

Status and Needs of ARPEL Member Companies Regarding Biodiversity Management

ARPEL ENVIRONMENTAL REPORT

Status and Needs of ARPEL Member Companies Regarding Biodiversity Management

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This is a document developed in the context of the activities of the ARPEL Environment, Health and Safety Committee

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The Objectives of the ARPEL Environment, Health and Safety Committee

- To be a Latin American and Caribbean forum with worldwide recognition that represents and disseminates the opinion of the industry operating in the Region, in issues concerning EHS.
- To promote the sharing of information and experiences among Member Companies as well as with regional and international organization to strengthen their EHS management and disseminate and encourage the implementation of best EHS practices.
- To identify regional/international EHS issues and trends and propose strategies and actions to address them.
- To promote the effective relationship of ARPEL with other regional and international associations and organizations, through the exchange of information, experiences and joint projects in EHS issues.



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1. Introduction and Objectives

Shareholder value can be affected by a wide range of environmental, social, human rights and security issues, as well as by a full range of financial and broader economic factors. Biodiversity is just one of the issues that can contribute to the risks and opportunities faced by a given company. Companies may face difficulties gaining permission and social license to operate in new sites, as well as liabilities, damage to reputation and increased operating costs unless they can demonstrate high standards with respect to biodiversity. As an identifiable and contributory risk, 'biodiversity risk' is increasingly receiving specific attention by companies.

Biodiversity has been considered as a strategic issue to be addressed by the ARPEL Environment, Health and Safety Committee (CASYSIA). At the 2005 CASYSIA meeting in Fortaleza, BRAZIL it was decided that ARPEL Executive Secretariat would make a survey to analyze the management status and the needs of the Member Companies and that the results would be presented at the 2006 CASYSIA Meeting for discussion. This document presents the findings of the results of the survey.

The performance of ARPEL Member Companies in biodiversity management was surveyed. The survey of companies' performance was developed considering a set of criteria under 14 headings across the five main elements of risk assessment, governance structures, policy & strategy, management & implementation and assurance & reporting. To complete the survey, companies were asked what they expected as results and what added value would derive from developing the biodiversity issue within the CASYSIA.



2. Results

Overall, it is fair to say that biodiversity management is at its early stages among the respondents. However, companies can be divided into three categories:

Companies Engaged and Actively Managing

- Biodiversity is acknowledged as a potential business risk and opportunity
- Biodiversity risk has been formally assessed
- Specific related policy commitments and management tools in place

Companies Aware and Mobilizing

- Awareness demonstrated through acknowledgement of company's impact on biodiversity, its inclusion within certain aspects of risk management and/or passing reference within policy documents
- No explicit supporting biodiversity strategy or guidance for staff

Companies in Early Stages

- Little or no evidence that potential risks relating to biodiversity have been formally assessed
- No publicly expressed rationale provided for any conclusion that biodiversity is not a business risk
- No explicit policy or management stance on biodiversity



3. Key Findings

A number of companies have made great strides in developing processes to manage biodiversity-related risks and opportunities. Some are aware of the issues and are mobilizing resources to address them.

3.1. Risk Management

The analysis of the risk management approach taken by the companies regarding biodiversity provides the following conclusions:

- Almost half of the companies consider biodiversity as both a potential risk and an opportunity for their business. Four companies deem biodiversity as an opportunity and three as a potential risk. The "positive" attitude (i.e., those companies that consider biodiversity as an opportunity) has as a rationale the potential to create an environmentally-friendly culture within the company personnel as well as the fact that it is a driver to strengthen the company environmental management. Those seeing the issue as a business risk foresee higher difficulties to obtain funding from different investors, limitations in the possibilities to expand their operations in sensitive areas as well as an impact on reputation.
- Despite the above mentioned, most companies have not allocated enough resources to formally
 assess the business risk that biodiversity issues pose to their companies. Companies usually consider
 biodiversity risks when developing their environmental impact assessment and management plans.

3.2. Governance

This section evaluates the extent to which responsibilities are assigned for managing biodiversity related risks, whether the risk identification and management framework incorporates biodiversity issues – an element of which is dialogue with key stakeholders – and the extent to which these are factored into core decision-making processes. The evaluation of the structures the companies have in place to ensure that biodiversity-related risks and opportunities are identified and incorporated into key decision making and management procedures indicates the following:

- Clear assignment of responsibilities for managing a company's impact on biodiversity or any major sustainable development issue is a prerequisite for achieving lasting improvements in performance. While leading companies acknowledge this, assigning responsibility for managing biodiversity and incorporating biodiversity within internal company divisions, most of the companies surveyed showed no evidence of this. In this situation, it is hard for stakeholders to form a view as to whether a company is managing its biodiversity impacts effectively.
- Stakeholder engagement is vital to inform understanding of biodiversity issues and impacts and possible responses at local and global level. Despite the importance of this process, some companies are just starting to identify the key stakeholders. Almost every company relies on the feedback provided by their governments during the environmental impact assessment of specific projects.



3.3. Policy and Strategy

This section asks the questions 'Does the company have a clear policy statement on biodiversity and is this supported by a strategy which is designed in such a way to drive performance improvements throughout the business?' From the assessment of the level of disclosure and quality of companies' policies and strategies on biodiversity, it can be conclude that:

- A number of companies focus on site-level management of biodiversity impacts with no reference to biodiversity in company-wide policy or strategy documents. To stakeholders, this signals an awareness of the issue at some locations, but may be insufficient to reassure them that the company has gone through a consistent and rigorous process of evaluating all their operations and has either identified those with significant biodiversity risk exposures or concluded that biodiversity risk is nealigible.
- Over half of the companies do not have some form of company-wide policy or strategy commitment in place. Two companies have a specific biodiversity policy or guidance.

