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REGIONAL ASSOCIATION OF OIL AND NATURAL GAS
COMPANIES IN LATIN AMERICA AND THE CARIBBEAN

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Relations with Communities Management System

Socio-Environmental and Reputational Risk Management Manual

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Sustainable Development of Communities - Relations with Communities Management System Socio-Environmental and Reputational Risk Management Manual

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1.0 INTRODUCTION

1.1 MANUAL PURPOSE AND SCOPE

The purpose of the Manual is to provide oil and natural gas companies in Latin America and the Caribbean with tools for Socio-Environmental and Reputational Risk Management.

In particular, the Manual addresses the following aspects:

a) a description of the nature and structural characteristics of the industry's socio-environmental and reputational risks.

b) the main elements and the conditions that distinguish them from different types of risks associated with the hydrocarbon sector.

c) the circumstantial factors that can put pressure on the company's interactions with the communities during the insertion, permanence and abandonment stages.

d) the possible conflicts with the communities and damages to the reputation stemming from negative socio-environmental impacts of the company.

1.2 MANUAL STRUCTURE

This manual is structured around four themes related to socio-environmental and reputational risk management.

1) Socio-environmental risk management

2) Reputational risk management

3) Prevention and transformation of socio-environmental conflicts

4) Biodiversity management as part of socio-environmental risk

1.2.1 Management of Socio-Environmental Risks

Refers to a company's management and adaptation capacity when faced with highly complex political-social situations in the industry's interaction with local communities in the different countries of the region in which they operate.

1.2.2 Reputational Risk Management

The purpose of reputational risk management is to protect the company's credibility capital by complying with high standards in community relations management and in the various dimensions of the company's interaction with the community, including the identification and transformation of situations that could affect the stakeholders' perception of its conduct or performance.

1.2.3 Prevention and Transformation of Socio-Environmental Conflicts

The handling and management of socio-environmental conflicts have a double purpose. On one hand, to contain inflated stakeholder expectations at the time of the company's insertion in the community, and on the other, as a process to channel the community's claims in the event of impacts on or changes to the environment and/or the customs and traditions of human settlements located in the direct area of influence of oil industry projects and activities.

1.2.4 Management of Biodiversity

The management of biodiversity is crucially important for the industry's socio-environmental risk efforts, considering the following factors:

a)   the overlapping of economic, social and environmental interests of the different stakeholders in the areas where hydrocarbon activities are developed.

b)   the interaction between the industry's activities, the biota components and the communities.

c)   the socio-cultural value assigned by the community to certain high biological diversity zones in the exploration or operations area.

d)   The political-institutional protection of certain natural spaces in which numerous hydrocarbon reservoirs are located and/or in which prospecting and production activities are developed.

1.3 THE CONCEPT OF RISK AND ITS SOCIO-ENVIRONMENTAL SIGNIFICANCE

Risk is the possibility of occurrence of a future and uncertain event with damaging consequences on property, human health or the environment.

Risk is also the contingency of a damage, which may be materialized at any time or never. Contingency is defined (Bueno, Campos, 1996, p. 168) as *"any external variable, environmental characteristic, surrounding factor or influential force which affects the effective design of the organization and its behavior"*.

Contingency is, then, *"something uncertain and contingent, which may or may not occur, and which usually represents a proposition whose truth or falsehood may be known through experience or through evidence, and not through reason"* (Morera Cruz, 2006, p. 8).

Any factor that can cause any kind of damage is a risk: a vulnerability, an obstacle, a danger, or a combination of these factors.

Vulnerability is any condition of weakness in a system or a process which results in a safety gap or risk, which may lead to a damage caused intentionally or involuntarily.

The oil and natural gas industry will understand "socio-environmental" risk as the kind of risk for companies that stems from their community involvement practices during the insertion, permanence, and abandonment of operations stages. Socio-environmental risk is conformed by sanitary, environmental, economic and socio-cultural elements.

Socio-environmental risk may also be analyzed by singling out its social and environmental aspects:

a) **Social risk** is the risk that originates in the unexpected or unforeseen conduct of the community in its interaction with the company. It is generally related to political, economic and cultural aspects of the communities, and is forged on the basis of the stakeholders' perceptions of the degree to which their expectations are met and of the commitments assumed by the companies during the insertion, permanence or abandonment stages.

b) **Environmental risk** is the risk that comes from the likelihood of occurrence of damage to the environment or to any of its components, which may also endanger public health and hygiene aspects. In the first case, risk is basically linked to the elements of biodiversity and natural resources in general, and in the second, to the possible consequences on human health and quality of living.

2.0   SOCIO-ENVIRONMENTAL AND REPUTATIONAL RISKS IN THE OIL AND NATURAL GAS INDUSTRY IN THE REGION

The oil and natural gas industry faces very high to moderate social instability and turbulence scenarios in the region, according to studies developed at a global level by The Economist Intelligence Unit (2009)[1]

Socio-political risk situations are strongly correlated to socio-environmental risk, which forces the industry to make every effort to avoid situations of conflict with the communities and thus guarantee the feasibility of its operations and protect its reputational capital.

Along with the increasing social tension in some countries in the region, companies are facing other pressures that justify the implementation of a socio-environmental and reputational management system. These pressures stem from the following factors:

a)   Crisis of a lack of trust in companies, and particularly in the hydrocarbon industry: a greater public scrutiny and higher stakeholder expectations are observed with regards to responsible performance by the industry.

b)   Regulatory pressures: new and stricter socio-environmental regulations in the regulatory frameworks for the extractive industry and oil and natural gas activities.

c)   Increasing difficulties and new socio-environmental requirements for access to international financing.

d)   Greater sensitivity and citizens' reactivity regarding socio.-environmental matters and specific aspects such as the relationship of companies with the native peoples and the management of biodiversity.

2.1   THE REPUTATION OF THE OIL AND NATURAL GAS INDUSTRY

At a global level, reputation is one of the most important sensitivities faced by oil and natural gas companies. Whether its reputation is based on real facts or on mere perceptions, the industry faces increasing obstacles and pressures from the environment in developing its activities, and is increasingly exposed to a decrease in its credibility.

By way of example, in a corporate reputation study carried

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[1] Economist Intelligence Unit study: *"Manning the barricades: Who's at risk as deepening economic distress foments social unrest" (*2009), has classified the socio-political risks of the countries of the region as follows:
a)   Very high risk: Haiti, Bolivia, Ecuador and Dominican Republic.
b)   High risk: Venezuela, Argentina, Panama, Colombia, Peru, Honduras, Belice, Guiana, Guatemala, Paraguay, Mexico, Jamaica and Nicaragua.
c)   Moderate risk: Brazil, Uruguay, Chile, Trinidad and Tobago, Cuba
d)   Low risk: Costa Rica

out in 2008 in the United States by the Reputation Institute[2] (the world's most prestigious organization specialized in this subject), this industry obtained the worst rating among all entrepreneurial activities of that country.

A few conclusions of the Global Pulse US 2008 investigation were the following:

- Oil and gas companies obtained the lowest levels of approval, with an average score of 51.45 points over a maximum of 100, which places them in the "weak reputation/vulnerability" category.

- Oil and gas companies obtained low results in the seven dimensions of Reputation (see dimensions in the chapter on Reputation Management of this Manual).

- Oil and gas companies exhibited one of the strongest downfalls in reputation, as compared with the 2007 ranking.

- A few large companies in the sector have fallen 5 points a year in the last period.

Management of socio-environmental and reputational risks arises as a key factor to counterbalance the industry's vulnerability in this setting and to favor compliance with the sector's business objectives.

It is important to note that a bad public perception regarding the conduct and performance of a particular oil and natural gas company may affect the industry as a whole, and therefore, managing reputation entails a double responsibility: towards investors and/or owners, as well as towards the sector in general.

2.1.1 Global Public Pressures Faced by the Industry

The industry faces increasing pressures from stakeholders at the global, regional and local scales, which forces them to be stricter in their performance and in the management of their socio-environmental risks.

The main questions come from the following aspects:

a) the tapping of non-renewable resources: fossil fuels.

b) the impact of their operations, processes and products on the environment, particularly their effect on climate change.

c) the prospective socio-political implications of the industry's presence in sensitive geopolitical zones, particularly in relation to subjects such as the preservation of peace, democracy and human rights[3]

d) conflicts with the communities.

2.1.2 Socio-Environmental Activism

The so-called "information society" has generated profound socio-political changes which have altered the environment of organizations. Information technologies and

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[2] Reputation Institute: "Global Pulse US 2008" http://reputationinstitute.com/events/US_Oil_Gas_Results-Global_Pulse_08.pdf
[3] WERNER, Klaus & WEISS, Hans: "El Libro Negro de Las Marcas" (The Black Book of Trademarks). Editorial Grijalbo Mondadori, Madrid (2004)

communications (ITC's) have enabled the appearance of virtual communications media and their different applications, such as web pages, electronic bulletins, e-mail lists, blogs, among many others, contributing to more horizontal and instantaneous information flows.

As a consequence of a broader access to information, public opinion is more informed and more aware and sensitive to ethical, social and environmental issues. There is an increasing participation in non-government organizations and citizen movements which exercise social control over institutions, demanding a responsible and transparent performance.

Many non-government organizations (ONG's) act at a global scale, through associations with local networks and actors, and are capable of mobilizing communities in the region's most remote places. Their mode of operation was described as follows in a front page article of a magazine specialized in industrial security[4]:

> *"An oil company operating in Canada had to move a 400 ton tank from the city in which it had been manufactured, to the place where it would be used in the oil fields. At first, the company decided to carry out the transport during the night; however, the authorities did not allow it, due to the danger involved.*
>
> *This decision exposed the company to another risk. Along the route, a Greenpeace protest blocked the progress of the truck. A group of protesters surrounded the vehicle while another group, made up of professional mountain climbers, climbed to the top of the tank. Through their cell phones, the "mountain climbers" initiated interviews with reporters, some of them from places as far away as Australia.*
>
> *A few protesters got out their sleeping bags and set up a sort of camp under the truck, while others hanged banners in front of the container. One protester used a laptop, energized via portable solar panels. The group took digital pictures and downloaded them via the Internet, providing the media with a real-time coverage of the incident. The press, alerted by the protesters, showed up at the place carrying their cameras."*

Regardless of the motivations that give rise or are attributed to these acts, the previous example illustrates the power of socio-environmental activism in terms of interrupting the activities and operations of a company and damaging its reputation.

Effective community relations management allows the industry to transform communities into its allies, minimizing the reputational risks to the company and the sector in general and reducing the weight of international activists' accusations and initiatives.

Knowing the corporate reputation and the positive or negative stakeholder perceptions allows for a better understanding of the attributes that can have a bearing on the company's value judgment.

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[4] Anderson, Teresa. *"Protests and the Politics of Protection"*, in Security Management International,. American Society for Industrial Security (2002)

2.2 SOCIO-ENVIRONMENTAL RISKS STEMMING FROM SOCIAL EXPECTATIONS AND PERCEPTIONS OF THE INDUSTRY IN THE REGION

The oil and natural gas industry usually invests and develops its activities in sensitive zones and in conflict-prone societies (International Alert, 2005). This entails significant risks, since the projects may *"trigger or sustain violence, or become focuses of resentment themselves[5]"*.

Oil and natural gas activity in Latin America and the Caribbean faces increasingly complex social scenarios originated in the high levels of inequity that characterize the region and in the population's expectations to access better living conditions.

This scenario creates strong external pressures for the industry, as a consequence of the dichotomy between citizen perceptions and social expectations:

a) On one hand, the industry *"is presented as a source of problems and damage; as the predators of wealth and of nature[6]"* (Bustamante, 2003).

b) On the other hand, oil activity is expected to contribute to the possibility of society as a whole solving the most urgent problems.

This duality is expressed through social pressures of a "mobilizing" or "distributionist" type. Its goal is to obtain a part in the sharing of resources through permanent confrontation with the industry, using mechanisms such as mobilizations and stoppages. Opposition to oil activity is, above all, the adoption of a strong negotiating position to obtain maximum benefits from the confrontation.

These dynamics have significant consequences for the industry's socio-environmental efforts, and require companies to monitor and consider the communities in the indirect area of influence of the projects, due to the following reasons:

a) the communities located near the industry's strategic infrastructure have a greater mobilization capacity, and their threat to bring an operation to a standstill grants them greater strength.

b) More distant communities, on the other hand, will feel affected by their difficulty to participate in the negotiations and eventual compensation, and will look for other means of pressure to participate in the distribution of benefits.

2.2.1 Causes of Socio-Environmental Conflicts

As with any productive activity, the hydrocarbon industry entails pressures on the environment and on communities. Although in general terms, the sector companies have optimized their processes thereby minimizing their impacts, socio-environmental and reputational risk management requires bearing in mind that socio-environmental conflicts are, in many cases, the argument used to express different

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[5] International Alert: *"Práctica Empresarial Sensible al Conflicto: Guía para la Industria Extractiva"*(Conflict-Sensitive Business Practice - Guidance for Extractive Industries) (2005).

[6] BUSTAMANTE, Teodoro: *"Las perspectivas de discusión de los temas socio-ambientales vinculados a la explotación petrolera en el Ecuador"* (The prospects of discussion of the socio-environmental subjects associated with oil production in Ecuador), in *"Petróleo y Desarrollo Sostenible en Ecuador"*(Oil and Sustainable Development in Ecuador), FLACSO Ecuador, Quito, 2003, pp. 27-49

types of questions.

Conflicts in the region stem basically from frequent questioning of the industry, originated in the following perceptions:

a) Criticism of progress dynamics, especially the negative effects of the oil activity, such as the generation of development processes characterized by economic concentration, institutional arrogance, land conflicts, the weakening of institutions, or social dynamics such as prostitution, crime or urban marginality.

b) Asymmetries in power, capital, profitability and opportunities between companies and communities. Compensation level much higher than the average of regional economies in which the hydrocarbon activities are inserted.

c) Industry's interrelation with multi-national companies and foreign capital, and growing pressures coming from globalization.

d) Controversy on contractual modalities which regulate production cost and benefit distribution for companies and states/regions.

e) Questionings regarding the industry's transparency levels and fair competition terms in the bidding and contracting of services.

f) Coordination and agreements at a high level between the extractive industrial sector and political actors involved in public activities.

2.3 COSTS ASSOCIATED WITH THE INDUSTRY'S SOCIO-ENVIRONMENTAL AND REPUTATIONAL RISKS

Oil and natural gas companies often face high direct and indirect costs resulting from socio-environmental risks.

The publication *"Práctica Empresarial Sensible al Conflicto: Guía para la Industria Extractiva"* (Conflict-sensitive Business Practice: Guidance for Extractive Industries) of International Alert, associates various types of direct and indirect costs with the industry's operations in risk zones, as illustrated in table 1.

TABLE 1 – INDUSTRY COSTS ASSOCIATED WITH SOCIO-ENVIRONMENTAL RISK

DIRECT COSTS	INDIRECT COSTS
By way of: - security - risk management - damages to physical structure - interruption of production - increased capital costs - personnel safety and compensation - reputation - litigation	Stemming from: - accidents, disability and death of persons - weakening of the community's social capital - loss of markets - environmental damage as a result of sabotage and losses caused by external agents - political costs associated with the weakening of institutions

2.4 RISK AS A FACTOR OF THE EXTRACTIVE AND INDUSTRIAL ACTIVITY

In the extractive industry, the management of financial, operating and environmental risks, as well as security and occupational health and accident prevention, are traditional functions of utmost importance for the administration. Risk management responds to a responsibility towards the shareholders, employees, the community and the environment, and to the need to protect the company's value and investments in industrial facilities.

The management of health, security and the environment (HSE) is a function assigned to Vice-Presidents, Operations Managers or Superintendents of the projects or business units, within the limitations of a business management plan and an annual budget approved by the central corporate level.

Operations Managers have many other responsibilities, such as increasing productivity, reducing operating costs, negotiating with unions and workers, and contributing to maximizing the company's profits. They are generally evaluated by their superiors in relation with goal achievement indicators in terms of production, cost reduction and reductions in accident and/or loss rates. Their primary dedication to these subjects leaves them little time to dedicate to matters relative to the company's socio-environmental and reputational risk.

The health, safety and environment (HSE) management, departments or units of companies which work at the operating level predominantly apply themselves to managing the so-called "operating risk", which comprises and addresses all those matters associated with the care of the facilities and equipment, and the protection of workers against occupational accidents and occupational diseases; occupational health.

In many cases, they perform functions such as directing and supervising the preparation, processing, approval and monitoring of Environmental Impact Studies and the conditioning parameters and elements established in environmental qualification resolutions, as well as of those contained in sector-specific permits.

The management of the socio-environmental dimension and particularly of the socio-environmental and reputational risk, is the result of a relatively recent conceptual development which, due to its nature and

characteristics, exceeds the scopes and capacities and competence of the Hygiene, Occupational Safety and Environment departments of oil and natural gas companies.

2.5 SOCIO-ENVIRONMENTAL AND REPUTATIONAL RISK AS AN EMERGING MANAGEMENT FACTOR IN THE INDUSTRY

The so-called socio-environmental and reputational risk is a new political and social phenomenon faced by the extractive industry in various countries of the region, and is founded on the risk - impact situations generated by a series of situations which have emerged in relation to new activities and projects of the sector.

These are due, first of all, to the fact that a sociological factor, unknown until recently, has been building up in the affected communities; this factor basically results from the citizens' need to occupy the spaces, the methods and the dynamics that used to be the responsibility of the old paternalistic state model.

In their relationship with the communities, companies have traditionally tended to consider only that part of the interaction that is related with the prospective environmental and sanitary impacts which can affect the population, the community or the environment as a consequence of the operations and activities, as well as with the unexpected occurrence of accidents, crisis episodes, operating errors or unforeseen and unpredictable situations.

Assessing and managing the communities' expectations, as well as understanding the mechanisms for the defense of their rights, requires that the company strengthen and reinforce its presence and activities of interaction with the community, in the manner indicated in ARPEL's Community Involvement Manual.

3.0   SOCIO-ENVIRONMENTAL RISK MANAGEMENT

3.1   FUNCTIONAL RESPONSIBILITY

Social and reputational risk management is an emerging strategic function of Community Relations, which must be systematically incorporated in the oil and gas industry in the region. Due to its increasing importance in terms of diminishing socio-environmental contingencies, companies require structures, specialized human capital, a budget and procedures to manage this type of risk.

In the oil and natural gas industry, managing socio-environmental and reputational risks in the communities will be a responsibility of the Community Relations structure. For these purposes, it will have the support of the Internal Community Relations Committee as described in ARPEL's Community Relations Management System.

