: Regional Capacity-Building Program for Energy Surveys and Policy Analysis (English)	11/91	-
Sao Tome and Principe	Energy Assessment (English)	10/85	5803-STP
Senegal	Energy Assessment (English)	07/83	4182-SE
	Status Report (English and French)	10/84	025/84
	Industrial Energy Conservation Study (English)	05/85	037/85

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
Senegal	Preparatory Assistance for Donor Meeting (English and French)	04/86	056/86
	Urban Household Energy Strategy (English)	02/89	096/89
	Industrial Energy Conservation Program (English)	05/94	165/94
Seychelles	Energy Assessment (English)	01/84	4693-SEY
	Electric Power System Efficiency Study (English)	08/84	021/84
Sierra Leone	Energy Assessment (English)	10/87	6597-SL
Somalia	Energy Assessment (English)	12/85	5796-SO
Republic of South Africa	Options for the Structure and Regulation of Natural Gas Industry (English)	05/95	172/95
Sudan	Management Assistance to the Ministry of Energy and Mining	05/83	003/83
	Energy Assessment (English)	07/83	4511-SU
	Power System Efficiency Study (English)	06/84	018/84
	Status Report (English)	11/84	026/84
	Wood Energy/Forestry Feasibility (English)	07/87	073/87
Swaziland	Energy Assessment (English)	02/87	6262-SW
	Household Energy Strategy Study	10/97	198/97
Tanzania	Energy Assessment (English)	11/84	4969-TA
	Peri-Urban Woodfuels Feasibility Study (English)	08/88	086/88
	Tobacco Curing Efficiency Study (English)	05/89	102/89
	Remote Sensing and Mapping of Woodlands (English)	06/90	--
	Industrial Energy Efficiency Technical Assistance (English)	08/90	122/90
	Power Loss Reduction Volume 1: Transmission and Distribution System Technical Loss Reduction and Network Development (English)	06/98	204A/98
	Power Loss Reduction Volume 2: Reduction of Non-Technical Losses (English)	06/98	204B/98
Togo	Energy Assessment (English)	06/85	5221-TO
	Wood Recovery in the Nangbeto Lake (English and French)	04/86	055/86
	Power Efficiency Improvement (English and French)	12/87	078/87
Uganda	Energy Assessment (English)	07/83	4453-UG
	Status Report (English)	08/84	020/84
	Institutional Review of the Energy Sector (English)	01/85	029/85
	Energy Efficiency in Tobacco Curing Industry (English)	02/86	049/86
	Fuelwood/Forestry Feasibility Study (English)	03/86	053/86
	Power System Efficiency Study (English)	12/88	092/88
	Energy Efficiency Improvement in the Brick and Tile Industry (English)	02/89	097/89
	Tobacco Curing Pilot Project (English)	03/89	UNDP Terminal Report
	Energy Assessment (English)	12/96	193/96
	Rural Electrification Strategy Study	09/99	221/99
Zaire	Energy Assessment (English)	05/86	5837-ZR
	Energy Assessment (English)	01/83	4110-ZA
Zambia	Status Report (English)	08/85	039/85
	Energy Sector Institutional Review (English)	11/86	060/86
	Power Subsector Efficiency Study (English)	02/89	093/88
	Energy Strategy Study (English)	02/89	094/88
	Urban Household Energy Strategy Study (English)	08/90	121/90
	Energy Assessment (English)	06/82	3765-ZIM
	Power System Efficiency Study (English)	06/83	005/83
Zimbabwe	Status Report (English)	08/84	019/84
	Power Sector Management Assistance Project (English)	04/85	034/85
	Power Sector Management Institution Building (English)	09/89	--