3.4. Management and Implementation

This section focuses on the extent to which the company has the mechanisms in place to ensure that biodiversity policy and strategy are implemented. Such mechanisms include tools for site selection, environmental impact assessments and site management plans which incorporate biodiversity, training and awareness raising on biodiversity issues and the existence of strong partnerships with conservation organizations that drive local and corporate level performance improvements, that include positive contributions to biodiversity conservation. The level of implementation of policy commitments related to biodiversity through the use of management tools and partnerships varies considerably:

- Some companies demonstrated that biodiversity was factored into a key management tool such as environmental impact assessments.
- Very few companies have specific biodiversity management tools indicating an important gap needs to be filled. One company has formalized tools that map its business operations against areas of high biodiversity value to incorporate biodiversity criteria within its environmental and social management process. This tool is useful to evaluate potential impacts on biodiversity at each stage of the project development process, anticipate problems and take steps to avoid them.
- Few companies implement biodiversity activities at site level through the use of partnerships with environmental NGOs¹. Such partnerships have the potential not only to deliver site level biodiversity programs, but also to inform overall corporate strategy and increase the level of trust with NGOs.

3.5. Monitoring, Reporting and Assurance

This section evaluates the mechanisms that companies have in place to ensure that the policy, strategy and management systems are being implemented effectively and the extent to which publicly reported information communicates a fair picture of the company's efforts to manage biodiversity related risks. Company processes to ensure that policy commitments and management systems related to biodiversity are implemented appear to be almost non-existent or in their very early stages:

¹ NGOs – Non Governmental Organizations



- Ten out of the thirteen responding companies do not report information on their activities to manage biodiversity risks, while the other three show detailed disclosures and are working with industry initiatives to develop acceptable standards of reporting. Shareholders need such information to reach an informed view of the extent to which companies are managing this risk appropriately.
- Even the companies most advanced in considering this issue are struggling to identify appropriate
 performance indicators for biodiversity management. Nonetheless, these companies could
 significantly improve their reporting by disclosing more fully the actions undertaken to understand and
 manage biodiversity.
- Where biodiversity is deemed a significant risk, it is expected to see that the company is monitoring
 the implementation of appropriate site level and corporate management systems. However, only two
 companies are about to develop assurance processes for this issue.



4. Expectations on the Work to be Developed through CASYSIA

This section was aimed at recognizing the expectations that companies have with regards to addressing the biodiversity issue in the context of the CASYSIA in order to receive an added value. Individual responses reflect their stage of biodiversity risk management:

- The array of expected results can be grouped as follows:
 - ✓ Awareness, training and exchange of experiences
 - ✓ Understand the link between biodiversity, environmental issues and sustainable development
 - ✓ Mainstreaming biodiversity issues into EHS management systems and financial aspects
 - ✓ Indicators/benchmarking
 - ✓ Identification/development/implementation of best practices
- Companies foresee that the results indicated will provide them with the following added value:
 - ✓ Improved environmental performance
 - ✓ Assistance in their learning process through synergy
 - ✓ Improved reputation by having ARPEL validation of practices utilized by individual companies
 - ✓ Enhanced relationship with other stakeholders (e.g., communities and NGOs)
 - ✓ Minimize legal liabilities



APPENDIX - Results of the Survey to Identify Status and Needs of ARPEL Member Companies regarding Biodiversity Management

Risk Assessment

1. Is biodiversity acknowledged as a potential reputational or operational risk and opportunity for your company?		
ANCAP	Both	
ECOPETROL	Biodiversity has been considered as a potential risk for the activities of the company. However, in particular cases in some operative areas, programs have been developed that generate opportunities for the biodiversity (Artificial reefs project for Gulf of Morrosquillo of the Transport Department)	
Pan American Energy	We consider biodiversity like a potential opportunity. We believe that although always we have been working on Environment, the concept of Biodiversity is much wider and –at the same time- focused in the areas we operate.	
PCJ	Yes	
PDVSA	It is an opportunity to develop a socio-environmental culture in the employees as well as of the corporate staff with the purpose of strengthening an environmental management focused on prevention and conservation of the natural resources.	
PEMEX	It is seen more like an obstacle rather than an area of opportunity.	
PETROBRAS	To date, the biodiversity is being addressed as a risk. By disregarding the risks related to biodiversity significant delays in the projects development could be faced generating financing difficulties since the investors are increasingly demanding the fulfillment of requirements that demonstrate the companies' social and environmental responsibility. Besides this, the lack of a biodiversity risk management could also generate a larger difficulty in obtaining environmental licenses, especially in ecologically sensitive and legally protected areas. Finally, it is important to highlight that the impact in the biodiversity is considered as a risk because it can jeopardize the image and reputation of the company before the investments market and the civil society as a whole.	
PETROECUADOR	It can be considered a risk from the perspective that limits the possibility of expansion, particularly within protected areas.	
PETROPERU	PETROPERU, within its Environmental Management, considers biodiversity as an element that could be affected and therefore as an opportunity to prevent its deterioration.	
PETROTRIN	Yes	
RECOPE	It is not a risk but a very vulnerable environmental aspect to be affected by the oil companies operations in biodiversity-rich areas, which is the specific case of Costa Rica where more than 14% of the national territory is protected and the tourism has been focused to the ecology. RECOPE has operations that cross the whole country from one ocean to another. It is a potential opportunity to improve the management capability within the framework of the Rio 92 Agreement.	
RepsolYPF	Yes	
Staatsolie	Yes, Staatsolie acknowledges that biodiversity is a potential reputational or operational risk and an opportunity.	



Risk Assessment (Cont'd.)