3.2   SOCIO-ENVIRONMENTAL RISK MANAGEMENT FUNCTIONS

Socio-environmental Risk Management considers specific functions which are part of a three-phase process:

1.   Risk identification

2.   Risk analysis

3.   Risk control and mitigation

3.3   STEP 1: IDENTIFICATION OF RISKS

The first and most important stage of risk management is the identification of the oil and natural gas industry's socio-environmental risks. It refers to the visualization of any factor that may cause, directly or indirectly, a situation that implies some kind of damage to the company's relationship with the communities and its stakeholders, resulting in patrimonial, operational and reputation impacts which affect the company's value, and, in most cases, have an impact on the credibility of the industry as a whole.

The identification of a company's socio-environmental risks requires performing a survey of the vulnerability conditions of its management systems or of its internal processes, of the obstacles and external threats it faces, and of the combination of these factors that could, at any time, lead to a loss or accident.

Based on the risk's origin, two types of risk factors will be identified:

1. **Internal Risk Factors:** Those socio-environmental risks that come from gaps in the company's management and practices and which adversely affect the stakeholders and the environment, putting pressure on its interaction with the communities.

2. **External Risk Factors:** Those socio-environmental risks that stem from conditions of the socio-environmental context and which are not influenced by the presence of the company's activity but could affect its relationship with the communities and thus cause damage to the company.

3.3.1 Risks Stemming from the Operation's Management

Managing internal risks requires identifying the risks to which a given operation, business unit or company process is exposed.

This identification will result from a participative exercise between the process executors, separating the organization in the various functional levels according to the example in table 2 "Identification of Risks by Process".

TABLE 2 - IDENTIFICATION OF RISKS BY PROCESS

PROCESS	INVENTORY OF RISKS BY PROCESS
1. "Minimum Legal Requirements" Compliance Assurance	
- Compliance with technical contents	- Non-compliance with the regulatory/standard-setting framework of environmental quality and emission standards and regulations during the insertion, permanence, abandonment of the operations or facilities by the company.
- Verification	- Difficulty to verify compliance
2. Technical Maximum	
- Exploration and production	- Re-settlement or relocation of native or indigenous people or of human groups, and/or disruption of their customs, ways of life, ancestral rights to the use of natural resources, and particularly of the territory and biodiversity.
	- Location of projects or activities in high biodiversity concentration places, owned by native or indigenous peoples, with a high landscape, tourist, archeological or socio-environmental value
	- Land use changes
	- Impacts on or changes in natural spaces and their environmental value as critical natural capital stock.
	- Insufficient or null political handling by the project or activity's representatives when faced with crisis or socio-environmental damage situations.
	- Insufficient or no mitigation, compensation or repair measures upon transitory or permanent, reversible or irreversible socio-environmental impacts
	- Alteration of the existing communication routes and in the regional infrastructure.
	- Damages during the construction of projects
	- Environmental modifications due to the works.

	-	Historical liabilities. Environmental degradation generated in the past and not addressed by the hydrocarbon sector
3. Social Optimum (voluntary)		
- Compliance with global principles	-	Non-compliance with global principles adhered to by the company
- Compliance with voluntary agreements with the communities	-	Lack of or insufficient compliance with the additional or voluntary commitments assumed by the company within the framework of the processes of insertion (Environmental Impact Study), permanence or abandonment of a project or activity
- Involvement	-	Insufficient levels of respect for peaceful coexistence and local culture
	-	Insufficient participation and social dialogue mechanisms
- Communication	-	Inconsistency between what is communicated and what is effectively done
	-	Use of ambiguous images and expressions that could be interpreted as image laundering.
	-	Insufficient communication to given groups of stakeholders
	-	Lack of credibility
- Contractors	-	Contractors do not respect the socio-environmental conduct codes defined by the company
	-	They do not meet the company's socio-environmental standards
	-	They damage the image of the company and its relationship with the community
- Employment	-	Lack of opportunities for local workers
	-	Hiring of foreign labor: migratory impacts, pressure on the primary infrastructure, culture shocks, alteration of ways of living (e.g.: leisure industry, crime, violence)

It is important that the total risks considered likely to affect the safety of the process, regardless of whether the same risk affects several processes to a different extent, be recorded for each process.

3.3.2 Socio-Environmental Risks Stemming from Pressures of the Setting

Hydrocarbon sector companies in the region face multiple kinds of pressures coming from the setting[7], as a result of socio-political, socio-economic and institutional situations. Certain conditions of the context may trigger stress and conflict situations for the company, the causes of which it has little possibilities to modify.

Although companies do not have the responsibility or the capability to substantially transform the setting's conditions, they do have the responsibility to identify and monitor these conditions and generate management tools to anticipate the occurrence of events that may impact their operations and facilities, and make decisions to protect their interests, investments and reputation.

Table 3 "Risks Stemming from the Oil Industry Context" outlines the socio-environmental pressures faced by the industry in the region. Each company, operation or business unit must analyze which of these pressures are relevant in each particular case and what potential risks can stem from this scenario. Check this reference table and identify the presence of risk factors in your company's setting.

TABLE 3 - RISKS STEMMING FROM THE OIL INDUSTRY CONTEXT[8]

PRESSURES STEMMING FROM:	POSSIBLE CAUSES
Conflict situations	- Struggle for land and its control - Competition for the use of natural resources and the natural capital - Scarce State presence - Growing presence of Non-Government organizations (NGO's) of international and regional scope as spokespeople on social and environmental subjects. - Insufficient political handling capacity of the authorities and of the community's spokespeople when faced with conflict or crisis situations - Failure to fulfill commitments assumed by the authority or the communities. - Low levels of tolerance, respect and values aimed at peaceful coexistence and citizen culture. - Uncertainty as to the future management of the conflict by the different actors, and frequent dislocation of the company and the institutions.
The community's economic problems	- High unemployment rates - Crises in broad sectors of the economy. - High levels of oil industry salaries - Low levels of training in the employment-demanding population
Socio-economic problems in the community	- Perception of the hydrocarbon sector as companies with the economic capacity to solve social problems. - Tradition of dependency relationships. - High rates of unsatisfied basic needs and deficits in infrastructure and

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[7] The analysis is based on the research "*Emprendimientos sociales en sectores estratégicos de desarrollo en Colombia: Subsector Hidrocarburos*" (*Social undertakings in strategic development sectors in Colombia: Hydrocarbon Subsector*"), conducted by Roberto Gutiérrez and published by Fundación Corona, Fundación Antonio Restrepo Barco, Dividendo de Colombia and Universidad de Los Andes. Bogotá (2007)

[8] The pressures faced by the oil industry were systematized by Asociación Colombiana del Petróleo in its Guía de Gestión Social para el Sector de Hidrocarburos (Social Management Guide for the Hydrocarbon Sector) (ACP, 2005).

	services.
	- High levels of violence.
	- Political handling of government entities at national, department, regional and municipal levels, and therefore, greater concern for private benefits than for the general interest.
	- Low management capabilities of the communities or difficulty in unifying criteria due to the differences.
	- Fear of environmental pollution, particularly of water sources.
Local government	- Shortage of resources
	- Weak institutional presence in the region
	- Lack of credibility and little governance
	- Insufficient institutional and community management capacity
	- Little management capacity of government entities and sometimes unethical conduct of public management.
	- Presence of forces that prevent state administration
	- Uncoordinated and sometimes contradictory interventions.
Contractors	- Little commitment with the process.
	- Specific intervention and insufficient anticipation of the problems that can be generated.
	- Contribution to the impairment of the company's image and of its relationships with the community.
Project impacts	- Land use changes.
	- Labor demand.
	- Alteration of existing communication routes and regional infrastructure.
	- Population displacement.
	- Damages during project construction
	- Environmental modifications caused by the works.
	- Alteration in relationships.
NGO's	- Perception of environmental degradation generated in the past and not addressed by the hydrocarbon sector (environmental liability) and of current negative environmental impacts.
	- Perception of social deterioration occurred in the past and of the potential, particularly in regions inhabited by "ethnic minorities" and native peoples.
Industry Reputation	- Ignorance of the socio-economic benefits generated by the hydrocarbon industry.
	- Negative image inherited from the past:
	a. Industry that has ample resources but which does not generate wealth, employment or acquire its supplies in the region, and which promotes an enclave economy and privileged conditions in its facilities.
	b. Sector that generates profound imbalances in wage payment and which uses hiring mechanisms that are not very clear and are sometimes corrupt.
	c. Industry whose workers have little social responsibility.
	d. Industry whose workers are 'passing through' the region and who assume opinionated and arrogant attitudes.
Criminal Actions	- Social permissiveness as regards certain criminal conducts such as theft, as a means to obtain resources.

	- Fear of population to report criminal actions
	- Low education levels of the communities and absence of a feeling of belonging
	- Lack of government authority and supervision
	- Corruption of public officers
	- Incidence of activist groups which act outside the law, questioning the development of the hydrocarbon sector and affecting productive activities.

3.4 STEP 2: RISK ANALYSIS

In specialized literature, the term "risk" is increasingly associated with the likelihood of occurrence of a certain level of impact[9].

In terms of risk analysis, the assessment of a risk's magnitude allows determining the levels of safety required for a given operation.

"Risk" may be determined when three elements can be known or foreseen:

1. the possible future scenarios

2. the respective probabilities of occurrence

3. the magnitude of the damages that can be caused

Mere uncertainty differs from risk because it refers to a situation in which the possible future scenarios, as in the case of risk, are also known or can be anticipated, but in which the likelihood of occurrence of the impacts associated with the risks turns out to be unknown or unpredictable.

The materialization of the risk takes place as a result of the occurrence of a loss or accident that entails a damage. On the other hand, in order for the occurrence of an impact to constitute a damage, it must exceed the limits imposed by the regulatory frameworks in terms of a "minimum legal requirement" for such events.

In this regard, and based on a global scope convention, the term "impact" generally refers to the natural environment, and the term "risk" usually refers to the human health ambit.

The so-called "Decision Theory" makes a distinction between the empiric observation and the perception of a risk-purporting condition, in which the concepts of "risk" and "impact" are treated equivalently.

3.4.1 Risk Assessment and Prioritization

The next stage we will denominate as Risk Analysis. This stage includes the assessment and prioritization of each one of the processes based on the risks already identified in each inventory by process.

a) Risk assessment

The assessment will consist of assigning the different previously identified risks a score ranking from 0 to 5, depending on the impact and likelihood of its occurrence or the frequency with which it has occurred in the processes, according to Figure 1 "Risk Assessment".

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[9] Walter E. Westman: *"Ecology, Impact Assessment and Environmental Planning"*. University of California. Los Angeles (1997), pags. 97 et seq.

Impact: Impact will be understood as the effect that a risk can have at the time it occurs. The assessment goes from low to high, according to the magnitude of the repercussion on the area or process at the time the risk occurs. In the event it has never occurred, all consequences, whether physical, economic, legal, social, or management, on which the assessed risk intervenes, must be taken into account.

Frequency or likelihood of occurrence: Will be understood as the number of times that an event considered as a risk has occurred or is likely to occur during a period of time, the assessor being free to determine when a given frequency is considered low, medium or high.

For example, it is assumed that the risk of failing to comply with environmental technical standards has arisen or may arise with a medium frequency and would have a high impact, due to the consequences it has on certain environmental componentsand therefore the risk is rated at five (5).

FIGURE 1 - RISK ASSESSMENT
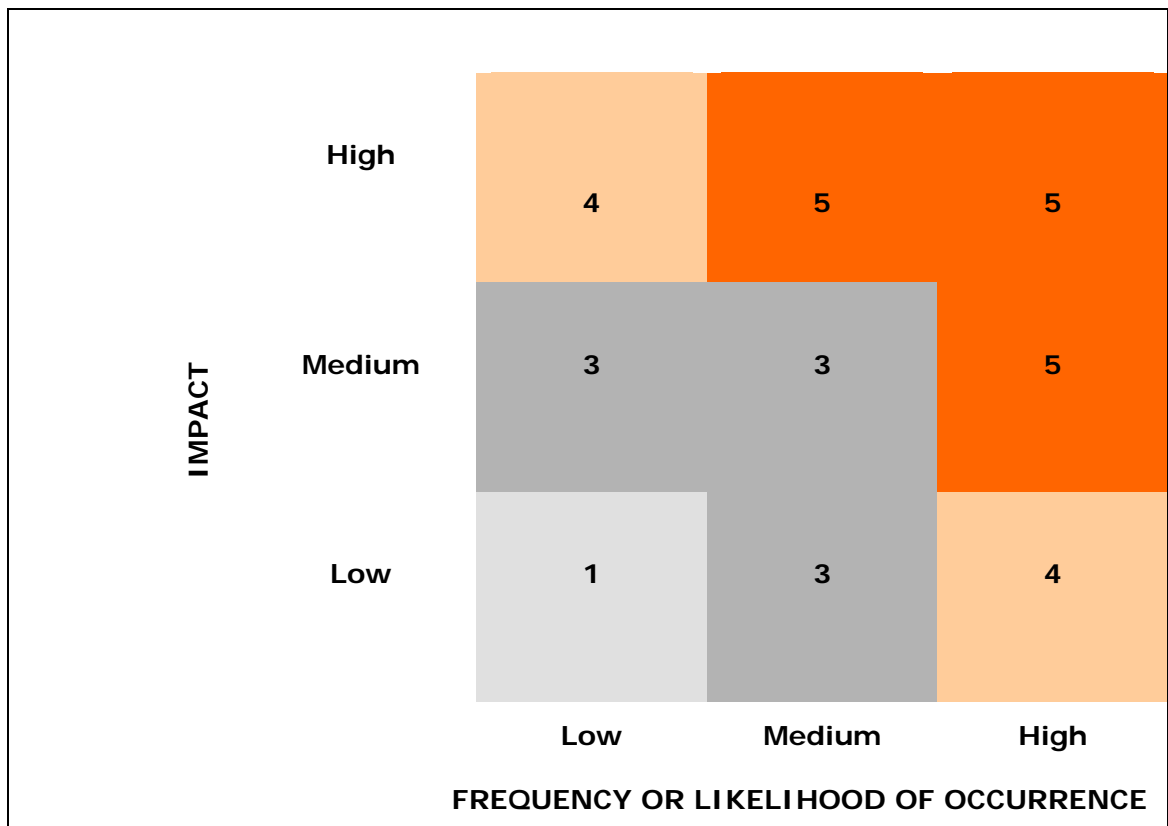
After determining the risk exposure level of each one of the risks identified in Step 1, table 4 "Risk Exposure" needs to be completed, including the respective assessment, as illustrated in the following example.

TABLE 4 - RISK EXPOSURE

Process	Inventory of socio-environmental risks by process	Exposure Level
Exploration and Production Operations	1. Resettlement or relocation of native or indigenous groups or of human groups and/or disruption of their customs, ways of living, ancestral rights to the use of natural resources, and particularly of the territory and biodiversity.	5
	2. Location of projects or activities in high biodiversity concentration places owned by native or indigenous peoples, of high landscape, tourist, archeological or socio-environmental value.	4
	3. Land use changes	3
	4. Effect on natural spaces and their environmental value as critical natural capital stock.	4

b) Risk prioritization

The result of the assessment exercise will be known as risk exposure and will facilitate the prioritization of risks, according to the level of risks determined.

Prioritization means grouping the various risks in decreasing order, according to the defined exposure level, as illustrated in table 5 "Risk Prioritization".

Risks rated with a 5, that is, located in the high exposure zone, will be subject to priority observation and analysis.

Once the risks by process have been assessed, they will be prioritized in decreasing order as indicated below, respecting the mitigation processes and controls.

TABLE 5 - RISK PRIORITIZATION

Process	Inventory of socio-environmental risks by process	Exposure Level
Exploration and Production Operations	Resettlement or relocation of native or indigenous groups or of human groups and/or effects on their customs, ways of living, ancestral rights to the use of natural resources, and particularly of the territory and of biodiversity.	5
Contractors	Non-compliance with socio-environmental standards.	5
Legal Compliance	Non-compliance with Technical Standard on Liquid Industrial Waste.	4
Community Involvement	Insufficient spaces for dialogue with community stakeholders	4
Communications	Inconsistency between messages and actual circumstances	4
Other		3

3.5 STEP 3: CONTROL AND/OR MITIGATION OF SOCIO-ENVIRONMENTAL RISKS

3.5.1 Control and/or Mitigation Measures

After the risks have been prioritized, mitigation controls or measures must be defined for each one of them according to the criterion deemed most adequate by the assessor.

Table 6 "Risk mitigation and control" may be used for the above purposes, following the pattern in the example.

TABLE 6 - RISK MITIGATION AND CONTROL

Process	Inventory of Risks by process	Exposure Level	Risk mitigation and control measures
Legal Compliance	1. Non-compliance with the technical standard on liquid industrial waste	5	- Revise process - Incorporate improvements - Invest in new technologies
	2. Difficulty to check	4	- Implement internal auditing systems - Define a continuous monitoring plan

3.5.2 Evaluation of the Effectiveness of Control Measures

Next, we need to evaluate to what extent the controls contribute to reduce the likelihood of the risks, based on their possible contribution to the reliable development of the process and their capacity to provide safety and reliability in the expected results. The above allows a determination as to which risk there is a need to strengthen the mitigative measures for.

The control effectiveness assessment scale will cover a range of 1 to 5, and will adjust to the following parameters:

CONTROL	EFFECTIVENESS
None	1
Low	2
Medium	3
High	4
Outstanding	5

3.5.3   Risk Map

Finally, a General Matrix of Risks by Process will be prepared and will constitute the process risk map based on which the action plans to be adopted will be defined, whether to control such risks or to design or strengthen adequate controls to mitigate them, as per the example in table 7.