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
Zimbabwe	Petroleum Management Assistance (English)	12/89	109/89
	Charcoal Utilization Pre-feasibility Study (English)	06/90	119/90
	Integrated Energy Strategy Evaluation (English)	01/92	8768-ZIM
	Energy Efficiency Technical Assistance Project: Strategic Framework for a National Energy Efficiency Improvement Program (English)	04/94	--
	Capacity Building for the National Energy Efficiency Improvement Programme (NEEIP) (English)	12/94	--
	Rural Electrification Study	03/00	228/00
<b>EAST ASIA AND PACIFIC (EAP)</b>			
Asia Regional	Pacific Household and Rural Energy Seminar (English)	11/90	--
China	County-Level Rural Energy Assessments (English)	05/89	101/89
	Fuelwood Forestry Preinvestment Study (English)	12/89	105/89
	Strategic Options for Power Sector Reform in China (English)	07/93	156/93
	Energy Efficiency and Pollution Control in Township and Village Enterprises (TVE) Industry (English)	11/94	168/94
	Energy for Rural Development in China: An Assessment Based on a Joint Chinese/ESMAP Study in Six Counties (English)	06/96	183/96
	Improving the Technical Efficiency of Decentralized Power Companies	09/99	222/99
	Air Pollution and Acid Rain Control: The Case of Shijiazhuang City and the Changsha Triangle Area	10/03	267/03
	Toward a Sustainable Coal Sector In China	07/04	287/04
Fiji	Energy Assessment (English)	06/83	4462-FIJ
Indonesia	Energy Assessment (English)	11/81	3543-IND
	Status Report (English)	09/84	022/84
	Power Generation Efficiency Study (English)	02/86	050/86
	Energy Efficiency in the Brick, Tile and Lime Industries (English)	04/87	067/87
	Diesel Generating Plant Efficiency Study (English)	12/88	095/88
	Urban Household Energy Strategy Study (English)	02/90	107/90
	Biomass Gasifier Preinvestment Study Vols. I & II (English)	12/90	124/90
	Prospects for Biomass Power Generation with Emphasis on Palm Oil, Sugar, Rubberwood and Plywood Residues (English)	11/94	167/94
Lao PDR	Urban Electricity Demand Assessment Study (English)	03/93	154/93
	Institutional Development for Off-Grid Electrification	06/99	215/99
Malaysia	Sabah Power System Efficiency Study (English)	03/87	068/87
	Gas Utilization Study (English)	09/91	9645-MA
Mongolia	Energy Efficiency in the Electricity and District Heating Sectors	10/01	247/01
	Improved Space Heating Stoves for Ulaanbaatar	03/02	254/02
Myanmar	Energy Assessment (English)	06/85	5416-BA
Papua New Guinea	Energy Assessment (English)	06/82	3882-PNG
	Status Report (English)	07/83	006/83
	Institutional Review in the Energy Sector (English)	10/84	023/84
	Power Tariff Study (English)	10/84	024/84
Philippines	Commercial Potential for Power Production from Agricultural Residues (English)	12/93	157/93
	Energy Conservation Study (English)	08/94	--

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
Philippines	Strengthening the Non-Conventional and Rural Energy Development Program in the Philippines: A Policy Framework and Action Plan	08/01	243/01
	Rural Electrification and Development in the Philippines: Measuring the Social and Economic Benefits	05/02	255/02
Solomon Islands	Energy Assessment (English)	06/83	4404-SOL
	Energy Assessment (English)	01/92	979-SOL
South Pacific	Petroleum Transport in the South Pacific (English)	05/86	--
Thailand	Energy Assessment (English)	09/85	5793-TH
	Rural Energy Issues and Options (English)	09/85	044/85
	Accelerated Dissemination of Improved Stoves and Charcoal Kilns (English)	09/87	079/87
	Northeast Region Village Forestry and Woodfuels Preinvestment Study (English)	02/88	083/88
	Impact of Lower Oil Prices (English)	08/88	--
	Coal Development and Utilization Study (English)	10/89	--
	Why Liberalization May Stall in a Mature Power Market: A Review of the Technical and Political Economy Factors that Constrained the Electricity Sector Reform in Thailand 1998-2002	12/03	270/03
	Reducing Emissions from Motorcycles in Bangkok	10/03	275/03
Tonga	Energy Assessment (English)	06/85	5498-TON
Vanuatu	Energy Assessment (English)	06/85	5577-VA
Vietnam	Rural and Household Energy-Issues and Options (English)	01/94	161/94
	Power Sector Reform and Restructuring in Vietnam: Final Report to the Steering Committee (English and Vietnamese)	09/95	174/95
	Household Energy Technical Assistance: Improved Coal Briquetting and Commercialized Dissemination of Higher Efficiency Biomass and Coal Stoves (English)	01/96	178/96
	Petroleum Fiscal Issues and Policies for Fluctuating Oil Prices In Vietnam	02/01	236/01
	An Overnight Success: Vietnam's Switch to Unleaded Gasoline	08/02	257/02
	The Electricity Law for Vietnam—Status and Policy Issues—The Socialist Republic of Vietnam	08/02	259/02
	Petroleum Sector Technical Assistance for the Revision of the Existing Legal and Regulatory Framework	12/03	269/03
Western Samoa	Energy Assessment (English)	06/85	5497-WSO
<b>SOUTH ASIA (SAS)</b>			
Bangladesh	Energy Assessment (English)	10/82	3873-BD
	Priority Investment Program (English)	05/83	002/83
	Status Report (English)	04/84	015/84
	Power System Efficiency Study (English)	02/85	031/85
	Small Scale Uses of Gas Pre-feasibility Study (English)	12/88	--
	Reducing Emissions from Baby-Taxis in Dhaka	01/02	253/02
India	Opportunities for Commercialization of Non-conventional Energy Systems (English)	11/88	091/88
	Maharashtra Bagasse Energy Efficiency Project (English)	07/90	120/90
	Mini-Hydro Development on Irrigation Dams and Canal Drops Vols. I, II and III (English)	07/91	139/91
	WindFarm Pre-Investment Study (English)	12/92	150/92
	Power Sector Reform Seminar (English)	04/94	166/94
	Environmental Issues in the Power Sector (English)	06/98	205/98