2. Have biodiversity risks been formally assessed by your company? Please give some examples.		
ANCAP	Biodiversity is being evaluated in the different sites of the company in the country.	
ECOPETROL	The evaluation of biodiversity risks is carried out within the projects' environmental planning process and Company facilities, when developing environmental impact assessment studies and environmental management plans.	
Pan American Energy	To date, we are carrying out geo-referenced environmental baselines. We begin with those layers that -due to the impact of our industry- exert certain priority. To date the risks are evaluated neither formally nor totally. We are in the stage of characterization.	
PCJ	A Biodiversity desk study is being done in the area of Oil & Gas Exploration. PCJ is also making a contribution towards development of a National Biodiversity study, as it relates to cleaning up the Kingston Harbor (7th largest natural harbor in the world)	
PDVSA	In the of offshore activities a project is being carried out where the conservation objectives are established based on the premises of biodiversity and the marine coastal ecosystems sensitivity. It is also being developed an environmental baseline project in the oil belt to determine with a systemic vision the conservation status of land ecosystems allowing for adequate decisions to be made and based on the knowledge of the ecosystems.	
PEMEX	Not in a direct way, but through what norms establish and the conditions to the authorizations, as well as the studies to identify the effects of the oil activities in the ecosystems or follow-up of this.	
PETROBRAS	Not formally. Just some initiatives like Environmental Regional and Local Characterizations and Environmental Impact Studies for the undertakings, considering the legal requirements, therefore without a focus in the potential specific risks of biodiversity. To date, only the supply area ("downstream") is carrying out a report on the degree of severity of its Units, based on biodiversity sensitivity near those units. Out of that survey, it is intended to subsidize an action plan for biodiversity risk assessment, prevention and minimization for the Supply Businesses Area.	
PETROECUADOR	Not formally, but it is considered within the impacts assessment framework.	
PETROPERU	The company, within its ISO 14001Environmental Management System, considers biodiversity risks as part of the environmental impacts identification. The company does not have a formal biodiversity risks assessment.	
PETROTRIN	Yes, partially. E.g. Vulnerability Assessments to Climate Change driven sea level rise have been conducted for the West Coast of Trinidad which looks at potential impacts on biodiversity over a 65 year time frame with sea level rise simulations.	



Risk Assessment (Cont'd.)

2. Have biodiversity risks been formally assessed by your company? Please give some examples. (Cont'd)	
RECOPE	They have not been formally evaluated, but studies on environmental sensitivity have been carried out of the route where the pipeline crosses from the county of Lemon, Caribbean sea, until the Barranca terminal, located in the county of Puntarenas, in the Pacific ocean. Additionally, studies have been carried out in the sector embracing the discharge of the river Matina to the Cahuita National Park. This sector covers the area of fuel discharge through the Caribbean sea, Moín bay where two very important RECOPE facilities are located, the oil dock and the sale of marine fuel to the ships that enter to the dock, where exports and imports are made. Similar studies have been made in the Puerto Caldera dock, where occasionally, fuels deliveries are made, this dock is not prepared to receive hydrocarbons, so oil spills safety measures are extreme, to avoid damages to the biodiversity, mostly formed by wetlands and mangroves.
RepsolYPF	Yes, Environmental Impact Assessments are carried out, including biodiversity baseline studies, establishment of impacts and associated mitigation measures. Moreover, there is a Biodiversity Plan under development to strengthen the evaluations of said aspects.
Staatsolie	Biodiversity risks have not been assessed by Staatsolie.



Governance

3. Does your company have a clear assignment of responsibilities for managing the impact on biodiversity and accomplishing an established level of performance?		
ANCAP	No	
ECOPETROL	No, the Company does not have a specific assignment as such to manage the biodiversity impacts. What ECOPETROL has is an assignment of general responsibilities related to the environmental issues.	
Pan American Energy	Yes, responsibilities involve the upper management to the technical level.	
PCJ	Not yet	
PDVSA	With the new Environment and Occupational Hygiene Corporate Management, guidance is given on issues considered as high-priority, such as renewable resources and their impacts: ecosystems, water, biodiversity, communities and environmental liabilities.	
PEMEX	The environmental impacts of the projects, in a general way, depend on the Environmental Protection and Industrial Safety area.	
PETROBRAS	The company recently approved a "Model for Potential Biodiversity Impacts Management" as part of a corporate policy on the topic. Therefore, to date, goals were not established for this area.	
PETROECUADOR	No	
PETROPERU	Yes, through the operational and procedures' matrix of the Environmental Management Systems of our Operations, as well as in the environmental impacts significance matrixes.	
PETROTRIN	There is no clear assignment of responsibility for long term impact on biodiversity. There is a clear assignment of responsibilities for conducting baseline surveys on biodiversity for all areas of operations. Natural Resource Damage Assessments are conducted which cover impacts on biodiversity on a more short term basis.	
RECOPE	Not so specific. The assignment of responsibilities exists within the framework of national Environmental laws, besides the certification environmental framework of the Environment and Energy Ministry, known as Ecological Flag. RECOPE assigned the necessary resources for the acquisition of equipments for the response against spills in sea, rivers and lagoons. In addition, it has trained the environmental personnel in the management of that type of emergencies.	
RepsolYPF	According to the present Environment and Safety structures	
Staatsolie	No, Staatsolie does not have a clear assignment for biodiversity risks management.	



Governance (Cont'd)

4. Does your company have an established stakeholder engagement process addressing biodiversity issues (i.e., how do you obtain feedback on your company's understanding on biodiversity issues at the corporate or project level?)		
ANCAP	0800-telephone service and an "eco mail" indicated in the company's Web site.	
ECOPETROL	It does not exist –within the company- as an engagement stakeholder process for biodiversity issues. The level of interaction made with stakeholders (environmental authorities: Ministry of Environment and Regional Autonomous Authorities) is displayed during the environmental studies assessment and follow-up of (Environmental Impact Assessments and management plans). Also, there are other interactions with stakeholders (Communities) during the elaboration and dissemination process of the environmental studies carried out with the communities at the area of influence of ECOPETROL projects.	
Pan American Energy	As mentioned in question number 2, we are in the characterization stage. At this point, we count with the support of different local and national NGOs. In addition, we have the cooperation of different consulting groups, which in several cases belong to local Universities.	
PCJ	We engage in public consultation sessions at the project level	
PDVSA	DID NOT RESPOND	
PEMEX	Contributions and donations are granted to support natural protected areas, through NGOs, but it does not yet exist as integral part of a project.	
PETROBRAS	Not to date	
PETROECUADOR	No	
PETROPERU	The company has identified the stakeholders, and is working on their involvement related to environmental mitigation as well as preventative measures –and therefore to the biodiversity.	
PETROTRIN	There is no established stakeholder consultation process specifically for biodiversity; however, through ISO 14001 training sessions with employees, biodiversity issues are covered. Through IPIECA BDWG ² biodiversity indicators are currently being reviewed.	
RECOPE	The process as such does not exist. We are in contact with universities and environmental academics from Costa Rica, through whom we obtain feedback and upgrade knowledge on biology and biodiversity. For new infrastructure projects, Environmental Impact Assessments are developed, including environmental management plans. When the project starts operating, the environmental management and control plan is implemented.	
RepsolYPF	To work on this item begins through a Biodiversity Working Group, specifically composed by the different sectors of the company.	
Staatsolie	For each new development, an appropriate EIA is prepared and stakeholders meetings are held to address environmental and safety issues. Biodiversity conservation is included in those meetings.	