TABLE 7 - GENERAL MATRIX OF RISKS BY PROCESS

PROCESS: Citizen participation					
Inventory of risks by process	Exposure Level	Executed control measures	Effectiveness	Average Effectiveness	Total (*)
1. Omitting relevant stakeholders	5	• Updating of Stakeholder Map • Verification of summons mechanism effectiveness • Ensuring that the participation format is adequate for the citizen participation objective	3 4 4	3.6	1.38
2. Failing to comply with the legal formalities of the regulatory framework	4	• Updating of regulatory framework contents • Verification of compliance with legal procedures • Ensuring compliance with advertising measures • Meeting of anticipated dates and deadlines	5 5 4 3	4.25	0.94
3. Failing to inform about deadlines for the submission of objections or comments	4	• Designing of legal procedure Gantt Chart • Ensuring widespread dissemination to stakeholders • Facilitating mechanisms for the submission of observations by the community	3 4 4	3.6	1.11
(*) The total result is given by the relationship between the "exposure level" and the "average effectiveness" of the control measures for each risk. The interpretation of the results will be:					

Values	Risk control level
0 - 1.0	- Adequately controlled risks
1.0 - 1.2	- Controlled risks, but which must be subject to periodical monitoring and purging
1.2 - 1.5	- Risks which must be subject to the revision of existing controls or the implementation of new controls
Greater than 1.5	- Risks that must be analyzed and controls that must be totally re-formulated in order to reduce their levels of exposure and to strengthen the controls that help mitigate them

4.0   CRITICAL ASPECTS OF SOCIO-ENVIRONMENTAL AND REPUTATIONAL MANAGEMENT

4.1   GENERAL ASPECTS

The implementation of the Community Relations Management System and the procedures that conform it is a guarantee for the oil and natural gas industry in its efforts to protect its operations and facilities in the face of socio-environmental and reputational risks.

One form of optimum coverage against social and reputational risk is the one that comes from the background of the social optimum and, basically, from the community's conviction that the hydrocarbon company acts at all times in a responsible manner, bearing in mind and considering its *stakeholders'* expectations.

When a company's operations exceed the limits established by the regulatory frameworks ("minimum legal requirement"), due to insufficient socio-environmental management and thereby causes impacts on and damages to the environment and/or the communities, a socio-environmental risk is configured that could result in stress and conflict with the *stakeholders*.

Figure 2 "Relationship between Socio-environmental Management and Risks in the Extractive Industry" shows the high correlation existing between good practices and the reduction of risks over the life cycle of projects. The following are a few preliminary conclusions:

a)   The socio-environmental risks and contingencies of a project or activity reach their highest level of sensitivity and exposure during the exploration and site closure phases.

b)   Closure risks can be reduced to a minimum level through efficient socio-environmental management in all the previous stages of a project's life cycle.

c)   The more efficient the previous socio-environmental management, the lesser the risks and contingencies during the dismantling, closure and post-closure of sites and facilities phases will be.

d)   On the contrary, an operation that did not incorporate good practices during the exploration and production phases, will face very high risks and contingencies during the closure and abandonment stage.

The control and monitoring of potential socio-environmental risks associated with the operations is generally not covered by the hydrocarbon companies' safety, occupational health and environment policies, constituting a new area of requirements and needs for the industry.

For these purposes, companies base themselves on the information contained in the Environmental Impact Studies, on the provisions of the regulatory framework in effect, and on the best practices of the industry which are available.

FIGURE 2 - RELATIONSHIP BETWEEN SOCIO-ENVIRONMENTAL MANAGEMENT AND RISKS IN THE EXTRACTIVE INDUSTRY
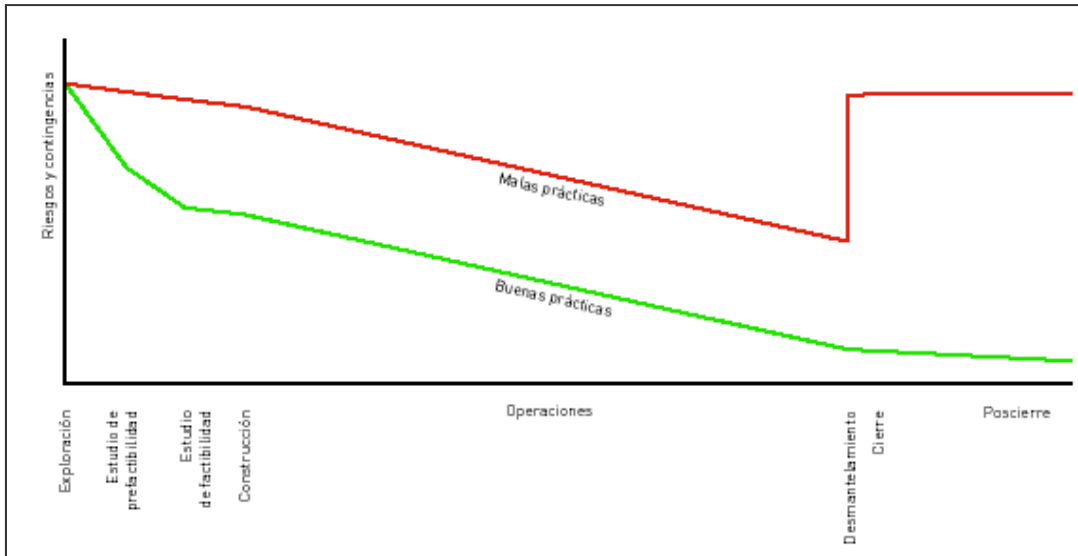
Source: International Council for Mining & Metals[10]

4.2 REPUTATIONAL AND SOCIO-ENVIRONMENTAL RISK IN THE INDUSTRY'S VALUE CHAIN

4.2.1 Upstream Operations

Upstream projects or activities generally interfere with or intervene areas with environmental value, components with touristic value, regions or territories belonging to indigenous ethnic groups and agricultural groups of small farmers and cattle raisers. The activities of oil companies may affect national parks, biosphere reserves, nature sanctuaries, maritime parks and other threatened biodiversity protection zones with different protection and preservation status.

Reputational risk comes from the prospective occurrence of mega-accidents, large-scale environmental damages or social impacts of a certain magnitude, the consequences of which may go beyond the frontiers of isolation and remoteness in which numerous operations and facilities are located, affecting the reputation of the company.

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[10] CONSEJO INTERNACIONAL DE MINERIA Y METALES (INTERNATIONAL COUNCIL ON MINING AND METALS): "Planificación del Cierre Integrado de Minas. Equipo de Herramientas". (Integrated Mine Closure Planning Toolkit) Page 10. (2009)

In these cases, the relationship between the company and the community will frequently be characterized by politically representative relationships with regional or rural authorities, and, in general, direct relationships with the various levels of central government. The community's interests will usually be represented by ecologist organizations of global reach, and also by territorial non-government organizations of local reach which will assume the right to act on behalf of the local community in the citizen participation and social dialogue processes.

4.2.2 Mid and Down- stream Activities	Storage, transportation, refining, loading and unloading, product distribution and sale activities – taking their location or places of operation into consideration - will involve and eventually affect areas with a greater population density.

Your risk management policies must include health and public safety aspects, with emphasis on the sanitary - environmental aspects.

4.3 LEGAL CERTAINTY AND INVESTMENT SAFETY	Government authorizations relative to the assessment of the socio-environmental impacts of the oil and natural gas industry in the region constitute an administrative resolution which, in most cases, does not grant sufficient legal certainty for the stable development of said projects or activities over time, or for the essential political safety required by any capital investment.

The socio-environmental permits granted in the various countries provide precarious legal protection to the projects or activities that are to be executed or modified. In most cases, they do not grant an ownership right that the holders may unrestrictedly exercise on said resolutions.

a) They only constitute a permit, granted on the basis of the mere discretionary power of the State, and therefore in most countries of the region they may be modified, lapsed, revoked and cancelled unilaterally and at any time by the same administrative authority that granted them.

b) In the current political format of the region's regulatory frameworks, the rights granted by the resolution approving the environmental impact studies to the holders are of a rather minor rank, such as for example the right of a company to carry out its industrial activity.

c) The socio-environmental authorities of the countries of the region are legally entitled to close and shut down the facilities and operations of any industrial activity or plant at any time, with no other risk than that of losing a given legal interpretation in court or paying limited amounts of compensations, which in no case will match the total losses that the oil and natural gas companies could suffer if forced to face situations like the one described.

d) Since the company is not deemed to be the real owner of the socio-environmental right contained in the environmental qualification resolution issued by the authority, that is, such right is not deemed to be part of the company's assets or of its ownership rights, said resolution could be subject to cancellation, revocation, modification or lapsing with no previous jurisdictional dispossession action ("due process") or payment of compensation for the expropriation of the legal permit.

e) Consequently, in most of the countries in the region, extractive and industrial activity has very precarious legal protection, since the establishments and facilities may be unilaterally shut down by the authorities, which may even modify, revoke, cancel or invalidate the socio-environmental authorization, transitorily or permanently, even without stating the reasons. In these cases, companies may only react and assert their rights by litigating against the States, the public services or the Government Agencies that shall have acted arbitrarily.

f) Finally, the practically total absence of property rights in the environmental impact approval resolutions and the existence of broad government discretion in the granting of the socio-environmental permits for the operation of projects or activities, leaves the space open for - among other effects - recording the socio-environmental damages and liabilities caused by the operations and activities in economic terms and charging their rehabilitation, repair and restoration directly to the industrial activity.

g) Without prejudice to the legal actions and jurisdictional recourses that may be attempted against the States and their governments for the eventual modification, revocation, lapsing or cancellation of the socio-environmental authorizations, or for the unilateral closing of facilities or operations, the political importance of this "legal precariousness" may be really significant for the oil and natural gas industry, and can even become a significant socio-environmental risk.

4.4 ENVIRONMENTAL DAMAGE AND ITS RELATIONSHIP WITH SOCIO-ENVIRONMENTAL AND REPUTATIONAL RISKS

The occurrence of environmental damage and its eventual sanitary and social consequences, both in the case of projects or activities which have been validated environmentally and socially by government agencies prior to their start-up, and of those projects whose operation does not require environmental approvals, will indefectibly have a significant impact on the company's image and its prestige, creditability and reputation.

Accordingly, the existence of a socio-environmental authorization for the projects and activities is a protection for the company against the eventual occurrence of an environmental damage situation.

a) The projects or activities that have a legal permit to operate within the framework of the Environmental Impact Assessment Systems and which, meeting the authorized technical standards cause socio-environmental damage, are acting within the laws in effect.

The above implies that, in the event the company becomes subject to legal action by the community for the damages caused, it generally has the possibility of appealing against the respective State which approved the environmental impact study, given the latter's responsibility in the preparation of the technical-legal framework on the basis of which the development of that particular activity was authorized.

b) On the contrary, in the same situation described above, a hydrocarbon company which does not have a socio-environmental resolution or authorization, or which has not fully complied with the technical contents thereof, will not be entitled to file a legal action against the respective State, and shall respond individually.

In the first case, the authorities and the communities will probably be important allies of the company right from the start of the problem, and more so when it is proven that it acted diligently and

responsibly at all times, and particularly within the limitations, conditions and regulatory permissiveness margins of the environmental qualification authorization.

In absence of a socio-environmental authorization, the authority and the community will not feel much affinity with or empathy towards the problems faced by the company. Consequently, the greater the omissions and deficiencies in terms of regulation, the greater the difficulties and problems that the company will have to face in order to solve its contingencies.

If environmental damage occurs in the absence of authorization or of legal compliance, the company's reputational damage will be exponentially greater than in the case described in the previous paragraph.

4.4.1 Insurance as Coverage Against Socio-Environmental Risks

In certain regulatory frameworks of countries in Latin America and the Caribbean, there is a system of extra-contractual civil liability insurance policies and contracts regarding property and environmental damage. The "ecological insurance" was created with the purpose of "*having a mechanism that provides coverage for quantifiable economic damage suffered by given persons as part of or as a consequence of damage to the environment and to the natural resources seeking to improve the operation of the justice system in this regard*"[11].

However, the transfer of socio-environmental risk to a third party through an insurance contract does not solve the underlying issue, because it does not neutralize the reputational risk that will affect the company's prestige and credibility upon or after the occurrence of the accident or loss.

The prospective solutions provided by the insurance schemes point only at guaranteeing cash flows that will basically go to repair and restore the consequences of the socio-environmental damages and the associated material and personal damages.

On the other hand, the irreversible and permanent effects of the socio-environmental damages cannot always be mitigated and/or compensated with money, but in most cases they must be "restituted" or "refunded" in the equivalent of the amount in "green currency" or some other kind of payment through a socio-environmental "bargaining chip".

4.5 RECOMMENDATIONS FOR THE PREVENTION OF SOCIO-ENVIRONMENTAL AND REPUTATIONAL RISKS

Considering the circumstances and challenges currently faced by the oil and gas industry in the region, companies need to take into consideration the following general elements to prevent socio-environmental and reputational risks:

1. The need to strengthen the credibility of their socio-environmental management as a foundational element of reputation.

2. The need to have clear and public policies in place on the subject of socio-environmental impacts of the activities, operations and facilities which purport any kind of effect on the communities or human groups, their resettlement or

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[11]Miguel Patiño Posse: "*Derecho Ambiental Colombiano*" (*Colombian Environmental Law*) Page 93. Editorial Legis, Bogotá (1999)

relocation, and particularly on customs, rituals or ancestral activities, the rights acquired in relation with the use and preservation of natural resources, biodiversity, and the environment.

3. The need to have operating and environmental risk management systems and procedures in place that allow preventing the adverse effects arising from accidents, spills and other environmental and sanitary contingencies which, in addition to generating damages to the environment and to human health, may significantly impact industrial reputation.

4. The need to have a clear and defined position on climate change and global warming, in connection with which "polyfunctional" initiatives should be designed and promoted. These should translate into tangible benefits for the community and for the environment, on the basis of voluntary or additional mechanisms based on market criteria, improving and deepening the objectives established in the Kyoto Protocol, as well as the current procedures of a mandatory and compulsive nature.

5. The need to have clear and publicly known policies in place regarding the oil industry's willingness to exclude and restrict hydrocarbon exploration and production in protected areas or zones in which there are significant critical natural capitals (v.gr. glaciers, ice fields and snow-capped mountains; world heritage sites, national parks, effects on the space-recreation ratio). As part of the oil companies' operating policies, it is suggested that they state that they will not carry out extractive activities in prohibited areas and that they will use the most recent technologies in restricted or socio-environmentally sensitive areas such as, for example, the Galapagos Islands, Easter Island, Ramsar sites, among others.

6. The need to have policies in place regarding the involvement of the oil and natural gas industry in research, design and implementation of non-conventional renewable energy generation (ERNC) such as tidal, wind, solar and geothermal energies.

4.5.1 Prevention of Socio-Environmental Conflicts

Socio-environmental conflicts generally occur due to the lack or insufficiency of previous strategies of the oil industry to address the issues described in the previous paragraphs. These issues constitute, with very rare exceptions, subjects which are not legislated or not proactively resolved by the industry.

Socio-environmental conflicts, just like any other kind of conflict, are resolved first based on the distinctive elements of a constitutional State, that is, on the basis of the State's jurisdictional activity, exercised both before the courts as well as before government agencies.

Conflicts, and among them socio-environmental conflicts, normally end with a judicial decision or through a jurisdictional equivalent such as a compromise agreement by which a pending litigation is ended or a future litigation is avoided, an agreement before a judge or a court, or through resolutions binding on the parties arising from a conciliation or mediation process.

Solutions to prospective socio-environmental conflicts are also offered through certain socio-environmental policy instruments, as are negotiations between the parties, the establishment of socio-environmental standards, etc.

4.6 THE EQUATOR PRINCIPLES AS SUGGESTED GUIDELINES ("SOFT LAW") FOR THE REDUCTION OF SOCIO-ENVIRONMENTAL RISK IN INVESTMENT PROJECT FINANCING

One of the aspects to be considered in the hydrocarbon industry's socio-environmental risk management is the incorporation, as part of the "minimum legal requirements", of regulatory guidelines of a voluntary type ("soft law"), particularly the so-called "Equator Principles", linked to "Project Financing" with resources coming from the international banking system.

This regulatory referent, recently designed and implemented by the International Finance Corporation (IFC), and adopted by almost the entire commercial banking system, is the result of the international financing community's need to count on a greater degree of legal certainty and political safety in socio-environmental matters, regarding the project to which they grant loans in amounts equal to or greater than MUS$ 10 (10 million US dollars).

This financial socio-environmental guideline is of a voluntary nature, and is used by banks jointly with the requirements of the regulatory frameworks of the countries in Latin America and the Caribbean for projects and activities carried out in this region.

The underlying purpose of these principles furthered by the World Bank through the IFC, is the financial entities' need to count on rules and tools supplementary to the requirements of each country's regulatory frameworks for the development and execution of projects financed by the international banking system. This aims to minimize the effects and consequences of prospective political instability or socio-environmental risk situations that could be generated in those communities located in territories on which projects or activities financed by these institutions are executed.

In short, there are specific situations in which the credit and financial entities could be legally involved - even if they have no direct relationship with a project - and find themselves compromised in the event of liability for socio-environmental damages of events related to those projects or activities. This because, without prejudice to having been financed fully in compliance with the regulatory frameworks of the country in which the project is executed, they could present omissions or weaknesses in respect of which the financial entities could be penalized by the regulatory frameworks of their countries of origin.

The Equator Principles condition the granting of credits to investment projects structured under the "project financing" format in amounts equal to or greater than MUS$10.0 to compliance with a "voluntary accreditation or certification" of social and environmental standards system.

A few considerations to be borne in mind by the oil and natural gas industry using the guidelines of the Equator Principles are the following:

1. The contents of the "minimum legal requirements" of the regulatory frameworks of the countries of Latin America and the Caribbean could be supplemented, and their rigidity could eventually increase, depending upon these new guidelines.

2. Each private bank or financial institution which has adopted the principles is entitled to propose to its "project financing" clients a procedure methodology with socio-environmental validations of a voluntary nature, complementary to the contents of each country's regulatory framework.

3. The emergence of the Equator Principles is basically explained by the existence of a certain degree of uncertainty regarding effective legal compliance with regulatory frameworks in

developing countries and their practical effectiveness, mainly due to the common deficiency on the subject of supervision. To the above we must add the absence of political-institutional willingness on the subject of verification of compliance with socio-environmental commitments assumed between company, authority and community within the framework of negotiations carried out during the environmental impact assessment processes.

4. Any socio-environmental requirements which have not been considered as requirements by the different regulatory frameworks and which are considered essential to carry out a project, may be incorporated into the projects or activities financed with funds proceeding from entities that have adopted the Equator Principles. Through these means, the socio-environmental impact contents of the projects or activities not comprised in the respective regulatory frameworks but "identified", "mapped" or "recorded in a cadastre" pursuant to the guidelines and technical mandate of the Equator Principles, become - for the purposes of this analysis - what could be denominated the "Socio-environmental minimum requirement"

5. In most cases, the Regulatory Frameworks do not include or characterize "socio-cultural" realities, nor do they address all of the "sanitary-environmental" aspects, and therefore this identification and/or compensation work must be carried out "voluntarily" or "additionally", which is precisely what allows the adoption and application of the contents of the Equator Principles.