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
India	Environmental Issues in the Power Sector: Manual for Environmental Decision Making (English)	06/99	213/99
	Household Energy Strategies for Urban India: The Case of Hyderabad	06/99	214/99
	Greenhouse Gas Mitigation In the Power Sector: Case Studies From India	02/01	237/01
	Energy Strategies for Rural India: Evidence from Six States	08/02	258/02
	Household Energy, Indoor Air Pollution, and Health	11/02	261/02
	Access of the Poor to Clean Household Fuels	07/03	263/03
	The Impact of Energy on Women's Lives in Rural India	01/04	276/04
	Environmental Issues in the Power Sector: Long-Term Impacts And Policy Options for Rajasthan	10/04	292/04
	Environmental Issues in the Power Sector: Long-Term Impacts And Policy Options for Karnataka	10/04	293/04
	Nepal	Energy Assessment (English)	08/83
Status Report (English)		01/85	028/84
Energy Efficiency & Fuel Substitution in Industries (English)		06/93	158/93
Pakistan	Household Energy Assessment (English)	05/88	--
	Assessment of Photovoltaic Programs, Applications, and Markets (English)	10/89	103/89
Pakistan	National Household Energy Survey and Strategy Formulation Study: Project Terminal Report (English)	03/94	--
	Managing the Energy Transition (English)	10/94	--
	Lighting Efficiency Improvement Program Phase 1: Commercial Buildings Five Year Plan (English)	10/94	--
	Clean Fuels	10/01	246/01
Regional	Toward Cleaner Urban Air in South Asia: Tackling Transport Pollution, Understanding Sources.	03/04	281/04
Sri Lanka	Energy Assessment (English)	05/82	3792-CE
	Power System Loss Reduction Study (English)	07/83	007/83
	Status Report (English)	01/84	010/84
	Industrial Energy Conservation Study (English)	03/86	054/86
	Sustainable Transport Options for Sri Lanka: Vol. I	02/03	262/03
	Greenhouse Gas Mitigation Options in the Sri Lanka Power Sector: Vol. II	02/03	262/03
	Sri Lanka Electric Power Technology Assessment (SLEPTA): Vol. III	02/03	262/03
	Energy and Poverty Reduction: Proceedings from South Asia Practitioners Workshop How Can Modern Energy Services Contribute to Poverty Reduction? Colombo, Sri Lanka, June 2-4, 2003	11/03	268/03
<b>EUROPE AND CENTRAL ASIA (ECA)</b>			
Armenia	Development of Heat Strategies for Urban Areas of Low-income Transition Economies. Urban Heating Strategy for the Republic Of Armenia. <i>Including a Summary of a Heating Strategy for the Kyrgyz Republic</i>	04/04	282/04
Bulgaria	Natural Gas Policies and Issues (English)	10/96	188/96
	Energy Environment Review	10/02	260/02
Central Asia and The Caucasus	Cleaner Transport Fuels in Central Asia and the Caucasus	08/01	242/01
Central and Eastern Europe	Power Sector Reform in Selected Countries Increasing the Efficiency of Heating Systems in Central and	07/97	196/97