 ² IPIECA BDWG – Biodiversity Working Group of IPIECA (International Petroleum Industry Environmental Conservation Association)
 ARPEL Environmental Report Nr. 29



Policy and strategy

5. Does your Company have an explicit company-wide policy/philosophy/objective towards biodiversity conservation? Please write it as it appears in your company report.		
ANCAP	The Conservation Principle of the in force Environmental Policy refers to biodiversity ("ANCAP will provide a way of sustainable development, in harmony with the community, careful of the conservation of the natural resources, as well as of the sound use of non renewable resources and mindful of the ecosystems and the biodiversity")	
ECOPETROL	There is not a clear corporate policy, philosophy or objective towards biodiversity conservation.	
Pan American Energy	What we have is a clear objective, but it is not clearly set in a policy.	
PCJ	No	
PDVSA	PDVSA environmental policy is guided by a systemic and integral vision towards the conservation and enhancement of life assets of the Republic of Venezuela, expressed in the biological and socio-cultural diversity, in the water sources, within the framework of the efficient and balanced use of energy management resources derived from the oil and gas in a context of endogenous sustainable development. From this viewpoint and with an extremely preventive character, our corporate policy is expressed mostly in a strategic action focused to minimize and/or to avoid, as far as possible, the negative impacts caused by the activities and the processes carried out by the corporation; this is complemented with the purpose of settling the social and ecological debt represented by the environmental liabilities generated by industry in the past. This strategic action is –simultaneously- based on the knowledge derived from the links established among the conservation status of environmental systems and the oil and gas industry operations, the evaluation of these systems from the perspective of its relations with vulnerability and risks, and fostering a socio-environmental holistic culture plenty of educative-environmental strategies and within the normative legal framework. This strategy must reflect our implementation of the mechanisms that guarantee the coresponsibility of the personnel and the engagement of the organized communities in areas of influence of the company, in their surveillance and environmental protection duties, and in the efficient use of energy and natural resources. Also, it will be according with the environmental policies of the governmental regulatory entities.	
PEMEX	No, but "respect to the environment" is among PEMEX institutional values.	
PETROBRAS	The company did not explicitly establish a policy and a philosophy towards biodiversity. However, it is important to highlight that a "Model for Management of Potential Impacts to the Biodiversity" was approved, that represents an important step in the sense of establishing a Biodiversity policy within PETROBRAS.	



Policy and strategy (Cont'd.)

5. Does your Company have an explicit company-wide policy/philosophy/objective towards biodiversity conservation? Please write it as it appears in your company report. (Cont'd.)		
PETROECUADOR	The Company promotes Sustainable Development within its activities, according to the Principles of the 1992 Rio de Janeiro Declaration. It also has environmental policies that promote -in general terms- the environmental protection.	
PETROPERU	One of the PETROPERU S.A. Environmental Policy guidelines requires that: "The prevention of environmental deterioration that may be derived from its future activities, products and services". Also, within the principles included in the 2006-2010 Strategic Plan of the Company, the Environmental Protection has been considered, stating: "We respect biodiversity and the right of the population of having a healthy environment through our activities, products' quality and international standards, fostering an environmental culture in the personnel, suppliers, customers and the community".	
PETROTRIN	We don't have a specific policy aimed at Biodiversity Conservation, however, we do have an Environmental Policy Statement that emphasizes the following: "PETROTRIN as part of its Corporate responsibility is committed to the provision of effective Health, Safety and Environment management systems for the continuous and improved quality of the Health and Safety of its employees, the public and of the environment. Furthermore, it is committed to the sustainability of the natural environment upon which its operations may have an impact. As a result, PETROTRIN shall take every measure, be it systematic, scientific, practical or otherwise in all its operations to prevent any discharge of hydrocarbon material into the environment as well as to prevent the occurrence of any incident that could adversely affect the Health and Safety of adjacent communities." "Ensure that its operations comply with all applicable environmental regulations of Trinidad and Tobago" "Ensure that all employees are informed of their individual responsibilities and are trained and empowered in their actions to be taken towards managing the environment" "Anticipate potential emergencies arising out of the Company's operations that could threaten the natural environment and prepare appropriate plans to ensure a prompt and effective response to these emergencies"	
RECOPE	There is nothing specific related to the biodiversity conservation, but it is included in the environmental component of the mission and vision.	
RepsolYPF	Since the adoption of a Position on Biodiversity, developed in July, 2005, efforts were made –throughout this year- to incorporate said commitment to the new version of Environment, Health and Safety Policy, as quoted below: "The inclusion of environment, health and safety criteria within the whole cycle of activities: RepsolYPF activities will consider environment, health and safety criteria within its strategy, all its activities and during their life cycle, aiming at preventing damages to people and goods, and to minimize the impact on the environs and the impacts on climate change, respecting the biodiversity and the local communities"	



Policy and strategy (Cont'd.)

5. Does your Company have an explicit company-wide policy/philosophy/objective towards biodiversity conservation? Please write it as it appears in your company report. (Cont'd.) No, Staatsolie does not have a biodiversity conservation policy as such. However in the company's HSE policy it is stated: "it is the policy of Staatsolie to conduct

Staatsolie

No, Staatsolie does not have a biodiversity conservation policy as such. However in the company's HSE policy it is stated: "it is the policy of Staatsolie to conduct business activities in such a way, as to prevent harm to the safety and health of its employees, neighbors, and the environment that may be affected by our operations". This sentence in the HSE policy statement of the company implies its philosophy towards biodiversity conservation.



Policy and strategy (Cont'd.)