6. This does not constitute a "minimum legal requirement" as such, but socio-environmental aspects that arise as evident facts and as a result of contrasting the scoping of the project or activity with the actual "socio-cultural" and "sanitary-environmental" circumstances of the direct service area of each entrepreneurial undertaking and aspects not covered by the regulatory frameworks. It is the genuine confrontation between the interests of the community's legitimated actors and the effects of the socio-environmental impacts of the proposed project or activity.

7. The results of this crossing of information between the "minimum legal requirement" of each regulatory framework and the contents of the "Equator Principles" generates the baseline information of companies' political and business rationale for the subsequent legitimation of the "socio-cultural" and "sanitary-environmental" contributions.

8. This allows envisaging and, beyond that, accurately and clearly justifying the elements that integrate the "insertion costs" and/or "permanence costs" budgetary items, depending on the stage of the project or activity. The absence of a previous strategic planning capable of identifying and quantifying the expenses and disbursements invested by a Project or activity in its "insertion", "permanence" or "abandonment" stages is, until now, a fuzzy fact which, in economic terms, is known as "hidden cost".

5.0   REPUTATIONAL RISK MANAGEMENT

5.1   PURPOSES

The purpose of this chapter is to guide the oil and gas companies' reputational risk management, within the framework of their Community Relations Management System. In particular, it provides guidelines to:

-    increase the industry's reputation capital by building credibility and trust relationships with the local stakeholders and preventing conducts that could damage it.

-    manage the socio-environmental performance aspects that can affect the company's reputation in the communities.

-    minimize the costs associated with the loss of public credibility to favor the development of the company's projects and operations.

5.2   DEFINITION

Reputation is the stakeholders' valuation of the behavior of an organization, based on the degree to which it meets expectations and fulfills its commitments with its audiences. Among the most used definitions are the following:

"Reputation is a perceptual representation of the past actions of a company and its future prospects, which describes its relationship with the key audiences" (Fombrum, 1996).[12]

"Reputational leadership is the rational and emotional attraction that makes a company be the preferred company to work in, buy, invest and share vicinity with in a same territory and additionally possess sufficient critical mass as to size and value (Villafañe, 2004).[13]

Reputation is the rational and emotional identification of stakeholders with the company, sustained in realities and in perceptions.

Identity, Image and Reputation

Conceptual confusion regarding certain terms associated with reputation, such as identity and image (of an organization), is quite common.

Corporate identity is defined as *"the series of symbols used by an organization to identify itself before different groups of persons*[14]*"*, and which covers four areas:

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[12] FOMBRUM, Charles. *"Reputation: Realizing Value from the Corporate Image"*, Harvard Business School Press, Boston, 1996

[13] VILLAFAÑE, Juste: *"La Buena Reputación, Claves del Valor Intangible de las Empresas" (Keys of Intangible Value Business),* Universidad Complutense, Madrid, 2004.

1. **The company's visual identity**

Visual elements such as logotype, branding, corporate colors, construction standards, types of office and facilities, corporate uniforms, etc.

2. **Communication**

What the company communicates and the messages it transmits through formal and informal channels

3. **Corporate conduct**

The values, integrity and, in general, the way in which a company conducts its businesses, as well as the behavior of its members

4. **Organizational culture**

Factors such as beliefs, styles, motivations, customs and practices which determine a particular way of being.

Image is the symbolic representation through the voluntary and conscious projection of the organization. In order to carry out this projection, organizations use tools such as public relations, advertising, branding and sponsoring, paid editorial spaces (insertions, for example), and advertising features in communications media), among others.

FIGURE 3 - IDENTITY, IMAGE AND REPUTATION OF AN ORGANIZATION
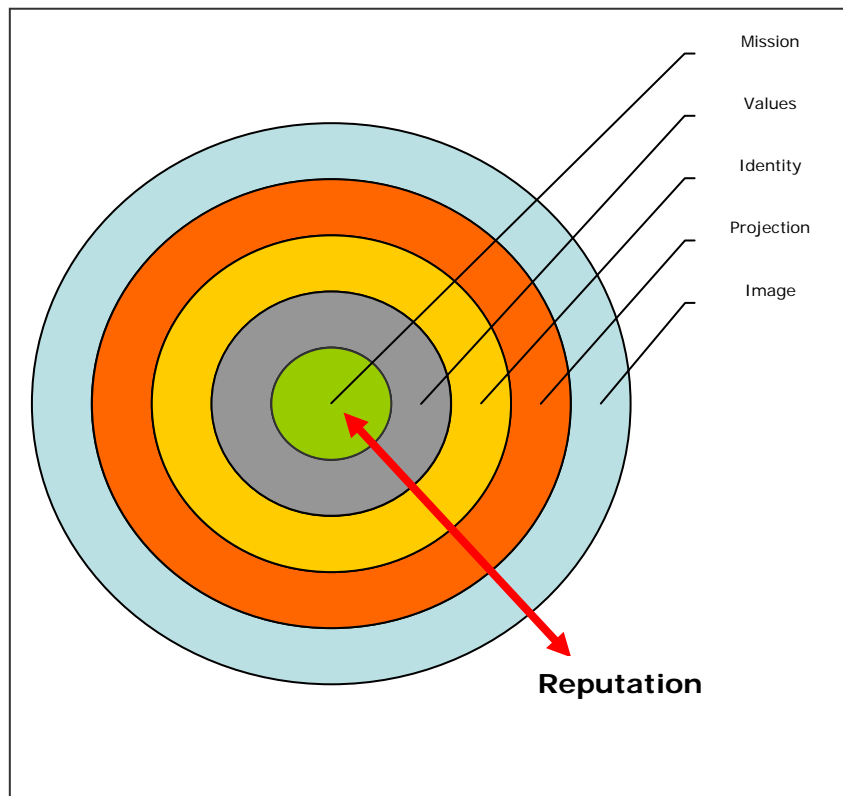
Source: Charles Fombrum, Reputation Institute, 2002

An organization's image does not necessarily correspond to its identity, and it generates expectations associated with the features offered. Image is short-lived, difficult to objectivize and has ephemeral

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[14] DOWLING, Graham. "*Corporate Reputation: Strategies for developing the corporate brand*". London, Kogan Page, 1994

effects. When a company projects an image that is not consistent with its actual circumstances - for example, by resorting to huge investments in advertising - it runs the serious risk of losing that investment, because its image can tumble down precipitously as a result of the inconsistency between the features with which it presents or "sells" itself and a conduct which does not stand comparison with the expectations created in the stakeholders.

As shown in figure 3, reputation, as opposed to image, is generated inside the organization, is based on transparency, is of a structural nature, and has perdurable effects. It is a trust fund that accrues and is consolidated as a result of recognition of a conduct that is consistent over time and verifiable.

5.3   THE IMPORTANCE OF REPUTATION

The importance of a company's reputation stems from the growing public valuation of transparency, credibility and trust in organizations. As an average, 65% of a company's market value is represented by its intangible assets[15], among which are its trademark, its knowledge, its intellectual property and its reputation.

The current trend points to an increment in the valuation of corporate intangibles, representing up to more than 90% of a company's market capitalization. In the words of Greenspan[16,] *"in today's world, where ideas are increasingly displacing the physical in the production of economic value, competition for reputation becomes a significant driving force"*.

Increasing the reputational capital of a company entails, above all, improving its market value. A company with a recognized reputation is, additionally, more competitive and is better positioned to obtain its "social license".

Good reputation is also the best armor to avoid crisis situations or to recover faster from their effects. Table 8 "Advantages of a Good Reputation" contains a summary of the advantages of reputation management and its contribution to creating company value.

TABLE 8 - ADVANTAGES OF A GOOD CORPORATE REPUTATION

- Easier access to capital and lower costs
- Greater ease to attract talent, and in terms of employee recruitment and retention
- Greater employee loyalty
- Greater brand equity
- Greater business and commercial alliance opportunities
- Greater client loyalty and increase in market share
- Greater willingness by governments to grant legal license, and reduced   supervision intervention by the State
- Faster recovery from a crisis
- Reduced risk of disruption of operations due to internal and external social factors
- More favorable disposition of stakeholders to grant "social license".

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[15] Reputation Institute/ http://www.reputationinstitute.com/knowledge-center/ri-insights
[16] Clase magistral en la Universidad de Harvard, mientras era Presidente de la Reserva Federal del Tesoro de los Estados Unidos. *Commencement address*., Cambridge, Massachusetts (1999)

The insertion and/or permanence costs of a company with a solid reputation are generally lower than those that a company preceded by a poor reputation has to assume. Due to all of the foregoing, reputational risk management is a critical aspect of business management.

At a local level, a company's reputation facilitates its insertion and involvement with the communities. Particularly during exploration activities, a company preceded by a good reputation finds it easier to achieve the acceptance of the communities and to establish trust relationships with them. This favorable disposition of the audiences translates into insertion costs that are lower than those faced by an unknown company which first has to demonstrate, through its conduct, whether or not it can be trusted by the community, or than those of a company preceded by a bad reputation, which right from the beginning tends to face greater stress and conflicts as a result of its past actions, even if such actions took place in other localities, regions or countries.

In this sense, efforts made towards building a good reputation, and avoiding risk situations, will not only add value to a company's current activities in a given locality, but constitutes an investment that is reflected in lower costs of future projects and operations of the entire company.

5.3.1 Background Information on Reputation Management	Society all over the world is facing a strong erosion in trust in its institutions and organizations, including governments, multi-lateral agencies, the non-profit sector, and also companies.

From the beginning of this millennium and after the huge financial scandals of several large corporations that disappeared as a consequence of their lack of credibility, the indicators of distrust in companies have experienced sustained growth.

The most powerful brands were exposed as never before to the scrutiny of public opinion. Their well-cared for images, built with huge advertising investments and public relations actions, began running the risk of tumbling down fast if the company was accused of using bad business practices with its different stakeholders.

Social activism exercised by citizen organizations and NGO's dedicated to monitoring business conduct (e.g. watchdogs), has increased, and is now centered on the reporting bad practices of the most widely-known and valued brands which attract the greatest media attention and coverage.

The strongest and most widely-known brands are public scrutiny's preferred target, and are therefore more vulnerable to any error they may incur in.

Systematic and professional reputation management based on responsible conducts which are in turn based on values, has become the key to minimize reputation risks and damages.

5.3.2 Reputation and Relationship with the Communities

Corporate Reputation and Community Relations Management are interdependent dimensions that provide feedback to one another. The harmonious insertion of the company in the communities contributes to a good reputation, and a good reputation facilitates community relationships.

5.4 MANAGING CORPORATE REPUTATION

Reputation management is summarized in simple words in the following quote of Socrates: *"The way to achieve a good reputation consists of struggling to be what you wish to seem".*

A company's reputation is forged when its business ethics consistently meet the expectations of the stakeholders. The audiences compare the ideal values and conduct they expect from a company, with their personal experience in direct interaction, the information they receive about it, and the features they assign thereto. When there are gaps and expectations are not met, reputation loss occurs.

Reputation is basically the result of two essential factors:

a) corporate performance in different dimensions relative to society's expectations

b) the way in which this behavior is perceived by the stakeholders

Knowledge of the stakeholders' expectations is the first key element in reputation management.

Society's expectations are one of the main pressures that will define the agendas of business leaders in the future. In the Social Responsibility Ambit, a World Economic Forum survey[17] identified four specific challenges: reconstructing the public's and investors' trust; promoting corporate integrity, transparence and accountability; and a close relationship with the setting.

5.4.1 Step 1: Assess the Company's Performance

The first condition for a company to achieve a good reputation in the communities is to ensure an adequate performance in all areas of socio-environmental management. In Brady's words (2005), *"The first necessary step is performance; then transparency, which creates trust, and trust creates value"* [18].

A company's reputation is related to seven dimensions of performance, according to the management model developed by the Reputation Institute[19] and which serves as a methodological framework for the RepTrack Pulse study, highly valued in the corporate sector at global level to measure and compare corporate performance in various markets.

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[17] FORO ECONÓMICO MUNDIAL: *"Findings of a CEO Survey on Global Corporate Citizenship"* (2002)

[18] BRADY, Arlo: *"The Sustainability Effect, Rethinking Corporate Reputation in the 21 Century"*, Palgrave/ Macmillan, USA (2005).

[19] FOMBRUM, Charles. *"Reputation: Realizing Value from the Corporate Image"*. Harvard Business School Press, Boston (1996)

As shown in table 9 "Dimensions of entrepreneurial reputation", the seven dimensions of reputation are: corporate governance, leadership, performance, innovation, employment quality, products and services, and corporate citizenship.

The specific weight of each of the performance areas in a company's reputation is different in each market and country, depending on the respective history, culture and citizen sensitivity.

TABLE 9 - DIMENSIONS OF ENTREPRENEURIAL REPUTATION

	Dimension	Company attributes
1.	**Corporate Governance**	• Open and transparent • Ethical conduct • Fair and responsible in the way it does business • Inclusive
2.	**Leadership**	• Market or sector leader • Attractive leaders • Management excellence • Clear forward-looking vision
3.	**Performance**	• Profitable • Sustained growth expectations • High returns for investors • High standards in its processes (certifications and standards)
4.	**Innovation**	• State-of-the-art products and services • Incorporation of cutting edge technologies and procedures
5.	**Products and Services**	• High quality • Cost-efficient (value for money) • Customer or post-sales service excellence • In tune with the needs of the market and of clients or consumers
6.	**Work**	• Fair compensation for workers • Equal opportunities • A good place to work • Personal career development
7	**Citizenship**	• Environmental responsibility • Support of social causes and initiatives • Positive impact on society • Responsible coexistence practices with its stakeholders • Actions in favour of the community

At a community level, the dimensions with greater incidence in a company's reputation are:

a) Corporate Governance, with attributes such as transparence, ethical conduct, fair operating practices, and inclusiveness.

b) Citizenship, with emphasis on aspects such as environmental responsibility, support of social initiatives and causes, positive impacts on society, responsible coexistence practices, and actions in favour of the community.

A second model on the company's performance areas that determine corporate reputation (Brady, 2005) describes seven dimensions which, in general terms, resemble the Rep Track Pulse model. These are:

1. Knowledge and skills

2. Emotional connection

3. Leadership and vision

4. Quality

5. Financial Credibility

6. Social Credibility

7. Environmental Credibility

Brady emphasizes the growing understanding of companies regarding the close relationship between businesses, society and the environment, with corporate reputation. He sets out that in order to increase the general corporate reputation, companies must be aware of the emerging socio-political trends and improve their performance in relation with the demands of their stakeholders.

According to Brady, the virtuous circle of a company's relationship with the stakeholders that allows a good reputation is the following:

THE VIRTUOUS CIRCLE OF RELATIONSHIP WITH STAKEHOLDERS

1. Identify the stakeholders, bearing in mind that many of them may belong to more than one category
2. Build a relationship based on trust and dialogue
3. Reach agreements and define objectives and indicators that allow verifying compliance
4. Design and execute plans and programs and fulfill commitments
5. Demonstrate, verify and communicate

Regardless of the reference model selected by the company, the first step for reputation management will be to assess its performance in each one of these environments and detect the weaknesses that could place the reputation at risk. For these purposes, the matrix in table 1 may be used, contrasting it with the actual circumstances of the company.

5.4.2 Step 2: Know the Public Perception of the Company

The second key factor of a company's reputation is the stakeholders' perception. In communities, this perception depends on the following factors:

1. Past and current performance of the company in the community

2. Previous socio-environmental interaction experiences

3. Cultural, religious, ideological patterns, attitudes, beliefs and opinions

4. Influence of opinion leaders, movements and organized groups.

The task consists of knowing the perceptions of the stakeholders in the community, identifying the risk areas and opportunities for action and the company's communication, formulating recommendations and warning the executives responsible for the corresponding areas, as appropriate.

The measurement of a company's perception relates to four basic criteria: esteem, admiration, good feelings and trust, according to the RepTrack Pulse, the most prestigious reputation measurement tool at a global level.

Esteem	Admiration
Good Feelings	Trust

The company's relationship with the stakeholders and the knowledge of their expectations, in the terms outlined in detail in the Community Involvement Manual, are key to reputational risk management.

5.4.3 Step 3: Identify the Gaps Between Performance and Perceptions

A third step consists of contrasting the company's effective performance with social perceptions, and building a map to visualize the risks and opportunities that arise when cross-referencing the information. As a reference to develop the risk map, you can use Table 3 "Risks stemming from the context of the oil industry", included in paragraph 3.3.2 of this Manual, which specifies the pressures of the setting on the company.

In addition to the risks generated by context conditions, another group of risks to reputation is generated when the company itself creates social expectations which it is not in a condition to satisfy, assuming formal and informal social commitments expressed by any of its representatives, both in the direct contact with the stakeholders in the community or through the formal information and dissemination media.

A valuable tool to perform this task is the Communication Risks and Opportunities Matrix, described in figure 4.

FIGURE 4 – COMMUNICATIONS RISKS AND OPPORTUNITIES MATRIX
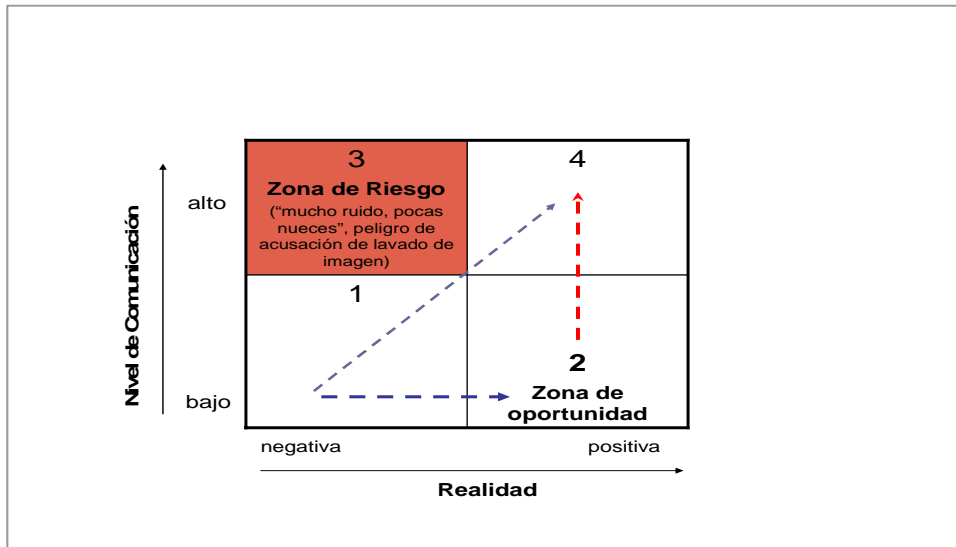
Risk Zone: "all talk and no action", risk of being accused of image laundering.