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
	Eastern Europe and the Former Soviet Union (English and Russian)	08/00	234/00
	The Future of Natural Gas in Eastern Europe (English)	08/92	149/92
Kazakhstan	Natural Gas Investment Study, Volumes 1, 2 & 3	12/97	199/97
Kazakhstan & Kyrgyzstan	Opportunities for Renewable Energy Development	11/97	16855-KAZ
Poland	Energy Sector Restructuring Program Vols. I-V (English)	01/93	153/93
	Natural Gas Upstream Policy (English and Polish)	08/98	206/98
	Energy Sector Restructuring Program: Establishing the Energy Regulation Authority	10/98	208/98
Portugal	Energy Assessment (English)	04/84	4824-PO
Romania	Natural Gas Development Strategy (English)	12/96	192/96
	Private Sector Participation in Market-Based Energy-Efficiency Financing Schemes: Lessons Learned from Romania and International Experiences.	11/03	274/03
Slovenia	Workshop on Private Participation in the Power Sector (English)	02/99	211/99
Turkey	Energy Assessment (English)	03/83	3877-TU
	Energy and the Environment: Issues and Options Paper	04/00	229/00
	Energy and Environment Review: Synthesis Report	12/03	273/03

#### **MIDDLE EAST AND NORTH AFRICA (MNA)**

Arab Republic of Egypt	Energy Assessment (English)	10/96	189/96
	Energy Assessment (English and French)	03/84	4157-MOR
	Status Report (English and French)	01/86	048/86
Morocco	Energy Sector Institutional Development Study (English and French)	07/95	173/95
	Natural Gas Pricing Study (French)	10/98	209/98
	Gas Development Plan Phase II (French)	02/99	210/99
Syria	Energy Assessment (English)	05/86	5822-SYR
	Electric Power Efficiency Study (English)	09/88	089/88
	Energy Efficiency Improvement in the Cement Sector (English)	04/89	099/89
	Energy Efficiency Improvement in the Fertilizer Sector (English)	06/90	115/90
Tunisia	Fuel Substitution (English and French)	03/90	--
	Power Efficiency Study (English and French)	02/92	136/91
	Energy Management Strategy in the Residential and Tertiary Sectors (English)	04/92	146/92
	Renewable Energy Strategy Study, Volume I (French)	11/96	190A/96
	Renewable Energy Strategy Study, Volume II (French)	11/96	190B/96
Yemen	Energy Assessment (English)	12/84	4892-YAR
	Energy Investment Priorities (English)	02/87	6376-YAR
	Household Energy Strategy Study Phase I (English)	03/91	126/91

#### **LATIN AMERICA AND THE CARIBBEAN REGION (LCR)**

LCR Regional	Regional Seminar on Electric Power System Loss Reduction in the Caribbean (English)	07/89	--
	Elimination of Lead in Gasoline in Latin America and the Caribbean (English and Spanish)	04/97	194/97