6. Is your company-wide policy/philosophy/objective towards biodiversity conservation reflected in specific plans to be implemented during projects or do you only implement site-level biodiversity management strategies?		
ANCAP	Specific management strategies	
ECOPETROL	Specific activities at site-level are implemented, according to the environmental management plans derived from the environmental impact assessments developed for projects and activities of the Company.	
Pan American Energy	The biodiversity strategy is based on site characterization, understanding or management units or areas, and at the same time evaluate the impacts that the projects developed in those areas may have on the biodiversity	
PCJ	We only implement site-level biodiversity management strategies.	
PDVSA	The environmental policy guidelines are implemented through the strategic objectives, and these –at the same time- are implemented within the production areas through specific projects on conservation, biodiversity, environmental education, air quality, implementation of agro-diverse systems and alternative renewable energies, among others.	
PEMEX	Legal compliance –beyond what's stated in the law- is stated.	
PETROBRAS	As a first stage, the action plans for biodiversity management should be implemented at the unit representing more environmental sensitivity at their environs. In the future, this should be improved for all the units, until we achieve the level of each project individually.	
PETROECUADOR	It is not specific to the topic; it provides general guidelines.	
PETROPERU	Only specific biodiversity management strategies are implemented on each of our operations through the Environmental Management System objectives, goals and programs of each one of the operations.	
PETROTRIN	 Yes. Currently developing Biodiversity Action Plan (BAP) which involve Vulnerability Assessments to sea level rise Baseline Surveys on biodiversity throughout our operations Audit of operations in sensitive areas leading to well abandonment e.g Trinity Hills Wildlife Sanctuary 	
RECOPE	None.	
RepsolYPF	These actions are considered within the proposed 2006/2008 Work Plan	
Staatsolie	No	



Management and implementation

7. Is biodiversity considered in all relevant stages of your company projects?		
ANCAP	Yes, in the corresponding Environmental Impact Assessments	
ECOPETROL	Within the environmental planning process of the Company projects, and keeping in mind the demands of the environmental authorities, the biodiversity is considered in the development and implementation of environmental studies (Environmental Impact Assessments and environmental management plans).	
Pan American Energy	Yes, the company has a Projects Management model, divided in different stages. Each of them, specially the initial one, takes into account the impacts that can cause.	
PCJ	No	
PDVSA	At this point, it is not considered in all processes, but actions are being developed, aiming at giving the real dimension that have the environment and the conservation of natural resources, not only the biodiversity.	
PEMEX	No, we are recently integrating them to national territory ordering exercises, where the biological conditions of the territory are implicit and will have to be considered in future projects.	
PETROBRAS	See previous response	
PETROECUADOR	Not specifically; it is part of the portion corresponding to the environmental protection of natural areas.	
PETROPERU	Environment is considered as a strategic cornerstone, and therefore includes the biodiversity as an important factor to develop sustainable projects, and to be socially responsible.	
PETROTRIN	No, with the exception of major projects for which regulatory approvals such as a Certificate of Environmental Clearance (CEC) is needed. CECs are required by the Environmental Management Authority (EMA) for new projects as well as modification to existing plant and infrastructure.	
RECOPE	Yes, related to Environmental Impact Assessment.	
RepsolYPF	They are considered within the actions of the 2006/2008 Work Plan	
Staatsolie	No	



8. Does your company have specific biodiversity management tools in place? Please provide		
examples.	Al de la constant de	
ANCAP	Not specific	
ECOPETROL	Biodiversity management in projects and operations of the company are developed through the Environmental Management Plans specific for each project or facility.	
Pan American Energy	We can refer to the Geographic Information System as a tool we are utilizing to implement our management.	
PCJ	No	
PDVSA	An offshore Project is about to finish, that will be a tool for the environmental management, planning and decision making for undertakings in the short, medium and long term. This project is pioneer in marine coasts, since it identifies and classifies ecosystems that should be preserved.	
PEMEX	No. When support for conservation efforts is needed, we make contributions or donations or in some cases, the work is channeled through an academic institution.	
PETROBRAS	Yes. The <i>Management Model for Potential Biodiversity Impacts</i> sets criteria and procedures for the management of potential biodiversity impacts in areas influenced by facilities, activities, operations and undertakings in the whole life cycle and in all units that embrace the PETROBRAS System. This Model was approved by the company, and will be transformed into specific Processes and Implementation Standards in several Business Areas.	
PETROECUADOR	No	
PETROPERU	No	
PETROTRIN	Yes; they form part of existing management tools, e.g. Environmental Impact Assessments, Vulnerability Assessments to sea level rise, Quantitative Risk Assessment, Natural Resource Damage Assessment, Environmental Auditing and Monitoring, Emergency Response Planning, Training, ISO14001 EMS	
RECOPE	Yes, for Environmental Impact Assessment studies and <i>Ecological Flag</i> programs at two distribution terminals, La Garita and Barranca, established by the Environment Ministry. The tools utilized integrate the mathematical-statistical baggage in biology, like the methods of capture-recapture, quantitative bio-systematic and populations' ecology.	
RepsolYPF	These actions are considered in the proposed 2006/2008 Work Plan. Specific accounts for biodiversity management have been foreseen for the new Guideline on Environmental and Safety Costs, and documents are being developed that will allow facilitating the management and the implementation of criteria at the different business stages.	
Staatsolie	No	