The greatest risk is found in the zone of high expectations created by the company and not sustained by actions and a verifiable performance, as explained in table 10 "Map of reputational opportunities and risks".

The greatest opportunities are found in the zone in which, there are high performance standards which have not been communicated and are unknown to the community's stakeholders. The Communications and Reporting Manual provides tools for effective communication with the communities".

TABLE 10 - MAP OF REPUTATIONAL OPPORTUNITIES AND RISKS

ZONE	ACTUAL CIRCUMSTANCES	COMMUNICATION	ANALYSIS
1	The company does not have a good performance or develop initiatives, actions or programs in line with social expectations.	The company does not communicate	**Zone of challenges for action and communication** Act to improve performance and communicate what is done.
2	The company has a good performance. There are positive initiatives, actions, programs or realities.	Performance and initiatives are not communicated by the company to the community.	**Zone of opportunity for communication**
3	The company does not have a good socio-environmental performance	The company generates social expectations through communication, with no support in actual circumstances. There is no consistency between what is said and what is done	**Zone of reputational risk** Risk of loss of credibility, trust, esteem and reputation
4	The company expresses its values and principles in its relationship with the communities through its involvement with the stakeholders and its contribution to local development	Initiatives and programs are communicated to all audiences.	**Desired zone for reputation management** The company has a good performance and communicates it Consolidation or strengthening of reputation

5.4.4 Step 4. Measuring a Company's Reputation

A common tool to which companies resort in order to measure their reputation are perception or public opinion surveys. Several organizations at world level have developed specific methodologies to measure corporate reputation.

The best known organizations which provide consulting services in certain countries of the region are:

a) Reputation Quotient, Reputation Institute, USA, www.reputationinstitute.com

b) MERCO, Monitor Español de Reputación Corporativa, España www.merco.info

c) Good Reputation Index, Australia

d) Reputation Strength Study, Reputation Rating Research, USA, www.ratingresearch.com

e) Reputation Degree Index, Fundación Getulio Vargas /Gecko Socioambiental Consulting, Brazil

f) Fortune/ ROPER Corporate Reputation Index, USA

In addition, there are various rankings of the most admired companies, such as "Global Most Admired Companies" or "World's Most Respected Companies".

5.5 RECOMMENDATIONS FOR COMPANY REPUTATIONAL MANAGEMENT IN THE COMMUNITIES

1. Respect the law and demonstrate compliance

Oil and natural gas companies' reputation and prestige require that they be in a condition to demonstrate, at all times and on the first requirement of authorities and community representatives, full compliance with the industry's regulatory framework in effect, in the face of the growing loss of credibility in the institutional systems and regulatory frameworks of certain markets of the region. Legal compliance is your best protection in case of losses or accidents in the operations.

In particular, see that your company stands out for:

- Successful Environmental Impact Studies
- Demonstration of legal compliance through socio-environmental audits and good results when supervised by the authority
- Dissemination of socio-environmental compliance audit reports (confirmed sustainability reports)

2. Promote business conducts based on business ethics

Institutionalize an ethics code in the company and train all company workers.

What are business ethics understood as? Cortina[20] defines them as "a kind of knowledge that helps those who work in the company make reasonable and fair decisions based on moral values."

Sensitize all members of the organization with regards to the impact that their behaviour can have on the community. For example, the use of free time, recreation and leisure activities, responsible driving, care of natural spaces, respect for private property, etc.

3. **Incorporate cutting edge technologies into your operations and processes**

Make sure that the company incorporates the best technologies within its reach so that its environmental performance exceeds the standards required by law (technical maximum).

4. **Promote top management leadership**

Reputation management has to go hand in hand with a leadership style.

The top executives of the leading companies in corporate reputation rankings dedicate considerable time to communication with stakeholders.

The personal reputation of a general manager can have a bearing of up to 50% on a company's reputation[21]. His/her credibility and ethical behavior are more important than profitability in the impression the company makes on its audiences.

5. **Meet international principles and standards**

- Demonstrate high performance
- Certify your operations

6. **Be consistent in fulfilling commitments**

- Do not create expectations you cannot meet
- Bear in mind the saying "being, rather than seeming"
- Look for coherence between what you communicate and the company's conduct.
- Make sure that your company's communication is supported by facts.

7. **Be an open and transparent company**

- Be close

Stakeholders who feel close to the company may become its promoters or ambassadors. This effect is known as word of mouth.

8. **Build trust relationships**

A critical aspect of the company's relationship with its stakeholders is trust. According to Burke (1999),

"*Trust is necessary to develop a positive reputation in the community. Where there is trust there is respect, a willingness to accept someone's expressions at their face value. There are no suspicions, no hidden agendas. Problems and difficulties can be worked out. People who trust each other understand that mistakes can happen, that people will work to correct those mistakes. Trust cannot be controlled or manipulated. It is based on a company's reputation, which in turn is based on perceptions. Trust is, however, a perishable commodity that needs to be nourished and sustained*".[22]

The creation of "trust funds" and reputation funds requires efficient strategies of relationship with your stakeholders. To know their expectations and respond to them:

- Deepen mutual knowledge
- promote interaction around common interests
- Establish dialogue and consultation mechanisms

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[20] CORTINA, Adela y Conill, Jesús. "*Democracia participativa y sociedad civil. Una ética empresarial*" (Participative democracy in civil society. Business ethics), Siglo del Hombre Editores, Santafé de Bogotá, 1998

[21] GAINES-ROSS, Leslie: "CEO Capital. *A Guide to Building CEO Reputation and Company Success*". Ed. Wiley. New Jersey, **2003**

[22] BURKE, Edmund M. "*Corporate Community Relations: The Principle of the Neighbor of Choice.*" Praeger Publishers, Westport, 1999

- Build far-reaching agreements and relationships

9. Ensure your presence, and participate in community life

- Ensure the inclusion of the stakeholders
- Promote local development
- Develop alliances with partners who are reliable and esteemed in the community
- Participate in social networks

10. Report the company's performance to the communities

Social or sustainability reports are increasingly valued as a means to make a company's economic, environmental and social performance transparent.

11. Be proactive

"The best defense is a good offense. A solid and arduously gained reputation for environmental management, social responsibility and ethical conduct" (Willard, 2003)

12. Communicate widely

Since reputation is sustained on perceptions, communication is a very valuable strategic management tool which points at obtaining visibility and differentiation, based on the principles of consistency, authenticity and transparence.

Corporate communication must be consistent: your messages are not only those explicit speeches you deliberately deliver, but all the signals that can be perceived by the setting.

"Communicate, communicate, communicate", is Austin's (1998) recommendation *"…and then, go directly to the facts. It is the actions that sustain the words, that create trust."*

Remember:

- Knowing how to listen is more relevant than talking
- Plan the communication of each initiative or project
- Have a crisis communication plan in place

13. Install feedback mechanisms

Feedback mechanisms are essential to measure the impact of companies' social or environmental initiatives on the perception of the audiences.

- Have complaint, claim and suggestion mechanisms in place
- Establish instances for direct communication with the communities

14. Monitor traditional communications media and virtual media

Introduce the following regular practices:

- Follow-up of regional and community communications media (through clipping services, for example)
- Follow-up of blogs and virtual media

In blogs, opinions are expressed and information is exchanged that may refer to your company and to its perception in specific local contexts.

A useful tool for the periodical follow-up of blogs is the www.technorati.com tool, which allows accessing blogs in which a particular search criterion has been mentioned, such as for example, the name of a company or of one of its business units in particular.

15. Monitor the information media of NGO's and environmental networks

At the regional, as well as the global level, there are numerous organizations and networks that bring various organizations of the civil society together and exercise social and citizen control on business conduct: unions, consumer organizations, environmental organizations, among others.

Check your electronic bulletins, web pages and other information media to know their view on the activities of the extractive and hydrocarbon industry.

The sector is subject to the specialized attention of several of these "social observatories" or watchdogs, whose mission is to monitor and eventually report on business conducts.

16. Avoid communication that may be interpreted as "image laundering" or greenwashing

Be very careful when disseminating the Social Corporate Responsibility and community support initiatives promoted by your company. Make sure this communication is not interpreted as greenwashing.

Pay particular attention to advertising activities: marketing campaigns with a cause, ads and insertions on environmental and social programs, sponsoring of community events, publishing of pictures in the social pages of the written press.

Do not use misleading images or expressions. The use of concepts such as "ecoefficiency", "clean" processes or "green" products, "sustainability", "recyclable", "biodegradable", among other, requires great responsibility. Do not expose your company to retractions.

17. Do not underestimate the power of NGO's

"Recent surveys reveal the growing influence of NGO's and the subjects they defend. The public simply does not believe they are the wild fanatics of certain simplistic visions. In a survey developed by Edelmann Worldwide, European opinion leaders say they trust twice as much in NGO's than in governments, and substantially more than in companies.".[23]

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[23] GAINES-ROSS, Leslie. Op. cit , págs. 170 y 171

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APPENDIX I: PREVENTION AND MANAGEMENT OF SOCIAL-ENVIRONMENTAL CONFLICTS

APPENDIX I

TABLE OF CONTENTS

LIST OF TABLES

1.0   INTRODUCTION

1.1   OBJECTIVE

This Appendix to the ARPEL Socio-Environmental Risks Management Manual provides Basic Tools and practical guidelines to the management and community relation teams in the oil and natural gas companies in Latin America and the Caribbean, for the analysis of conflicts and the design and implementation of cooperation strategies and processes which will ensure the prevention and solution of conflict situations, as a core element of the community relations system.

Its purpose is to provide the skills to transform scenarios of potential or actual conflicts into cooperation and trusting relationships with communities in the area of direct influence of a specific project.

The proposed approach will require three core actions from companies:

a)   Installation and strengthening of skills within the companies,

b)   Adoption and application of methodologies and tools for analysis and management,

c)   Design and implementation of cooperation processes.

1.2   OPPORTUNITIES AND CHALLENGES

Although at present there are increasing efforts from the oil and gas companies operating in Latin America and the Caribbean to address management of social-environmental conflicts, it is possible to point out, as initial diagnostic, two fundamental challenges faced by hydrocarbon companies:

1)   That treatment of conflicts should be approached from a prevention angle (reactions are still delayed and ineffective), and

2)   That the companies' actions in conflictive scenarios should be framed in the design of strategies addressing the issue in an integral and specific manner, rather than through punctual, isolated, and unplanned actions.

Undoubtedly, the operating effectiveness and economic profitability of projects will be easier to achieve in a peaceful environment of social stability than in situations of stress, conflict and confrontation.

Preventing, managing and solving conflicts in a timely and effective manner will always be a synonym of higher reputation of financial institutions, governments, communities, and the various stakeholders.

It becomes necessary to have the skills for constructing cooperation processes and generating equitable spaces for dialogue and bargaining, based on the acknowledgement of the others as legitimate social role-players, in order to prevent crisis and violence, and construct good governance processes.

Any good practices of prevention, management and resolution of conflicts will go hand in hand with voluntary agreements that translate into actions and specific contributions to communities. The design

and implementation of well-defined local development initiatives (see Community Involvement Manual) will be determinant in opening a range of options for solving crisis situations.

1.3   BACKGROUND INFORMATION

During the last decade, the Region of Latin America and the Caribbean has faced an increase in the frequency and intensity of socio-environmental conflicts from productive projects, derived on one hand, from higher competition for access to natural resources, and on the other hand, a higher public sensitivity to potential impacts from economic activities, and specially the extraction industry, on the environment and the communities' quality of life.

This escalation of conflictive issues has resulted in a barrier to new projects or to the expansion of existing projects, as well as in obstacles, in many cases, to the normal development of ongoing activities, with the consequential risks and unpredictable associated costs to all sectors involved.

The entrepreneurial sector tends – in many cases – to interpret socio-environmental conflicts as the consequence of two basic factors:

1. Errors by a company in the management, design or implementation of a specific project,

2. Communities' claims - expectations of obtaining benefits or advantages that are not in order or are unjustified.

This conventional standpoint for approaching conflicts has led companies to maintain a reactive attitude or to setup dialogue or bargaining processes in order to avoid a specific conflict from happening, seeking to consolidate a unilateral interest and a certain status quo.

The practice of disregarding certain role-players and key stakeholders has created conditions that inevitably help to turn conflictive situations into crisis, where any type of intervention is more difficult and at higher costs.

Understanding that conflicts are a normal aspect of relationships among groups of role-players with different interests and expectations, and taking conflicts as an opportunity to discuss and agree upon models of sustainable development, it becomes necessary to address such conflicts from a new standpoint and treat them as an agent for change. This new standpoint or vision of conflicts will allow companies to transform such conflicts into the starting point of the following processes:

a) Transformation of human relations,

b) Construction of spaces for effective cooperation,

c) Joint and participative definition of local development plans.

The development of a specific oil and natural gas project with a prevention approach requires that the focus of possible conflicts be proactively addressed, and that arising conflicts not be perceived as negative.

The main challenge is to avoid escalation of tensions and/or violence that may generate irreversible and negative soco-environmental consequences for local communities and the natural resources that sustain such communities, and that, in turn, may become an insurmountable obstacle for development of a specific productive project and a breaking point of relations with local stakeholders.

1.4   CONCEPTS AND DEFINITIONS

[24]

This Appendix is based on the following definitions and concepts:

a)   **Socio-environmental problem**:   *"Actual damages to the environment and natural resources threatening human welfare or the integrity of a specific ecosystem"*. Examples of socio-environmental problems are the pollution of a river resulting from spillage of hydrocarbons or the indiscriminate felling of forests, among others. It is not necessary for a socio-environmental problem to arise for a conflict to be created. The simple perception of the existence of a problem is sufficient for conflictive dynamics to start.

b)   **Socio-environmental conflict**: *"Process of collective interaction characterized by dynamics of opposition and controversy among stakeholders, resulting from their actual or perceived incompatibilities, on the control, use, and/or access to the environment and its resources."*[25]

c)   **Interested party**: In conflict dynamics, we will refer to *"an individual or group taking positions, defining objectives, and acting thereon"* as an interested party. Without interested parties in confronting positions there will be no conflict.

d)   **Conflict prevention and management**: *"Set of strategies and activities seeking to address a conflict in order to prevent the escalation of tensions and/or transform confronting relations into cooperation and trusting relations for peaceful, fair and equitable coexistence"*.

e)   **Conflict prevention**: The accuracy of this concept is relative, since what needs to be sought, more than preventing the conflict itself is to prevent the crisis, its violent manifestation and all negative (and in some cases, irreversible) consequences deriving from such crisis. For the purposes of addressing the subject throughout this Manual, we will rather use the term "**crisis prevention**".

f)   **Crisis**: *"Specific moment in a conflict where the opposition and controversial dynamics are expressed in escalating tension and/or violence."* If we ask, as from this definition, if it is possible for conflicts to occur without a crisis, the answer is yes. While it is necessary to create conditions for conflict prevention, it is also necessary for cooperation strategies and processes to have a priority objective of due and timely attention to factors escalating towards a crisis.

g)   **Transformation of conflicts**: *"Process that is sustainable in time, seeking to solve, more than an actual dispute, any problems originating conflicts in all dimensions: environmental, social, cultural, and political"*[26]

The approach of transformation has the purpose of promoting constructive change processes, has a temporal vision with a long term horizon (past, present, and future) and prioritizes (gives special attention to) the subject of power relations between role-players as the basis for understanding the profound causes for conflict, without disregard, notwithstanding, to the communication aspects for timely resolution thereof.

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[24] Program for Prevention and Management of Social-environmental conflicts of the Latin American Future Foundation (FFLA) */: www.ffla.net*

[25] Definition of the Lima Group (2005) in *"Environmental Cross-roads in Latin America. Between Conflict and Cooperation",* published by Hernán Darío Correa and Iokiñe Rodríguez, Universidad para la Paz, CyC Program, 2006

[26] Correa and Rodríguez, 2006

In the paradigm of transformation, conflicts should go through an ideal process of four consecutive stages:

1) Latency,

2) Confrontation,

3) Negotiation, and

4) Definition of public policies[27].

h) **Governance**: *"Mechanisms, processes, and institutions through which the state, the private sector, and civil society coordinate their interests, use their powers, perform their obligations, report their performance, and mediate their differences"*[28].

i) **Good governance**: Principles that governance is based on, that is: legitimacy and voice[29] (participation and search for consensus[30]), compliance reporting (transparency); performance (capacity to respond, efficiency, and effectiveness); social justice (equitableness and law enforcement); and management (strategic vision).

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[27] Dumas and Luna, 2008
[28] Adapted from Good Governance and Sustainable Human Development, UNDP, 1997.
[29] Five Principles of Good Governance, CF: Institute of Governance, 2002, Canada.
[30] Good Governance and Sustainable Human Development, UNDP, 1997.

2.0   CONFLICT ANALYSIS AND MANAGEMENT

2.1   ELEMENTS OF CONFLICT PREVENTION AND MANAGEMENT

Conflict prevention and management constitute core and strategic aspects in company relations with communities and therefore, following the continuous improvement logic, all projects require a process and specific management tools in their various stages.

This Chapter provides tools, instruments, and formats to guide the implementation of two core elements in conflict prevention and management:

1)   Analysis of role-players and conflicts, and

2)   Design of management strategies and processes.

Such instruments will help understand the scenario and context of any conflict, and to identify who is involved, visualize possible solution alternatives, and define basic elements of how to address a specific case.

Tools have a wide scope of application and may help significantly in effective decision making. There is no pre-determined scheme for using these tools, and they should adjust to the reality, situation or location of the project, according to the addressed scenarios, role-players, and contexts.

Through the use of these methodologies and tools, it will be possible to manage conflictive situations more adequately, in a manner such that projects may achieve normal development. However, not all conflicts have a solution.

2.2   SKILLS

In order to timely and effectively prevent, manage, and solve social-environmental conflicts, and transform conflictive scenarios into sustainable cooperation and trusting relationships, it is essential to have the appropriate skills available, that is, professionals (or professional teams) with specific qualifications, skills, and expertise, as required to implement the tools provided in this Manual, and specifically, to carry out cooperative processes.

If the responsibility for addressing conflicts is placed upon individuals whose main skills and duties are focused on other areas, the success of such strategies and processes will be unlikely.

In practical terms, to analyze, prevent, manage, and solve conflicts will require the development of know-how and expertise in the practical application of methodologies and tools, and in the direction of processes. This is certainly an eminently practical task.