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
LCR Regional	Elimination of Lead in Gasoline in Latin America and the Caribbean - Status Report (English and Spanish)	12/97	200/97
	Harmonization of Fuels Specifications in Latin America and the Caribbean (English and Spanish)	06/98	203/98
	Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshop held in Bolivia	06/05	202/05
	Power Sector Reform and the Rural Poor in Central America	12/04	297/04
	Comparative Study on the Distribution of Oil Rents in Bolivia		
Bolivia	Colombia, Ecuador and Peru	08/05	304/05
	Energy Assessment (English)	04/83	4213-BO
	National Energy Plan (English)	12/87	--
	La Paz Private Power Technical Assistance (English)	11/90	111/90
	Pre-feasibility Evaluation Rural Electrification and Demand Assessment (English and Spanish)	04/91	129/91
	National Energy Plan (Spanish)	08/91	131/91
	Private Power Generation and Transmission (English)	01/92	137/91
	Natural Gas Distribution: Economics and Regulation (English)	03/92	125/92
	Natural Gas Sector Policies and Issues (English and Spanish)	12/93	164/93
	Household Rural Energy Strategy (English and Spanish)	01/94	162/94
	Preparation of Capitalization of the Hydrocarbon Sector	12/96	191/96
	Introducing Competition into the Electricity Supply Industry in Developing Countries: Lessons from Bolivia	08/00	233/00
	Final Report on Operational Activities Rural Energy and Energy Efficiency	08/00	235/00
	Oil Industry Training for Indigenous People: The Bolivian Experience (English and Spanish)	09/01	244/01
	Capacitación de Pueblos Indígenas en la Actividad Petrolera. Fase II	07/04	290/04
	Estudio Sobre Aplicaciones en Pequeña Escala de Gas Natural	07/04	291/04
	Brazil	Energy Efficiency & Conservation: Strategic Partnership for Energy Efficiency in Brazil (English)	01/95
Hydro and Thermal Power Sector Study		09/97	197/97
Rural Electrification with Renewable Energy Systems in the Northeast: A Preinvestment Study		07/00	232/00
Reducing Energy Costs in Municipal Water Supply Operations "Learning-while-doing" Energy M&T on the Brazilian Frontlines		07/03	265/03
Chile	Energy Sector Review (English)	08/88	7129-CH
Colombia	Energy Strategy Paper (English)	12/86	--
	Power Sector Restructuring (English)	11/94	169/94
Colombia	Energy Efficiency Report for the Commercial and Public Sector (English)	06/96	184/96
Costa Rica	Energy Assessment (English and Spanish)	01/84	4655-CR
	Recommended Technical Assistance Projects (English)	11/84	027/84
	Forest Residues Utilization Study (English and Spanish)	02/90	108/90
Dominican Republic	Energy Assessment (English)	05/91	8234-DO
Ecuador	Energy Assessment (Spanish)	12/85	5865-EC
	Energy Strategy Phase I (Spanish)	07/88	--
	Energy Strategy (English)	04/91	--
	Private Mini-hydropower Development Study (English)	11/92	--
	Energy Pricing Subsidies and Interfuel Substitution (English)	08/94	11798-EC
Guatemala	Energy Pricing, Poverty and Social Mitigation (English)	08/94	12831-EC
	Issues and Options in the Energy Sector (English)	09/93	12160-GU
	Health Impacts of Traditional Fuel Use	08/04	284/04



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Haiti	Energy Assessment (English and French)	06/82	3672-HA
	Status Report (English and French)	08/85	041/85
	Household Energy Strategy (English and French)	12/91	143/91
Honduras	Energy Assessment (English)	08/87	6476-HO
	Petroleum Supply Management (English)	03/91	128/91
Jamaica	Energy Assessment (English)	04/85	5466-JM
	Petroleum Procurement, Refining, and Distribution Study (English)	11/86	061/86
	Energy Efficiency Building Code Phase I (English)	03/88	--
	Energy Efficiency Standards and Labels Phase I (English)	03/88	--
Jamaica	Management Information System Phase I (English)	03/88	--
	Charcoal Production Project (English)	09/88	090/88
	FIDCO Sawmill Residues Utilization Study (English)	09/88	088/88
	Energy Sector Strategy and Investment Planning Study (English)	07/92	135/92
Mexico	Improved Charcoal Production Within Forest Management for the State of Veracruz (English and Spanish)	08/91	138/91
	Energy Efficiency Management Technical Assistance to the Comisión Nacional para el Ahorro de Energía (CONAE) (English)	04/96	180/96
	Energy Environment Review	05/01	241/01
Nicaragua	Modernizing the Fuelwood Sector in Managua and León	12/01	252/01
Panama	Power System Efficiency Study (English)	06/83	004/83
Paraguay	Energy Assessment (English)	10/84	5145-PA
	Recommended Technical Assistance Projects (English)	09/85	--
	Status Report (English and Spanish)	09/85	043/85
Peru	Energy Assessment (English)	01/84	4677-PE
	Status Report (English)	08/85	040/85
	Proposal for a Stove Dissemination Program in the Sierra (English and Spanish)	02/87	064/87
	Energy Strategy (English and Spanish)	12/90	--
	Study of Energy Taxation and Liberalization of the Hydrocarbons Sector (English and Spanish)	120/93	159/93
	Reform and Privatization in the Hydrocarbon Sector (English and Spanish)	07/99	216/99
	Rural Electrification	02/01	238/01
Saint Lucia	Energy Assessment (English)	09/84	5111-SLU
St. Vincent and the Grenadines	Energy Assessment (English)	09/84	5103-STV
Sub Andean	Environmental and Social Regulation of Oil and Gas Operations in Sensitive Areas of the Sub-Andean Basin (English and Spanish)	07/99	217/99
Trinidad and Tobago	Energy Assessment (English)	12/85	5930-TR
<b>GLOBAL</b>			
	Energy End Use Efficiency: Research and Strategy (English)	11/89	--
	Women and Energy--A Resource Guide		
	The International Network: Policies and Experience (English)	04/90	--
	Guidelines for Utility Customer Management and Metering (English and Spanish)	07/91	--
	Assessment of Personal Computer Models for Energy Planning in Developing Countries (English)	10/91	--
	Long-Term Gas Contracts Principles and Applications (English)	02/93	152/93