9. Does your company implement biodiversity activities at project/site level through the use of partnerships with environmental NGOs? Please provide examples		
ANCAP	Sometimes, presentations from Environmental NGOs are incorporated to the training activities.	
ECOPETROL	Yes, in particular cases, in some operating areas, programs that generate opportunities to the biodiversity have been developed. The artificial reefs project at Gulf of Morrosquillo of the Transport Department is one of these particular cases where starting from an inter-institutional agreement with the Association of Fishermen from Gulf of Morrosquillo, the governorships of the municipalities of Coveñas, Tolú and San Antero, the government of the department of Sucre, the Autonomous Regional Corporation of Sucre (environmental regional Authority) and other institutions will develop this initiative	
Pan American Energy	Yes, sharing with national NGOs the election alternatives for tracing a gas pipeline, before starting the work in previous stages to the making of the work. Yes, using field supervisors of the same NGOs.	
PCJ	We engage the services of some NGOs, e.g.: The Jamaica Environment Trust.	
PDVSA	For projects development, strategic alliances with Universities, Environmental Consulting Firms, INTEVEP, among others are established.	
PEMEX	Through donations, the company has supported the Reserve of the Centla Swamp biosphere in Tabasco, the Veracruz reef National Park, turtle camps, and reef fauna and flora protection areas in Tuxpan in Veracruz, fauna and flora protected area in Terminos lagoon, Campeche, Cañadas de Patla, Puebla.	
PETROBRAS	The company develops projects, that, among its objectives, include, aspects related to the biodiversity and to the improvement of life quality of the local communities. In general terms, these projects count with the support of NGOs. Below some examples: **Project Ecological Green Belt** Transpetro, is developing this project with the support of UNIBIO (an NGO), aiming at the environmental preservation of an area of about 70.000 m², having programs that take care of the community through informal environmental education and communitarian orchards. **Pilot Project of Carbon Sequestration with Reforestation and Combination of Native and Oleaginous Species for energy purposes and employment generation and incomes for communities in isolation in Marajó island.** The objective is to develop a viable and reproducible model including reforestation activities for carbon sequestration, developed in degraded areas for ecosystem recovery having native and oleaginous species for energy generation, allowing the employment generation –permanent and temporary- for the local community. The partners of this projects are: the Federal Rural University of Amazonian (UFRA) and the Sustainable Amazonian Institute (IAS)	



9. Does your company implement biodiversity activities at project/site level through the use of partnerships with environmental NGOs? Please provide examples (Cont'd)	
PETROBRAS (Cont'd)	 Dynamic levels and biological stability of forest growth rates in the South of Brazil and its potential for carbon credits generation Objectives To evaluate the carbon stock of the main species planted in the South of Brazil and its potential for carbon credits generation as afforestation-reforestation project, according to the Kyoto Protocol. To subsidize the development of Brazilian base line and monitoring methodology as CDM forest projects To subsidize the development of (Project Design Document) for Project in Brazil as afforestation and reforestation. Partners of these projects are the Federal University of Parana (UFPR) and ECOPLAN Institute.
PETROECUADOR	Within the context of the previous two questions, activities such as reforestation and research are fostered.
PETROPERU	No
PETROTRIN	Yes, we use NGOs to assist in Biodiversity Surveys. Through Environmental Impact Assessments we consult with NGOs as part of the process. A prime example of NGO partnership is the Pointe-a-Pierre Wildfowl trust with an NGO that is located within the PETROTRIN refinery. They do environmental education and public awareness; research, breeding and re-introduction programs for locally endangered, wetland birds; lobby for improved environmental policies; as well as promotion and implementation of the wise use of our natural resources.
RECOPE	No
RepsolYPF	 Several partnerships and agreements have been established. Below some examples: Environment and Safety Department: agreement with the Ecocenter Foundation. Support for the population study of Southern Frank Whales, in the Puerto Madryn area, Argentina. The Lujan del Cuyo Refinery and the Department of Renewable Natural Resources of Mendoza State, agreed to create the "Center for Rescue, Rehabilitation and Conservation of Wild Birds", that will operate at the Ecological Reservation (located at the same refinery) aiming at preserving species endangered or at risk through rehabilitation and relocation. Repsol Brazil: Repsol Forest Program (Brazil) support to a program "Forest of the Future" of the SOS Atlantic Forest Foundation". This Program aims at biodiversity conservation, protecting the fauna and flora and water resources. Repsol Exploration Peru, has established an agreement with Conservation International
Staatsolie	No



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10. Is biodiversity training one aspect of the overall HSE training for employees? And contractors?	
ANCAP	Partially for employees. For contractors, only in major projects.
ECOPETROL	Yes, in a partial way and for EH&S training programs for workers and contractors developed by the Integral Responsibility Area of ECOPETROL, biodiversity is a component that is addressed in a generic way.
Pan American Energy	This is an aspect to be improved. The concepts addressed during training –maybe- are not sufficiently complete or prepared for our supervisors and in particular for the contractors of the area.
PCJ	No
PDVSA	A socio-environmental culture is being developed through the environmental education network, through which the basis, principles and values related to conservation and biodiversity are established in the workers, communities at the environs of production areas.
PEMEX	It is a condition only in the Reserve of the Centla Swamp biosphere in Tabasco. It is a condition that SEMARNAT ³ imposes to grant the authorization of works in the reserve
PETROBRAS	Training on biodiversity issues is not systematized as topic of professional qualification, therefore, it is carried out on a case-by-case basis or by demand both for the company employees as well as for those contracted that are directly involved in the models implementation process. Recently, a seminar on "Biodiversity and the oil and gas industry" was developed, which main objectives were to promote the standardization and awareness of the whole work force on the issue, becoming the first initiative in this regard.
PETROECUADOR	No
PETROPERU	Biodiversity training aspects are related to environment, health and safety training programs.
PETROTRIN	Yes
RECOPE	It has been implemented for the operational personnel, first emergencies response personnel and professional staff that work in the environmental area, and to the contractors.
RepsolYPF	 These actions are considered within the proposed 2006/2008 Work Plan. The first week of October, a workshop on Biodiversity will take place in Lima, Peru. To disseminate RepsolYPF Principles on Biodiversity, the Biodiversity Work Plan up to 2008 and to share information on the projects we are developing. To gather those at RepsolYPF that work on issues related to biodiversity, as well as some external organizations working jointly with companies of the energy sector. To identify opportunities, projects and real initiatives to strengthen the 2006/2008 Work Plan and to implement the RepsolYPF Principles on the topic. Said workshop will also have an "in company" course, dictated by professional of the Smithsonian Institute on Biodiversity Action Plans (BAPs)
Staatsolie	Biodiversity training is not part of the overall HSE training for employees and contractors.