Therefore, it is not realistic to seek to provide skills solely through training courses and theoretical academic programs. Consolidating know-how and applying tools in local cases and realities will require – at least in the beginning – the company to have specialized technical support and cooperation in

practice, and to create spaces for the exchange of experiences and learning between companies in the oil and natural gas sector and the extractive industry, in general.

2.3 ANALYSIS OF ROLE-PLAYERS AND CONFLICTIVE ISSUES

2.3.1 Objectives

The analysis of role-players and conflicts is essential for socio-environmental risk prevention, even in the absence of actual conflicts.

The purposes for analyzing role-players and conflicts are the following:

a) Identification and comprehensive analysis of role-players and stakeholders.

b) Attaining a deeper understanding and characterization of their interests, needs, and positions on specific projects to be implemented.

c) Determination of conflict scenarios and dynamics (potential or actual) as basic input for the design of prevention or management strategies.

2.3.2 Process of Analysis of Role-Players and Conflicts

The analysis of role-players and conflicts should be carried out in an early stage of the oil and natural gas project, and under a preventive approach, once the social baseline is available as input.

STEP 1   INITIAL IDENTIFICATION OF ROLE-PLAYERS AND STAKEHOLDERS

The identification and analysis of role-players is a dynamic process that should be updated along the various project stages, that is, pre-feasibility, construction, operation, and closure.

This first step should be approached by the company professional or team in charge of interactions with communities.

In each project there are certain already established relations with the community. Draw a preliminary list of such relations. Some role-players will be easily identifiable, such as the community adjacent to the project and local or regional governments, among others; these are the direct stakeholders.

There will be other stakeholders that are more difficult to identify (indirect stakeholoders) and will therefore require a close analysis of their interest dynamics and their potential relationship to the project. Examples of these groups may be the NGOs or teachers located in localities which are further away from the project.

STEP 2   VERIFICATION OF ROLE-PLAYERS AND STAKEHOLDERS

Efforts should be made to ascertain and supplement the listing developed in Step 1. You can do an exercise of verifying role-players with your colleagues and teams inside the company, or by contacting external role-players you are already acquainted with, who may in turn suggest other direct stakeholders of the project. The use of **Tool 1: "Table of reference for identification of role-players and stakeholders"** is recommended.

STEP 3   ANALYSIS OF ROLE-PLAYERS AND STAKEHOLDERS

Once role-players and stakeholders have been identified, proceed to apply **Tool 2: "Matrix for analysis of role-players and stakeholders".**

Depending on the answers to the various questions made in this matrix, the stakeholders (role-players or groups) shall be grouped and ranked to determine which will be the most impacted, or which hold the highest stakes in the project and therefore shall require the most attention from the company.

STEP 4   ANALYSIS OF CONFLICTS

Collect information from various sources. You may do so through interviews with key role-players, direct observation, informal meetings or workshops and/or examination of secondary information. For such purposes, use **Tool 3 "Guidelines for collection of information".**

In case of a potential or actual conflict – identified in Step 3 or expressed through specific public positions or actions from specific role-players – proceed to apply **Tool 4: "Matrix of conflict analysis",** to understand the characteristics and possible dynamics of such conflict.

To achieve a suitable analysis of a specific conflict, it is necessary to collect information on two aspects:

1) the problem originating the conflict situation

2) the role-players involved

2.4   STRATEGIES OF CONFLICT MANAGEMENT

2.4.1   Objective

The purpose of conflict management strategies is to facilitate the analysis of possible solution alternatives when facing a socio-environmental conflict scenario, and to define a strategy to formulate a management process.

2.4.2 Design and Implementation of a Conflict Management Plan

The process of conflict management should be implemented in the event an actual conflict appears, and under a solution approach, in any of the project stages.

Prior to the design and implementation of the process, in the prevention phase, the role-players and stakeholders shall have been identified, analyzing their positions and claims, in order to perform a preliminary determination of the scenario and dynamics of the conflict.[31]

STEP 1   IDENTIFICATION AND ANALYSIS OF SOLUTION ALTERNATIVES

Proceed to identify possible options for solving or settling the conflict situation, taking into account the positions, stakes, and needs of the role-players in dispute. Use Table 1 "Alternative Solutions to Conflicts" as reference.

The distinction of positions, stakes, and needs of the conflicting parties is essential in any analysis. Focusing on the differences between the different positions will make any incompatibilities very obvious and result in an inflexible approach which does not open options or alternative solutions beyond the positions themselves and that will, inevitably, result in one party winning and others losing.

There are two sets of options or approaches for solving socio-environmental conflicts: cooperative systems based on interests, and adversarial systems, based on power and rights.

a) Adversarial Systems

In the so-called adversarial systems (structured by rights and power), the dynamics of processes will always be competitive and the role-players will limit themselves to making offers and counter-offers to solve their problems.

b) Cooperative Systems

Cooperative systems (focused on the stakes and needs of role-players) will provide an easier vision of the points of mutual interest and mutual agreement.

We will define cooperative processes as *"the processes that gather individuals and groups with different stakes and points of view on a subject or a problem, for the purposes of working together in the development of an action program, or in the resolution of a conflict, using an approach based on consensus"*.

These types of processes help construct more inclusive and equitable relationships, and seek to satisfy all parties to the extent possible. A range of possible results is opened and there is more flexibility for acting, reaching legitimate and sustainable decisions as a consequence of participative consensus. In this way, collective actions are constructed based on dialogue. .

The dynamics of cooperative processes require – in most cases – the presence of an impartial third party to help define the rules of the process, build consensus, and ensure that all role-players participate with equal voice and treatment.

To transform positions into stakes will be equivalent to obtaining better spaces and opportunities to aachieve relationships of cooperation and trust.

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[31] Tool N° 1 "Analysis of role-players and conflicts" shall have been applied.

TABLE 1 - ALTERNATIVES FOR CONFLICT SOLUTION

COOPERATIVE SYSTEMS		
Negotiation	**Facilitation**	**Mediation**
A process between two or more parties with the purpose of reaching an agreement. A strategy where something is compromised in order to obtain something else; based on entering into commitments and agreements between the parties. A negotiation that is carried out well should result in the satisfaction of the parties. Generally, negotiations are carried out directly (between the parties involved), but in certain cases, could be carried out through a third party negotiator, who will provide information and agreement proposals to the parties.	A process directed by an impartial third party who helps the parties to communicate, understand each other, and reach agreements. The role of facilitator aims solely at ensuring conditions for due process, where all parties have the same opportunity to be heard and express their points of view. Whether agreements are reached or not shall depend solely on the parties. The facilitator performs several tasks: to collect basic information and ask questions to help the parties clarify the situation and possible solutions, among others.	Consists in a process where conflicting parties accept (by mutual agreement) the intervention of a third party (mediator) who helps discuss complex issues and reach agreements. The mediator may suggest possible strategies for solution on the basis of proposals from the parties, but has no power whatsoever to decide the final outcome.
ADVERSARIAL SYSTEMS		
Arbitrage	**Court Decision**	**Administrative <u>Decision</u>**
The conflicting parties delegate their decision-making capability and transfer to an impartial third party the power to make a resolution, which shall be binding for the parties. The arbitrator analyzes information and hears arguments from both parties. Arbitrage is requested freely and voluntarily by one of the parties involved, but must be accepted by all. Otherwise, arbitrage shall not be duly legitimate and its solution loses viability. An arbitrator's decisions are binding and final.	Consists in exploring and finding resolutions within the frame of the justice system, through procedures established by law. If it has not been possible to reach a solution through collaborative systems, the parties have the option of recurring to a decision by the corresponding authority.	Refers to the certain possibility for a given conflict to be resolved through a decision by a competent authority adhering to what is established in the applicable regulations and administrative procedures. Refers to a unilateral decision when faced with a problem that determines a conflict and represents the main cause for the same.

STEP 2   EVALUATION OF OPPORTUNITIES, COSTS, AND RISKS

Next, make an evaluation of each of the alternatives considered, by applying **Tool 5: "Evaluation of Opportunities, Costs, and Risks".** This tool helps visualize information for decision-making with regards to:

      a) what to do to face the conflict,

      b) what solution should be approached,

      c) what risks are assumed when selecting one solution or the other.

The various options for a solution to a specific conflict should be analyzed, assessed, and compared according to their scopes and limitations, costs, benefits, and risks, taking into account the stakes and needs of the various role-players, and the conflict scenario and dynamics.

Variables such as the economic aspects, reputational issues, dates and terms, external effects (e.g. financial), political, social, environmental, cultural, etc. variables shall be evaluated. These variables may be tangible or intangible, current or future.

Make a balance in order to determine which of the options is the most convenient to the interests and needs of your company or project. The balance is the result of the evaluation, depending on the cost/benefit analysis. The option with the lowest costs, more benefits and less risk for the company should be chosen.

STEP 3   PLANNING AN INTERVENTION STRATEGY

Once the possible resolution alternative is determined, proceed to identify the components required to build an intervention strategy based on:

a) The re-definition of the conflict,

b) Identification of process goals,

c) Assessment of external conditionings,

d) Definition of a mechanism to convene participants,

e) Participation structure and roles for role-players and groups.

The definition of each of the variables set forth above generates input for designing an action plan, as per Table 2 "Format of an Intervention Strategy".

TABLE 2 - FORMAT OF AN INTERVENTION STRATEGY

COMPONENT	DESCRIPTION	PROPOSAL
1. **Constructive redefinition of the conflict**	The conflict is presented by the parties in a polarized way, based on positions (NO vs. YES to an oil project). Then, a way to constructively redefine the conflict based on the interests of the parties should be sought and proposed.	
2. **Identification of process goals**	Initially, define and propose clear goals for the process, to be discussed, supplemented, and agreed upon by the other role-players. Clear goals help limit the expectations from role-players.	*Possible goals may be: exchange of information, reaching a specific agreement to settle the conflict, development of a joint action plan with the community, etc.*
3. **Evaluation of context (external factors)**	Consider and evaluate the processes or situations that are beyond your control, but that may have direct incidence on the process (e.g., to carry out elections during the process or judicial trial in course).	
4. **Mechanism for formalization of process**	Explore and define a possible mechanism linking the process with decision-making instances by responding to the question: How do we make sure that the institution or authority responsible for making a decision on this conflict will respect the results of this process?	
5. **Convocation**	The convocation should request the attendance of all parties with significant affected stakes, decision-making audiences, and even those with the power to "boycott" a negotiated solution. A legitimate caller in the eyes of all identified role-players should be used, and the means to be used shall be decided.	
6. **Participation Structure**	Plan and define the format of participation: sequence and number of meetings required by the process, number of attendants, etc. It is equally necessary to identify mechanisms for representation of the various stakeholders.	
7. **Definition of Roles**	Define roles for the team involved in the process: who calls, who will be facilitator, who will speak in representation of the company, who will answer certain technical issues, who will take note and draw records, who will systematize the results, who will be in charge of logistic aspects, who will be responsible for communications, who might be external observers, etc.	
8. **Construction of agreement proposals**	Begin by identifying possible points of mutual consent to construct tentative proposals. All proposals shall include goals, activities, responsibilities, roles, committed resources, and follow-up mechanisms. Proposed agreements shall be simple and easy to communicate.	

STEP 4   IDENTIFICATION OF INDICATORS AND MONITORING

Before implementing your strategy, define indicators to be used for measuring the outcome of the process.

Fill-in **Tool 6 "Indicators for conflict prevention"** before starting up your intervention strategy. For each indicator, describe the current situation and formulate possible scenarios upon conclusion of the intervention as well as elements to help verify the degree of compliance with results.

Proposed indicators are only a basic reference. You should update, adapt, or otherwise formulate new or additional indicators, according to the characteristics of the case/conflict or depending on the resolution process carried out.

Proceed to an initial reading of the indicators that will allow you to establish a baseline for monitoring improvements in relationships with role-playerswith regards to the initial conflict situation and goals of the process.

Make a second measurement of the indicators, post intervention.

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4.0   TOOLBOX

TOOL 1 - TABLE OF REFERENCE FOR THE IDENTIFICATION OF ROLE-PLAYERS AND STAKEHOLDERS

Communities	**Stakeholders**
• Local community located in an area of direct influence relative to the project • Community located in an area of indirect influence • Local community near the head office • Regional community • National community • International community	• Public Health Groups • Citizen Security Groups • Human Rights Groups • Social Justice Groups • Drinking Water and Sanitary Committees • Political parties base committees • Other groups
Specially affected groups	**Other organizations of civil society**
• Neighbours and groups nearest to operations • Elderly/sick/disabled people • Indigenous people • African descendants • Children/schools/orphanages	• Churches and religious organizations • Unions or trade associations • Educational organizations • Charity organizations • Organizations for childhood protection • Organizations for protection of the elderly • Professional and Business associations • Others
Public institutions and regulators	**Internal level of the company**
• Local government officers • Regional government officers • National government officers • Counselors (township) • Senators and deputies	• Board of Directors • General Manager • Executive Committee • Shareholders • Legal counselors • Health, Security, and Environmental Executive Officers • Human Resources or Personnel Department • Corporate Communications • Others
Entrepreneurial sector	**Individuals/groups with special interests**
• Companies or industries located in the area of	• With stakes in the area of direct influence of the

direct influence of the project • Companies or industries located in the area of indirect influence of the project • Competing companies in the business • Suppliers • Clients • Industrial or corporate trade associations • Others	project (small producers, farmers, cattle breeders, fishermen) • With stakes in the company (existing partners) • With stakes in the industry • Persons who are already involved • Persons who wish to become involved • Persons who work in responding to emergencies • Persons you wish to engage • Communications media • Others
Environmental NGOs and Base Organizations	**Regulators**
• Local groups (residents' associations, committees) • Local, regional, and/or national NGOs • International NGOs • Environmental activists • Other leaders in civil society	• Officers in public services with competence • Inspection agencies/controllers • Others

TOOL 2 - MATRIX FOR ANALYSIS OF ROLE-PLAYERS AND STAKEHOLDERS

QUESTIONS	ROLE-PLAYERS/ STAKEHOLDERS		
	TO A HIGHEST DEGREE	TO A MEDIUM DEGREE	TO THE LOWEST DEGREE
Who will be directly affected by the project's negative impacts?			
Who will benefit from the project?			
Who will be responsible for implementing actions to mitigate negative impacts?			
Whose cooperation, capabilities or influence would contribute to the project's success?			
Who are the most vulnerable and have no opinion, or have been targeted for special efforts to become closer, consult, and engage?			
Who supports the changes to be brought about by the project?			
Who opposes the changes that the project will bring about?			
Whose opposition may be highly detrimental for the project's success?			
Who will make strategic decisions for approval/ execution of the project?			

TOOL 3 - COLLECTION OF INFORMATION ON ROLE-PLAYERS AND PROBLEMS

1.	**What do we need to know about stakeholders?**

- Who are the main interested role-players and who are representatives?
- Who are secondary role-players?
- Which are their positions, interests, and needs?
- How well defined are the role-players?
- Which public authorities are/ should be involved?
- What are their attitudes at the time of addressing the conflict scenario?
- What are their attitudes towards the contents of the conflict?
- What is the history of relations between role-players?
- What type of emotions are at stake between them?
- Does a potential for escalation of tensions and/or violence exist?
- Which are the possible factors for escalation of the conflict?
- What role do values play in this conflict?
- How much do the various role-players invest in this conflict?
- What is the level of power asymmetry and amongst whom does it exist?
- What tactics and actions do the various role-players use to face the conflict?

2.	**What do we need to know about the problem causing the conflict?**

- Which is the most accurate way to describe the problem?
- Are interests and values at stake, or only perceived differences?
- Which are the core aspects of the problem and which are secondary?
- Which are the structural and adjacent causes for the problem?
- Which are the issues of agreement and disagreement in this conflict?
- Which are the most pressing aspects?
- What value does each of the parties allocate to the natural resources at stake?
- Which are the possible solutions to be implemented?

TOOL 4 - MATRIX OF CONFLICT ANALYSIS

ROLE-PLAYER/ STAKEHOLDER	POSITIÓN	STAKES/NEEDS	SOURCES OF POWER				STRATEGY
			Economic	Legal			Economic

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TOOL 4: MATRIX OF CONFLICT ANALYSIS

Fill-in the following matrix with the data and information collected through interviews with key role-players, direct observation, informal meetings, or workshops and/or examination of secondary information.

Try to be the most objective possible in treating and analyzing the information.

Definitions for using this tool:

- **Role-players and groups** identified and analyzed in steps 1, 2, and 3.

- **Position:** Positions adopted by role-players trying to satisfy their needs and interests. It is what role-players wish: (We oppose the construction of the oil pipeline! / I am in favor of the oil project).

- **Stakes:** What role-players wish to obtain.

- **Needs:** What role-players require for a dignified human existence.

- **Power:** May be:

    a) The capability of role-players or groups to achieve what they want.

    b) The capability to sensitize others in respect of a specific situation and move them by concrete actions.

    c) The capability to perform actions that may change specific circumstances.

- **Strategy:** The set of actions that a role-player or group is carrying out to defend his/her or their position and procure the satisfaction of their interests/needs.

TOOL 5 - EVALUATION OF OPPORTUNITIES, COSTS, AND RISKS

ALTERNATIVE SOLUTION/ SETTLEMENT	STRENGTHS/ OPPORTUNITIES	WEAKNESSES/ RISKS	BOTTOM LINE
Example: Direct dialogue and negotiation process			
Example: Mediation with support from impartial third party			
Example: Legal action			

TOOL 6 - INDICATORS FOR CONFLICT PREVENTION

Indicator	Baseline	Final situation after intervention	Verification Means
1. **Levels of communication between role-players** *Non-existent, interrupted, deficient, confusing, etc. communication.*			
2. **Access to information on role-players**			
3. **Actual actions** *Actions of pressure and urgent claims (campaigns, protests, violent actions, physical aggressions, others)*			
4. **Reiterated, unaddressed claims** *Filed by the communities before the companies or responsible institutions.*			
5. **Lack of balance of power between role-players in conflict**			
6 **Ability to reach agreements**			

APPENDIX II: MANAGEMENT OF BIODIVERSITY

APPENDIX II

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1.1   OBJECTIVES

This Appendix to the ARPEL Social-environmental and Reputational Risk Manual has the purpose of guiding the Oil and Natural Gas Industry in Latin America and the Caribbean by providing guidelines for managing biodiversity in the framework of the Community Relations Management System.

Biodiversity management is focused on four basic dimensions:

1) Risk management for prevention of impacts on biodiversity,

2) Management of biodiversity as a strategic aspect in the development of hydrocarbon projects,

3) Development of voluntary conservation initiatives,

4) Involvement of the community in biodiversity management programs.