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	Comparative Behavior of Firms Under Public and Private Ownership (English)	05/93	155/93
	Development of Regional Electric Power Networks (English)	10/94	--
	Roundtable on Energy Efficiency (English)	02/95	171/95
	Assessing Pollution Abatement Policies with a Case Study of Ankara (English)	11/95	177/95
	A Synopsis of the Third Annual Roundtable on Independent Power Projects: Rhetoric and Reality (English)	08/96	187/96
	Rural Energy and Development Roundtable (English)	05/98	202/98
	A Synopsis of the Second Roundtable on Energy Efficiency: Institutional and Financial Delivery Mechanisms (English)	09/98	207/98
	The Effect of a Shadow Price on Carbon Emission in the Energy Portfolio of the World Bank: A Carbon Backcasting Exercise (English)	02/99	212/99
	Increasing the Efficiency of Gas Distribution Phase 1: Case Studies and Thematic Data Sheets	07/99	218/99
	Global Energy Sector Reform in Developing Countries: A Scorecard	07/99	219/99
	Global Lighting Services for the Poor Phase II: Text Marketing of Small "Solar" Batteries for Rural Electrification Purposes	08/99	220/99
	A Review of the Renewable Energy Activities of the UNDP/ World Bank Energy Sector Management Assistance Programme 1993 to 1998	11/99	223/99
	Energy, Transportation and Environment: Policy Options for Environmental Improvement	12/99	224/99
	Privatization, Competition and Regulation in the British Electricity Industry, With Implications for Developing Countries	02/00	226/00
	Reducing the Cost of Grid Extension for Rural Electrification	02/00	227/00
	Undeveloped Oil and Gas Fields in the Industrializing World	02/01	239/01
	Best Practice Manual: Promoting Decentralized Electrification Investment	10/01	248/01
	Peri-Urban Electricity Consumers—A Forgotten but Important Group: What Can We Do to Electrify Them?	10/01	249/01
	Village Power 2000: Empowering People and Transforming Markets	10/01	251/01
	Private Financing for Community Infrastructure	05/02	256/02
	Stakeholder Involvement in Options Assessment: Promoting Dialogue in Meeting Water and Energy Needs: A Sourcebook	07/03	264/03
	A Review of ESMAP's Energy Efficiency Portfolio	11/03	271/03
	A Review of ESMAP's Rural Energy and Renewable Energy Portfolio	04/04	280/04
	ESMAP Renewable Energy and Energy Efficiency Reports 1998-2004 (CD Only)	05/04	283/04
	Regulation of Associated Gas Flaring and Venting: <i>A Global Overview and Lessons Learned from International Experience</i>	08/04	285/04
	ESMAP Gender in Energy Reports and Other related Information (CD Only)	11/04	288/04
	ESMAP Indoor Air Pollution Reports and Other related Information (CD Only)	11/04	289/04

<i>Region/Country</i>	<i>Activity/Report Title</i>	<i>Date</i>	<i>Number</i>
	Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshop on the Pre-Investment Funding. Berlin, Germany, April 23-24, 2003.	11/04	294/04
	Global Village Energy Partnership (GVEP) Annual Report 2003	12/04	295/04
	Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshop on Consumer Lending and Microfinance to Expand Access to Energy Services, Manila, Philippines, May 19-21, 2004	12/04	296/04
	The Impact of Higher Oil Prices on Low Income Countries And on the Poor	03/05	299/05
	Advancing Bioenergy for Sustainable Development: Guideline For Policymakers and Investors	04/05	300/05
	ESMAP Rural Energy Reports 1999-2005	03/05	301/05
	Renewable Energy and Energy Efficiency Financing and Policy Network: Options Study and Proceedings of the International Forum	07/05	303/05

Last report added to this list: ESMAP Formal Report 304/05