³ SEMARNAT - Environment and Natural Resources Ministry



Monitoring, reporting and assurance

11. Do your company annual reports include information on the activities to manage biodiversity risks? If not, please indicate why.	
ANCAP	No, it is not customary.
ECOPETROL	No, the annual reports of the company show the general aspects of the environmental management and are not –specifically- focused on biodiversity issues.
Pan American Energy	We do not talk about risks related to the biodiversity. Our balances indicate environmental topics and –within them- biodiversity issues are included.
PCJ	No; because it was not considered as a high priority item up to now
PDVSA	The development of environmental indicators that reflect the environmental component within the activities of the industry is under way.
PEMEX	There is not a concept for environmental risk management, what is notified in the annual reports are some supporting activities in natural areas.
PETROBRAS	Yes. The company publishes a Socio-environmental Report, where information related to biodiversity is described in the Environmental chapter. The 2005 Report, quoted the following actions on Biodiversity risks management: ■ Environmental Assessment Project for the Guanabara Bay (RJ-Brazil) ■ Limnlogical Bio-indicators Projects applied to petroleum ■ Environmental oil spills sensitivity maps ■ Piatam - Potential environmental impacts and risks of the oil and gas industry in the Amazonian ■ Specific environmental monitoring projects of the oil exploration and production effects on water quality, soil and marine biota, highlighting: ✓ Deep waters characterization in the Campos Basin (RJ-Brazil) ✓ Environmental Monitoring in the Potiguar, Ceara, Halagaos and Sergipe Basins (Brazil) ■ Environmental sensitivity studies for areas under influence of Transpetro (Petrobras Transporte S.A.) operations. The project embraces 108,000 km of pipelines and 6,000 km of shoreline in 2 shoreline terminals.
PETROECUADOR	No
PETROPERU	Not yet; because we do not have indicators to be included in the annual reports.
PETROTRIN	Yes
RECOPE	Included within the working programs of the environmental responsible parties. Also, projects are included within the Operative Annual Plan related to the environmental management.
RepsolYPF	Case studies and follow-up of some Global Reporting Initiative indicators are included.
Staatsolie	No, because we do not have a biodiversity management and monitoring plan.



Monitoring, reporting and assurance (Cont'd)

12. Does your company conduct internal or external audits on the extent to which biodiversity risks are being managed at all levels of the business?	
ANCAP	No
ECOPETROL	No, audits both internal as well as external of the company evaluate the general aspects of environmental management and they do not evaluate the biodiversity topics specifically.
Pan American Energy	Not specific audits on biodiversity. To date, they are part of the environmental audits.
PCJ	No
PDVSA	DID NOT RESPOND
PEMEX	No
PETROBRAS	Audit programs, both internal as well as external, consider –still in an early stage- the aspects related to biodiversity risks. Therefore, the–recently approved- Management <i>Model for Potential Biodiversity Impacts</i> foresees the development of specific audits to verify the biodiversity impacts management systems (to be developed), besides indicating the biodiversity item to be incorporated within the audit plans already in place.
PETROECUADOR	No
PETROPERU	PETROPERU is developing internal and external audits to the Environmental Management Systems of its operations, where biodiversity is considered part of it.
PETROTRIN	Internally through our certified Environment Management System and externally through regulatory bodies for the follow up of Environmental Impact Assessments for specific projects. Quarterly meetings with regulatory bodies where biodiversity issues are discussed.
RECOPE	External audits are carried out at the company by external agencies, Ministry of Environment, the National Environmental Technical Secretariat, and the Ministry of Health.
RepsolYPF	To date they are included in the Environmental audits.
Staatsolie	No, Staatsolie does not conduct this type audits.



Monitoring, reporting and assurance (Cont'd)

13. Does your company work with industry initiatives to develop acceptable standards of reporting?	
ANCAP	Only in ARPEL
ECOPETROL	No
Pan American Energy	No
PCJ	No
PDVSA	Yes, it is intended to have indicators where the environmental component be duly represented
PEMEX	Yes, but not related to biodiversity.
PETROBRAS	Yes. Regarding biodiversity, we work jointly with the Global Reporting Initiative (GRI) and with the Sustainable Business Index (ISE) of the Sao Paulo State Stock Exchange (BOVESPA)
PETROECUADOR	No
PETROPERU	The company is working on the presentation of suggestions and comments to several law projects related to institutional transparency. In addition, we have the Ethic and Transparency mailbox –within the web portal- where public at large can ask for any kind of information.
PETROTRIN	Yes, through quarterly meetings with regulatory agencies, IPIECA BDWG, and monthly meetings at the Association of Upstream Operators of Trinidad and Tobago
RECOPE	No
RepsolYPF	These actions are considered in the proposed 2006/2008 Work Plan.
Staatsolie	No



Monitoring, reporting and assurance (Cont'd)

14. Does your company monitor the implementation of appropriate site/project level and corporate management systems?	
ANCAP	Yes, in those areas where management systems have been implemented.
ECOPETROL	No; the company does not monitor the implementation of management systems adequate to site/project level and to corporate level for biodiversity issue.
Pan American Energy	Yes, we have ISO 14.001 certification that is applied to sites and projects.
PDVSA	DID NOT RESPOND
PEMEX	No. We do a follow-up to the fulfillment of the conditions established by the authority for each project.
PETROBRAS	Within the System of the company, there is an official program for Environment, Health and Safety Management Assessment, which considers assessments, audits and monitoring at all levels of the business. Meanwhile, and as mentioned above, the aspects related to biodiversity risks are addressed in a very limited way.
PETROECUADOR	Yes
PETROPERU	The company monitors the implementation and maintenance of the Environmental Management Systems based on the ISO 14001 norm, and will start the implementation of the Occupational Health and Safety OHSAS 18001, in all its operations.
PETROTRIN	Internally through our certified Environment Management System. This ensures semi annual audits by external auditors and continuous monitoring and auditing by PETROTRIN
RECOPE	Partially. This year two facilities were certified and indicators on the topic are being defined. Also, in the environmental impact studies, monitoring and environmental control programs and the post project environmental management systems.
RepsolYPF	These actions are considered in the proposed 2006/2008 Work Plan.
Staatsolie	No