1.2   DEFINITION AND IMPORTANCE OF BIODIVERSITY

Biological Diversity (commonly referred to as biodiversity) is defined as the *"variability among living organisms of every origin, including terrestrial, marine, other aquatic ecosystems and the ecological complexes they are part of. This includes the diversity among species and of ecosystems"*[32] .

In simple terms, biodiversity may be described as *"the variety of animal and vegetal species in their environment"*.

Biodiversity is formed by a complex network of genes, individuals, species, ecosystems, habitats, and ecologic processes sustaining life in the planet, providing human beings with food, medicine, raw materials, and ecological services that support the permanent availability of clean air and freshwater, control of plagues, and regulation of climate, among many other benefits.

Interlinked with the functional aspects of biodiversity are spiritual, cultural, and recreational elements which, for many cultures, are just as important as the more functional aspects of biodiversity.

The industrial sector, as a fundamental pillar of development, together with other key role-players (governments, NGOs, the scientific world and local communities) have a significant role to play in management and conservation of biodiversity. The gas and oil industry is facing the challenge of contributing to conservation of biodiversity and carrying out its regular activities and operations, both effectively and responsibly, in order to secure protection thereof.

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[32] Convention on Biological Diversity, Article 2. / In Internet*: http://www.cbd.int/*

1.3 BIODIVERSITY IN THE GLOBAL SCENARIO

Biodiversity is going through a complex scenario at a global level; its degradation is quickly increasing. For the last 50 years, human intervention has generated greater changes in ecosystems than in any other comparable period in the history of mankind. Large surfaces of ecosystems and natural habitats of high global importance, such as tropical forests or wetlands, have come to sustained depletion and species are extinguishing at a rate 1,000 times higher than historical rates that have been registered in the planet.

Environmental services provided by bio-diverse and healthy ecosystems allow human beings to satisfy their basic needs and maintain environmental balances. Notwithstanding, and according to the Millennium Ecosystem Assessment[33] of the 24 services provided by ecosystems, 15 are in actual degradation:

- Supply of freshwater

- Sea fishing production

- Number and quality of spaces of spiritual and religious value

- Capacity of atmospheric purification before pollution

- Prevention of natural disasters

- Pollination

- Capacity of agricultural ecosystems to fight plagues.

The poorest and most vulnerable communities (specifically, farmers and indigenous people) are the ones suffering the most from the consequences of loss of biological diversity and collapsing of ecosystems, since they depend directly on the services provided by ecosystems for their subsistence.

Sustained loss of biological biodiversity is shown, among others, in planetary phenomena such as:

- Deforestation (it has been estimated that since the year 2000, 6 million hectares of primary forests have been lost per year)

- Degradation of coastal and marine ecosystems

- Decrease of wild species and the risk of becoming extinct

- Fragmentation of natural habitats.

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[33] Scientific study developed with the participation of over 1,300 experts throughout 95 countries. In Internet: http://www.millenniumassessment.org/en/index.aspx

1.4 SITUATION OF BIODIVERSITY IN LATIN AMERICA AND THE CARIBBEAN

In Latin America and the Caribbean, the loss of biodiversity is a priority issue, which should be addressed if the Region intends to achieve environmental security (ONU, 2007)[34]. Although the Region has a very high biological diversity, this heritage is strongly threatened by loss of habitat, degradation, and changes in the uses of soil, deforestation, and maritime and coastal contamination.

1.4.1 Loss of Biodiversity

The figures relating to the threats faced by biodiversity in the Region are alarming. Some of such threats are the following:

- The Region has 23.4 % of the forest coverage worldwide. Commerce, unplanned urban development, and lack of planning in the use of soil are forcing its conversion into pasturelands and monocultures for exports.

- Deforestation affects the quantity and quality of water, causing soil erosion and damaging biodiversity.

- Soil degradation affects 15.7 % of the land in the Region: 26% in Mexico and Central America, 14 % in South America.

- Coastal damages are widely extended: almost one third of the coastline in North America and Central America and almost one half of the coastline of South America are in moderate to high danger due to the impacts from development.

1.4.2 Initiatives for Conservation of Biodiversity

Coordinated action from various sectors to stop the loss of diversity, including role-players in the corporate sector, has achieved encouraging results. Some examples are the following:

- The protected areas (as per classification by the International Union for Conservation of Nature, UICN) cover 10.5% of the total territory in this Region and the annual deforestation rates in the Amazon are falling.

- New efforts are being made in matters of biodiversity protection, including the creation of the Mesoamerican Biological Corridor from the south of Mexico to Panama.

- Integrated prevention and control programs have reduced the need for reforestation of the Amazon region practically to one half as compared to 2004, covering 13,100 square kilometers in 2006.

- Paraguay, with one of the highest forestry loss rates until 2004, has reduced its deforestation rates in its eastern regions, by 85%.

The greatest challenge in this Region (PNUMA, 2007) is the design of policies for sustainable management of natural and social capitals, and specially, to ensure adjustment to international

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[34] "*Prospects for World Environment*", Report GE0 4, PNUMA, Nairobi (2007)

environmental agreements. On the other hand, governments are increasingly acknowledging the close relationship between environmental management, poverty, and inequality.

1.5 INVOLVEMENT OF COMPANIES IN THE CONSERVATION OF BIODIVERSITY

The growing degradation of biological diversity and loss of habitat have turned the implementation of effective response actions such as the creation of new protected areas and programs of natural resource management and prevention of pollution into a priority. This is the sole possibility of stopping and reversing this trend (Djoghlaf, 2007)[35].

In order to achieve a significant reduction in the current loss rate of biological diversity at various levels (global, regional, national, and local), two main actions are required:

1) Revision and adjustment of current production and consumption patterns,

2) Adoption of timely and effective measures.

Although exploration and exploitation of hydrocarbons is an industrial activity generating potential impacts on biodiversity, this industry is becoming a preponderant role-player in its contribution to the search for solutions to global environmental problems, by using its know-how, financial resources, technical expertise, and leadership and management skills.

International initiatives such as the Convention for Biological Biodiversity or Ramsar Convention on Wetlands[36], invite the corporate world to develop and adopt new policies, strategies, and operating approaches for management of ecosystems, by making efforts to avoid, minimize, mitigate, and compensate the negative impacts on ecosystems. However, this calling is not only aimed at managingthe negative operating effects, but equally and explicitly, to taking on new roles, and leading processes thath promote conservation at various levels and scales.

Oil and gas companies operating in Latin America and the Caribbean have shown significant progress in the implementation of environmental protection and social responsibility programs. However, the existence of initiatives for biodiversity conservation addressing critical ecosystems or endangered species or species ranked as a conservation priority, is still incipient.

In this last area, it is possible to observe a wide range of contributions from various levels and scales with funding coming up as one of the most widely used initiatives. However, there are very few companies and actions framed within the design of specific programs, with clear objectives, action lines, goals, and results that allow an assessment of the effectiveness of company contributions to biodiversity conservation.

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[35] Message from Ahmed Djoghlaf, Executive Secretary of the Convention on Biological Diversity, "*World Perspective on Biological Diversity*" (2006)
[36] In the Internet: www.ramsar.org

1.6 ADVANTAGES OF BIODIVERSITY MANAGEMENT FOR THE REGIONAL OIL AND NATURAL GAS INDUSTRY

The integration of biodiversity management into hydrocarbon operations relates to fundamental aspects of socio-environmental risk management, that is: minimization of the possibility of impacts and maximization of opportunities for community involvement.

To evade biodiversity considerations at the level of exploratory and productive projects may cause serious problems and delays in the execution thereof, hindering the company's capability to achieve its strategic business goals. Poor management of biodiversity may damage the overall reputation of the company, affecting its access to financial resources, new concession areas, lands, human resources, and public goodwill, and could even limit the company's future business opportunities.

In addition to ethical considerations, good management of biodiversity by the industry will bring along advantages, such as:

- Minimization of socio-environmental conflicts from operations in areas of high biodiversity.

- Reduction of social-environmental risks and eventual political-juridical liabilities.

- More expeditious end less contentious processes for obtaining environmental permits.

- Decrease of socio-environmental conflicts and communication and reputational crises.

- New and better spaces for relations and cooperation with stakeholders.

- Higher corporate reputation and more solid positioning in the markets.

- Greater trust from financial entities.

- Higher business sustainability.

2.0 MANAGEMENT OF SOCIO-ENVIRONMENTAL AND REPUTATIONAL RISKS, AND OF BIODIVERSITY

Growing public concern about the loss of biodiversity and legitimacy of the citizens' defense in this matter is a variable that shall be acknowledged as an important factor of environmental risks faced by companies which lack corporate policies regulating the same.

To that effect, the initiatives that a company can undertake to respond to this emerging social expectation will be a key factor to reduce risks, such as delays in the execution of projects, unexpected costs derived from crisis management, conflicts with local communities and governments, confrontation with NGOs and even the possible vicissitudes of penal or civil trials.

2.1 OPERATING IN HIGHLY FRAGILE ENVIRONMENTS

One of the main characteristics of the oil and natural gas industry is operating in highly (and, in some cases, extremely) fragile social-environmental milieus. This is the case of habitats and ecosystems of exceptional biodiversity, which range from extreme deserts, passing through wetlands, coral reefs, and tropical rainforests, to freezing tundras, coastal zones and marine parks, and from rural areas inhabited by peasants and indigenous communities (in certain cases, in voluntary isolation) to fishing communities and densely populated urban environments. This characteristic of hydrocarbon activities brings about the potential risks of negative impacts from operations on biodiversity

In the context of this Appendix, we will define risk to biodiversity as *"the possibility of occurrences that negatively impact biological diversity, and values and associated resources thereof"*.

When we speak of contingencies, we are referring to undesired occurrences or situations. This guiding definition contains three implicit concepts:

1) threat

2) vulnerability

3) environmental impact[37]

Biological diversity is deemed to be at risk when a specific company and/or project or operation lacks the capability to develop management mechanisms that will enable the company to assess, prevent, and respond to possible contingencies timely and effectively.

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[37] The negative effect caused by a specific human action or a natural event on the environment and its various resources may be measured as "the negative alteration of a baseline".

2.2 SCENARIOS OF RISKS AND IMPACTS

Hydrocarbon operations may have a wide range of direct negative impacts on ecosystems, such as contamination of soil, air, and water resources, fragmentation of habitats, deforestation and erosion, among others.

In many cases, such operations are pioneer economic activities in certain areas with incipient development, or simply not developed, which implies associated human intervention, such as migration processes, colonization of lands, and spontaneous settlement of new human groups, agricultural conversion, and development of new infrastructure that may cause additional damages to biodiversity through the so-called "secondary impacts"[38].

2.2.1 Risk Factors to Biodiversity Derived from Hydrocarbon Operations

Risks to diversity derived from hydrocarbon operations and activities, both *upstream* and *downstream*, are the possibility of events or emergencies occurring associated to the following scenarios:

- Natural phenomena (seismic events, hurricanes, floods, eruptions, tsunamis, etc.)

- Operating accidents and failures (e.g., spillages and discharges of hydrocarbons and chemical substances, fires, and others)

- Accidents in other industrial infrastructures, such as terminals, roads, and pipelines

- Sabotage and/or deliberate attacks to facilities or operations.

2.2.2 Potential Impacts on Biodiversity

Some possible impacts from hydrocarbon operations on biodiversity may be the following:

- Modification of landscape and affectation of its values

- Affectation of ecosystems and their ecological functions

- Transformations in the use of soil and changes in microbiology thereof

- Contamination of soil, air, and water resources (heavy metals)

- Deforestation and desertification

- Destruction and/or fragmentation of key habitats (e.g., nesting sites, migratory corridors, wetlands)

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[38] These impacts are not directly due to project activities, but triggered due to the presence of the project. Such impacts may go beyond the limits of the project or even the limits of the concession, and may last beyond the life cycle of a project. They are normally caused by changes in human population in an area or by new or additional economic activities arising around the infrastructure provided by the project, such as highways, ports, camps, or small towns. These impacts are especially severe in remote and undeveloped areas.

- Alteration of basins, water bodies, and watercourses (interruption of flows, drainage, or supply to aquifers)

- Affectation of wildlife, endangered and/or threatened endemic species

- Erosion and downsizing of soils.

2.3 ANALYSIS AND ASSESSMENT OF RISKS TO BIODIVERSITY

Analysis and assessment of social-environmental risks, and specifically, the risks related with biodiversity variables, shall be performed during the earliest possible stages of project planning, in a manner such as to avoid the creation of negative impacts, and the necessary management actions shall be identified and implemented in advance. These practices apply equally to companies in charge of projects which are already in operation in areas of high biodiversity.

Companies shall make operating (and political) decisions starting with the construction of risk management mechanisms that allow for the identification and prioritization of such risks (Social-environmental and Reputational Risks Manual), as well as assessment of costs and benefits from options, considering financial, operating, strategic, image and reputation criteria, including possible risks to biological diversity.

Some key aspects for analyzing risks to diversity are set forth in Tables No 1 and No 2.

TABLE 1 - KEY ASPECTS FOR ANALYSIS OF RISKS TO BIODIVERSITY

1) Identification of potential hazards and damages to biodiversity derived from hydrocarbon activities.

2) Analysis of negative consequences for biological diversity (resources and values) in each situation.

3) Identification of the most likely scenarios.

4) Study of risks in each scenario.

5) Identification of accident "routes" and critical consequences on biological diversity in the short, medium and long term.

6) Identification of possible actions to be implemented for reducing risks.

7) Identification of actions to correct eventual impacts on biodiversity.

The criteria to determine if risks or impacts shall be significant will vary depending on the environment, type of project, and the companies themselves, since each company will have its own definition of transcendence and its own level of risk tolerance, based on its environmental and ESR policies, values and corporate ethics and skills.

TABLE 2 - SEQUENCE FOR ASSESSMENT OF RISKS TO BIODIVERSITY

1. Characterization of biodiversity in the area
Baseline: a) Physical aspects (soil, climate, geology, geo-morphology, hydrology) b) Biological aspects (flora and fauna) c) Social-economic aspects (use of territory, cultural heritage, infrastructure, population, and main subsistence and economic activities that depend on biodiversity[39])
2. Overall analysis of operational characteristics
Assessment of all facilities and infrastructure from a dimension of industrial security as a key input for the description of contingency scenarios.
3. Risk Assessment
Analysis based on the interaction between natural phenomena and operation, and operating risks to biodiversity in various possible scenarios (includes potential consequences on resources from biodiversity).

Companies shall responsibly determine if impacts from their activities and operations may be minimized or mitigated to acceptable levels – depending on the area's biodiversity values – and if risks from operating in highly fragile areas are too high, both in respect of biodiversity itself and in terms of the company reputation.

In certain cases, the biodiversity variable may come to affect the economic and/or technical feasibility of a project and may finally provide grounds for the decision of not continuing the execution thereof.

The uncertainty of risks to biodiversity will not be a factor for ignoring the need for management and actions. Quite on the contrary, this aspect must be specifically addressed, starting with the application of the "Precautionary Principle", explicitly acknowledged in the Convention on Biological Diversity itself.

Results from the analysis and assessment of risks to biodiversity should be the following:

a) Identification of those facilities posing the highest risks to biodiversity,

b) Generation and planning of management measures, effective and timely response to contingencies (preventive and corrective actions).

If significant impacts on biodiversity should be detected in the analysis and assessment phase, and despite that fact, the company should decide to continue in an area where there are high potential risks, it will be advisable for the biodiversity management plan to go beyond compliance with the minimum legal requirements to ensure its protection.

The Project shall include specific objectives and goals for conservation of biodiversity, associated to indicators that will allow verification of compliance therewith.

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[39] One of the issues to consider in consultations with local communities is their dependency on and/or relation with resources from biodiversity, as nourishment, water, support, and aesthetic value, as well as potential impacts on human health due to degradation of natural resources, and the probability and/or potential consequences for local communities from eventual impacts.

3.0   MANAGEMENT OF BIODIVERSITY IN THE IMPLEMENTATION OF HYDROCARBON PROJECTS

Management of biodiversity depends on socio-environmental management by oil and natural gas companies in Latin America and the Caribbean. Guidelines and procedures to diagnose and construct baselines for biodiversity, assess the importance of areas, identify and assess impacts from the company, establish indicators and implement mitigation, rehabilitation, and compensation actions are set out below**.**

3.1   DIAGNOSTIC OF BIODIVERSITY

The diagnostic has the purpose of identifying the environmental and social issues that shall be taken into account in managing biodiversity during the various development stages of a hydrocarbon project.

The diagnostic requires an initial analysis of the context of biodiversity in the exploration site or expansion project. To make the diagnostic, the following actions are suggested:

a)   To examine the national, regional and local legal provisions relating to biodiversity.

b)   To identify if the site or area of influence is part of a protected zone (if it is a designated area for protection of biodiversity at local, national, regional or international level).

c)   To identify if the site or area of influence, while not protected, has been identified as a high priority area for biodiversity conservation.

d)   To identify if in an area of influence there are endangered or at risk species, as per the Red List of the UICN[40] or national listings (even if the zone is not officially protected).

e)   To become informed of stakeholders' opinions about the area, if it has a significant traditional or cultural value.

3.2   BASELINE BIODIVERSITY STUDY

Starting from the earliest phases of implementation of a Project, a biodiversity baseline study will be required to provide the required information on the specific environmental scenario of the project and the biodiversity components that may be affected. Information shall be collected against which to measure the direction and scale of change and the resulting impacts.

Baseline studies of biodiversity have two main objectives:

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[40] The Red List of the International Union for Conservation of Nature (IUCN) is the most complete study of the conservation status of animal and vegetal species worldwide. The Red List uses a set of criteria to assess the risk of extinction of thousands of species and subspecies. These criteria are applicable to all species throughout the world.

1) To identify (or confirm) the species, habitats, and ecosystems in the area of influence of the project, together with its related functions and services, and

2) To identify the legal designations and the species, habitats, and ecosystems set out as a priority.

The study methods to be used will depend on the project and site characteristics. For the existing sites, the previous work may be sufficient or may need to be updated or supplemented, while for planned sites or projects, the baseline study may be integrated into other studies, for example, during the preliminary geological studies or resources assessments, or as part of the impact assessments.

When examining existing data or undertaking field studies, it is important to consider the variability and natural uncertainty in measurements of biodiversity. A baseline study is an "snapshot of an area at a specific time". Therefore, multiple "snapshots" will be necessary to cover, for example, different seasons in the year, so as to obtain a more accurate picture of the biodiversity conditions in a specific area.