Expectations on the work to be developed through CASYSIA

15. What are your expectations on the results to be obtained by working biodiversity issues through ARPEL?	
ANCAP	To acknowledge other experiences.
ECOPETROL	To acknowledge successful experiences from other Latin American companies of integrating the issue of biodiversity protection and preservation within their environmental programs, e.g., the PETROBRAS case (Amazonian forest, manatees, whales, Brasil das aguas, among others) to integrate said scheme within its strategy of corporate social responsibility.
Pan American Energy	Biodiversity is a very complex issue, even more if we intend to split it between environmental and sustainable development issues. ARPEL can be a link between the companies of the sector that support –through different working groups- to better understand the Biodiversity concept between the two mentioned above, support to determine biodiversity indicators considering the different areas, support the development of guidelines on biodiversity audits, as mentioned in a previous question, when it is not easy to generate and standardize criteria.
PCJ	To get a better understanding of the importance of biodiversity issues, and to learn how to incorporate biodiversity management into the EHS system.
PDVSA	 Development of strategies to address biodiversity and environmental conservation issues to face the major challenges of the oil industry expansion in Latin America. Exchange of knowledge on policy issues and actions developed by other companies regarding the environment aiming to improve the environmental performance in the oil and gas industry To harmonize criteria and concepts related to environment within oil producing companies and corporations. To be able to establish strategic partnerships to develop projects focused on biodiversity conservation.
PEMEX	To acknowledge best practices from other oil and gas companies regarding biodiversity. To set the biodiversity integration factor within the planning process for its consideration in the financial aspects of each project.
PETROBRAS	We expect that the information obtained allows us to visualize a diagnosis of the Latin American and the Caribbean Companies, regarding the way they are performing their biodiversity management. From said diagnosis, we expect to gather good indicators and identify best practices on the issue. The creation of an ambit for the exchange of experiences and ideas will allow that these practices always be under evaluation.



Expectations on the work to be developed through CASYSIA (Cont'd)

15. What are your expectations on the results to be obtained by working biodiversity issues through ARPEL? (Cont'd)	
PETROECUADOR	To have guidelines that allow the specific incorporation of biodiversity within the environmental management of the Company.
PETROPERU	We expect to evaluate our biodiversity management compared to other ARPEL member companies' management, and to implement the use of tools to improve said management.
PETROTRIN	Sharing of knowledge with energy operators, establish best practices, know how, develop tools and guidelines on biodiversity management
RECOPE	We have high expectations, because in our region the oil companies have to always manage while interacting with natural –especially biologic- resources. Interaction and knowledge exchange on the topic requires improvement. This is a very important aspect, since –in the case of RECOPE- biodiversity protection is included within a large environmental component, but should be addressed separately because it has all the ecological components of a system or habitat that might be in danger, be vulnerable or completely modified by a future project –or under development.
RepsolYPF	Similar experiences to the ones of IPIECA and OGP ⁴
Staatsolie	We expect to gain knowledge and tools to execute a biodiversity risks assessment, and to develop a biodiversity management plan.

⁴ OGP – International Oil and Gas Producers Association ARPEL Environmental Report Nr. 29



Expectations on the work to be developed through CASYSIA (Cont'd)

16. What is the value added of these results for your company?	
ANCAP	To contribute to improve environmental performance.
ECOPETROL	With the information obtained, ECOPETROL will be able to refer, analyze and implement the development and implementation of a biodiversity protection and preservation program within its corporate social responsibility strategy.
Pan American Energy	To facilitate the work we are implementing, gradually learning, allowing faster improvement by having the synergy of a joint work.
PCJ	Will be better informed and can more effectively focus the work in the future.
PDVSA	To achieve a green and environmentally responsible image. To contribute in the dissemination of a socio-environmental culture within our population (internal and external) leading to the development of environmental conservation coresponsibility.
PEMEX	Real support to conservation and sustainable use of nature, equilibrium in benefits sharing of the oil activity towards the nearby communities, improvement of people's perception of the company, minimization of risks to facilities and activities by those communities feeling affected in their patrimony.
PETROBRAS	The fact that we are associated and interacting with an organization with UN official consultative status and looking for industry best practices, adds value to the company. Our practices also become more valuable internally as far as they are recognized by an organization that represents a group of companies.
PETROECUADOR	DID NOT RESPOND
PETROPERU	The results obtained will allow us to keep improving biodiversity protection and thus the environment, aiming at continuing as an integrated and competitive energy company, leading the national market, having an increasing participation in the international market.
PETROTRIN	Minimize legal liabilities Enhance our Corporate image as well as the Company's reputation. Be on par with other oil and gas companies.
RECOPE	Environmental indicators To reduce internal and external costs by environmental pollution Good image as oil company Avoids payments form environmental damages Substantial improvement in the procurement of knowledge and its field implementation. To reduce the risk that represents a poor interaction with environmental NGOs in the region To develop environmental protection programs jointly with the community, under the umbrella of civil responsibility concept.
RepsolYPF	Enhancement of work plans with the incorporation of experiences from other companies operating in the region
Staatsolie	Contribution to the sustainable development of the oil and gas industry in Suriname by integration of biodiversity protection to HSE and social-environmental management.

ARPFI

Regional Association of Oil and Natural Gas Companies in Latin America and the Caribbean

Established in 1965, ARPEL is an association of 30 state owned and private oil and gas companies and institutions with operations in Latin America and the Caribbean, which represent more than 90 percent of the Region's upstream and downstream operations. Since 1976, ARPEL holds formal UN-ECOSOC special consultative status.

ARPEL works together with its members –through its various Committees and Working Groups- on issues that contribute to sustainable development in the Region:

- *Economic issues*: regional energy integration, pipelines and terminals, downstream and fuels
- *Environmental issues*: climate change, atmospheric emissions, oil spill contingency plans and best practices in environment and occupational health and safety management.
- Social issues: corporate social responsibility and relations with indigenous peoples

ARPEL develops a proactive attitude on issues of interest to the industry and produces documents representing the views of its members. It also promotes interaction among its members and with governments building alliances and establishing agreements with international organizations with the aim of presenting and developing a regional perspective. To accomplish its objectives, ARPEL organizes regional workshops and symposia to share information and best practices and develops technical documentation for capacity building and information exchange on the issues of interest to its members. To support its management ARPEL has an interactive Portal in which all documents developed by ARPEL Technical Committees and Working Groups are available for its Members. This tool also facilitates the virtual interaction within the ARPEL community and with those stakeholders that interrelate with it.



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