3.2.1 Stages of the Baseline Study

The baseline study has the following stages:

a) Becoming informed of stakeholders' points of view on the significance of the traditional or cultural value of the area as regards the existing biodiversity.

b) Identifying potential partners to help in the process of the baseline study and analysis of resulting data.

c) Assessing if there are voids in available information (if none, additional field work may not be required).

d) Hiring qualified experts (and where possible, local experts) to guide and/or undertake field studies and systematize collected information.

e) Identifying priority species, density of species, habitats and key ecosystems identified during the preliminary staff evaluation, and those under legal protection.

f) Identifying the functions of ecosystems, key ecological processes and the ecosystem's sensitivities (these aspects are more useful than general physical counts of species).

g) Identifying existing impacts on biodiversity, including impacts derived from socio-economic pressures, in order to determine which factors could be contributing or have contributed to biodiversity degradation.

We recommend that the results form the field study and analysis of existing information be submitted to the stakeholders in order to obtain feedback and additional contributions. In certain cases, feedback identifies the need for additional studies.

3.3 ASSESSING THE SIGNIFICANCE OF AN

Assessing biodiversity is fundamental for understanding the relevance of potential environmental impacts, and therefore, the priorities for mitigation and compensation actions.

Outside protected zones, but within valuable areas for

biodiversity, the evaluation is more complex. However, the absence of a specific protection status should not be deemed as an indicator of less significance for biodiversity.

In the absence of an international or national protection status, the challenge to companies will be to qualitatively evaluate the significance of these areas. This means taking into account a variety of criteria to determine if the zone has local, regional, national or international importance. Although there is no universal standard, some common criteria have been defined, as set forth in Table 3: Criteria to determine Zones of High Biodiversity.

TABLE 3 - CRITERIA TO DETERMINE ZONES OF HIGH BIODIVERSITY

♦ **Richness of habitats/species**

In general, the higher the diversity of habitats and species in an area, the more valuable they will be. The diversity of habitats in an ecosystem may have great value.

♦ **Endemism of species**

In general, endemic species are found in areas where the population of a specific species has been isolated for so long that it has evolved in a manner such, that it has gained distinctive characteristics relative to the original species, which prevents procreation with other populations of this species.

♦ **Key species**

Key species are those bearing great influence on an ecosystem as regards its abundance or total biomass.

♦ **Rarity**

The concept of rarity may be applied to ecosystems and habitats, as well as to species. Rarity is considered a measure of susceptibility to extinction, and the concept is expressed in a variety of terms such as vulnerable, rare, threatened, or endangered.

♦ **Size of habitats**

In general, the size of a natural zone is important. It should be large enough to be viable. Furthermore, size should be related to the resistance of ecosystems and habitats to activities at the margins, loss of species, and colonization of undesired species. Connectivity of habitats is equally important and refers to the degree of union between the areas of the natural habitat. The most desirable is to have high levels of connectivity between the various habitats or parts thereof.

♦ **Size of the population**

In international conservation of birds, for example, an established practice is to consider 1% of the total population of a species as important in terms of required protection. For certain major predators, it is important to know if a zone is large enough to encompass the entire variety of individuals and allow them to procreate and be sustained.

♦ **Fragility**

Fragility refers to the sensitivity to natural environmental changes or changes induced by human beings, as well as to an ecosystem's or specific habitat's resistance to such variations.

♦ **Value of the ecosystem's services**

Currently, the fundamental importance of environmental services provided by an ecosystem has been acknowledged. While assessment techniques are still being developed, efforts should be made to address this issue.

Identification and assessment of impacts on biodiversity implies acknowledging the effects thereon and on the fundamental systems of life sustenance (or ecosystem's services).

Services provided by ecosystems may include maintenance of hydrological systems, protection of soil, degradation of pollutants, recycling of waste, and regulation of climate. Conservation of biodiversity depends on the provision of such services, and may have more significance for local communities in vulnerable conditions.

Assessment of impacts should include:

a)   Level of impact on ecosystems (and related services), species or genetic resources.

b)   Nature of impact (primary, secondary, in the long or short run). Primary impacts occur when a proposed activity is directly responsible therefore, while secondary impacts are an indirect consequence of the project.

c)   Determination if an impact is positive, negative or has no effect whatsoever.

d)   Magnitude of impact in relation to richness of the habitat or species, population dimensions, size of habitat, sensitivity to the ecosystem, natural recurring disturbances, etc.

When assessing impacts on biodiversity, we must acknowledge that the intensity of impacts vary throughout a project's life. In general, intensity is low at the start and clearly increases during the construction and operating phases, and decreases during implementation of closure.

The importance of foreseen impacts on biodiversity depends on the magnitude (or intensity) of impacts and on the sensitivity of the ecosystem or affected species and may specifically occur at the following three levels:

3.5   CONSTRUCTION OF INDICATORS

1.   at ecosystem level

2.   at species level

3.   at genetic level

Construction of indicators enables the company to assess the effectiveness of implemented actions and measures, and to determine progress levels as compared to the goals set on biodiversity (scope of impacts on biodiversity, success of mitigation measures, etc.)

Measurement of results in biodiversity is not an easy task, considering its complex and dynamic nature. To accomplish the construction of effective indicators is a challenge. Given that biodiversity in a specific area has numerous components (each interacting with the other over different periods of time, seasons, and space), indicators and their framework should be adjustable to possible changes that may be observed throughout the processes.

3.4   IDENTIFICATION AND ASSESSMENT OF IMPACTS

Each operation should determine, jointly with government regulators and stakeholders, which group of indicators will be required to measure and manage its impacts on biodiversity.

Indicators may be divided into:

1.   Indicators of Condition (e.g., richness or composition of species)

3.5.1 Indicator Characteristics

2. Indicators of Pressure (e.g., scope of deforestation of native vegetation)

3. Indicators of Response (e.g., weed control or reforestation area)

In this eminently technical subject, assistance from experts to select and revise the most suitable indicators for measurement is recommended, as well as consulting with stakeholders for the selection of indicators, and thus ensuring that the set of indicators will be socially accepted.

3.6 MITIGATION AND REHABILITATION

The following characteristics are recommended for establishing indicators:

a) Indicators should reflect the pressures (threats) on the values of biodiversity, its conditions, and management responses to the impacts thereon.

b) Indicators of biodiversity should be based on species, structure and function of the ecosystem.

c) Indicators should comply with regulatory provisions and international standards.

Mitigation and rehabilitation are responses to impacts on biodiversity arising from project operations.

a) **Mitigation** involves selecting and implementing actions to reduce impacts on biodiversity arising from hydrocarbon operations.

b) **Rehabilitation** means taking action to restore an intervened or impacted area, according to pre-existing ecological conditions and/or those agreed upon with stakeholders.

It is always desirable to avoid negative impacts. However, in scenarios where this is not possible, the key will be to restrict the magnitude of impacts to acceptable levels. Therefore, the following actions shall be weighed:

a) **Prevention or restriction** of impacts by modifying a proposed or existing operation. An example may be to change the location or design of a specific infrastructure. A more extreme position would be not to proceed with the planned development.

b) **Minimization** of impacts by implementing decisions or activities to reduce undesired consequences on biodiversity.

c) **Rectification** of impacts by rehabilitating or restoring the affected environment. This includes recreation of habitat to restore the uses of land and values of biodiversity that existed in the area before project operations.

d) **Compensation** of impacts by replacing or providing substitute resources or environments. Compensation measures should be used as the last resource and may include the well-known tools for setting off the damages caused on biodiversity, such as acquisition of an area with equivalent habitat for its protection in the long run.

Mitigation alternatives should be agreed upon in the Framework of the Environmental Impact Assessment System. Ideally, options shall be consulted, discussed, and prioritized with the affected stakeholders or biodiversity specialists.

In general, restoration or recreation of valuable zones for biodiversity in impacted lands takes much more time and energy than protection of the existing native vegetation.

In the event the affectation or destruction of a valuable ecosystem which is not subject to a legal protection regime should be inevitable, as a last resource, certain compensation measures may be considered, taking into account the following:

a) Compensation measures should not be used to justify or make up for poor environmental management practices.

b) Protected areas that are affected should be compensated, preferably, by ecologically similar areas, of equivalent value and not smaller than the natural original habitat that was converted or degraded by the project. Contingency measures should be considered to compensate secondary impacts and future unplanned expansions.

c) Compensation measures should supplement other government programs or programs of other partners in conservation. Also, compensation measures need to be sensitive to conservation priorities in national or regional initiatives to implement the Convention on Biological Diversity

d) The application of compensation measures should generate net profits to biodiversity in time.

e) Compensation measures should last in time, setting off the impacts from development not only during the period when such impacts occur, but beyond such period.

f) Measures should be quantifiable, for which it will be essential that impacts, limitations, and benefits be properly assessed.

g) Compensation measures shall be focused. Therefore, impacts shall be compensated on the basis of "like for like, or better".

h) Measures shall be supplementary, that is, in addition to other existing commitments and not funded by virtue of a separate program.

i) Compliance shall be monitored as per the agreed upon issues, license conditions, clauses or contract.

j) Compensation measures shall be consulted with the stakeholders, and should be specific for each site and project.

3.8   PARTICIPATION OF THE COMMUNITY IN BIODIVERSITY MANAGEMENT PROGRAMS

Effective management of company relations with the community is a determining factor for biodiversity management. Although there is growing questioning from the conservative sector and local communities of extractive operations and development of oil and natural gas projects, many role-players have come to understand that these operations also provide a unique opportunity to form alliances for improving conservation of

3.7   COMPENSATION

3.8.1 Effective
Stakeholder
Participation

biodiversity.

The presence of companies and projects in some territories may involve positive externalities to improve the conditions of biodiversity, especially based on the management skills and resources of the corporate sector.

In this context, managing the company-community interface through ongoing dialogue, coordination of role-players, facilitation of processes, and construction of cooperation bridges with (and among) individuals who are directly interested in preserving biological diversity, and specifically with local communities, shall be part of an effective strategy to integrate essential biodiversity issues into the policies, systems, operations, and frameworks for decision-making by companies in this business line.

For the purposes of this appendix, stakeholders will refer to *"any organization, community, or individual with a specific interest in the use, management and/or conservation of biodiversity that may affect or be affected by an extractive operation."*

Effective participation of stakeholders is crucial for understanding the interactions between hydrocarbon projects and biodiversity, both in the assessment of possible negative impacts, design of mitigative actions, planning of closure actions and abandonment of the worksite, and in the development of conservation programs. Effective participation encompasses a large variety of activities, including exchange of and access to information, participative planning, joint decision-making, strategic associations and alliances.

Although participation of stakeholders is essential for sustainability of any initiative, the challenge is how to suitably manage such participation. Thus, the following factors shall be taken into account:

a) Various interests, different perspectives and priorities with regards to biodiversity and management thereof by stakeholders (certain groups may eventually be in conflict).

b) Proximity to the resources of biodiversity

c) Dependency on biodiversity resources for subsistence

d) Historical bonding

e) Formal and informal rights

f) Economic interests and institutional orders (in the case of government and non-government organizations).

Communities may contribute with their perception of local biodiversity based on their traditional knowledge, especially in areas where information may be scarce and limited.

Experiences in various locations around the world show the need for fully incorporating this knowledge into the various processes associated to conservation management (assessment of biodiversity and environmental impacts, management plans or others).

Special attention shall be given to scenarios where local role-players lack due access to information, have limited capabilities or organization. It will be crucial for companies to promote the strengthening of these aspects, so as to empower the local partners and achieve basic conditions for effective participation.

TABLE 4 - RECOMMENDATIONS FOR EFFECTIVE PARTICIPATION OF STAKEHOLDERS

- **Go beyond compliance**. Even if environmental laws contain requirements for consultation with stakeholders, companies may use these spaces to build lasting relationships, instead of doing so solely to comply with legal obligations.

- **Construct long term and permanent sustainable relations**. Relations with stakeholders should be considered as a long term investment, and therefore, it is important to give them time to develop.

- **Ensure acknowledgment of cultural differences, especially with native communities. Dialogue may only occur if the parties understand each other's viewpoints. Intercultural** training will be important to construct levels of basic respect.

- **Consider participation of neutral third parties**. Could be a manner of overcoming actual or perceived asymmetries (in terms of power, resources, etc.) as well as developing trust.

- **Develop trust**. Effective participation occurs if there is trust, but trust is sometimes absent or limited to the initial stage of stakeholders' participation.

- **Ensure that stakeholders are heard and promises are kept.**

- **Training of personnel of community relations**. Ensure that the community relations personnel is provided with the suitable skills for coordination and facilitation of processes.

Adapted from Business Partners for Development (2000)

4.0   CONSERVATION BEYOND COMPENSATION

4.1   MANAGING BIODIVERSITY FROM NEW SCENARIOS AND NEW VISIONS

Operating in environments with high biodiversity values implicitly brings along shared management responsibilities, beyond mitigating impacts and compensating such impacts.

The importance of preserving biodiversity in the current global scenario, increased public observation and pressure on companies demanding responsible operations, and the new ESR trends provide the context for building a new management vision, where companies go beyond the minimum legal requirements, transcend the classic conception of mitigating and compensating negative impacts, and start to lead and coordinate processes, spaces, and strategic opportunities to benefit conservation of biodiversity, thus becoming key role-players.

This new management modality takes on special relevance in scenarios (local, national, regional) where the skills and resources to preserve biodiversity are limited and insufficient; as it effectively guarantees that no net losses of biodiversity will occur, and offers an undisputable tangible value to the business, in terms of sustainability and corporate reputation.

4.2   EXPLORING ROLE-PLAYERS FOR CREATING ALLIANCES

The development of alliances with key role-players should be based on relations between partners with whom to share conservation goals, who are aligned with company goals (at least for a specific site or project) and who have value to add to biodiversity management (technical skills, research, traditional know-how, worldview).

For such purposes, it will be necessary to perform a full survey for identifying stakeholders, as detailed in Table 5: Reference for Identification of Stakeholders in Biodiversity.

TABLE 5 - REFERENCE FOR THE IDENTIFICATION OF STAKEHOLDERS IN BIODIVERSITY

1. Local communities and leaders;

2. National or local government agencies with responsibilities for the management, conservation or protection of biodiversity;

3. NGOs with an interest in the protection of biodiversity (e.g., wild life trusts, flora and fauna corporations, bird watching groups);

4. International governmental or non-governmental organizations (e.g., in the case of protected areas of international importance);

5. Universities, institutes, and/or research centers;

6. Land owners or other users of natural resources in the proximity of a project (specially, individuals who depend on their access to resources from biodiversity for their subsistence);

7. Community organizations with a stake in resources from biodiversity (fishing clubs, agricultural cooperatives, or others);

8. Other private companies with a business interest in resources form biodiversity (e.g., forestry companies).

Once stakeholders have been identified, an analysis thereof shall be carried out, so as to establish:

a) Their interests in biodiversity,

b) Level of compatibility or conflict of interests (such as exploitation versus conservation),

c) Level of commitment and involvement in conservation or improvement of conditions of biodiversity.

This analysis considers the key elements described in Table 6, in order to define possible strategic partners with whom to form alliances.

TABLE 6 - KEY ELEMENTS FOR ANALYSIS OF STAKEHOLDERS IN BIODIVERSITY

a) Defining characteristics of key groups;

b) Identifying their stakes in relation to biodiversity;

c) Identifying possible conflicts of interest between them and biodiversity, in a manner such that the sources of potential tension in an eventual conservation project may be identified;

d) Identifying relations between stakeholders that may facilitate associations around biodiversity issues;

e) Identifying needs of stakeholders to overcome their limitations to effective participation (e.g., language requirements or need for traditional consultation mechanisms);

f) Evaluating the capabilities of the various stakeholders to participate in conservation actions; and

g) Evaluating the various levels of commitment with each group (who provides access to information, who to consult, associations, etc.).
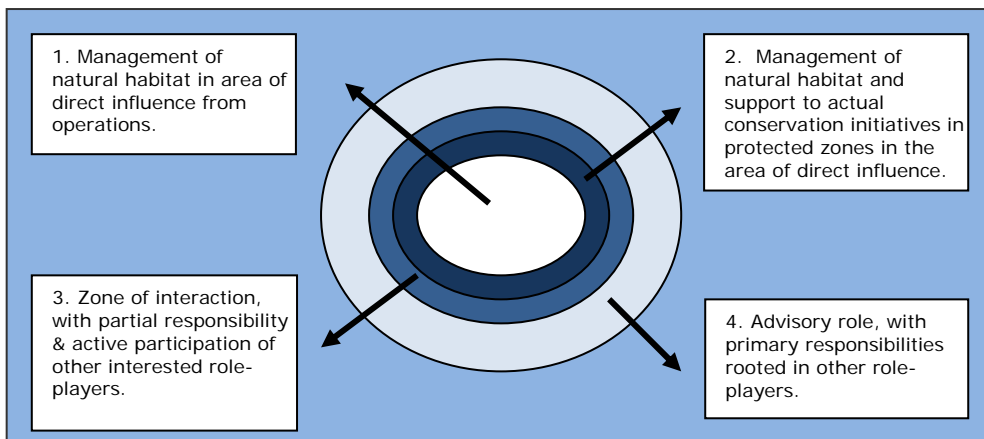
4.3 IDENTIFICATION OF OPPORTUNITIES

Identification of potential spaces and opportunities to increase and improve biodiversity in the local area, in the sphere of operating influence of projects, or even beyond that.

4.3.1 Possible Action Scopes

Possible scopes where actions to develop biodiversity conservation programs may be performed:

a) Within the limits of operations, natural habitats in undisturbed areas may be managed to improve their value in terms of biodiversity, or habitats which have suffered historical alterations (not necessarily linked to hydrocarbon operations) may be restored.

b) It is possible to expand said management actions to the more extended concession area, scope which offers various opportunities for connecting with ongoing conservation initiatives, or with adjacent protected areas.

c) The third scope for action is the so-called interaction zone, which refers to the more extended area of environmental or social interaction (e.g., wetland areas that may connect with basins or communities nearby, from which workers are hired). In this area, the possibilities of favoring conservation of biodiversity are more varied and may include involvement by communities and other partners.

d) The fourth possibility is potentially more extended and covers spaces for a supporting role to contribute to regional and national conservation initiatives.

FIGURE 1 - POSSIBLE SCOPES FOR CONSERVATION OF BIODIVERSITY[41]

1. Management of natural habitat in area of direct influence from operations.

2. Management of natural habitat and support to actual conservation initiatives in protected zones in the area of direct influence.

3. Zone of interaction, with partial responsibility & active participation of other interested role-players.

4. Advisory role, with primary responsibilities rooted in other role-players.

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[41] Adapted from S. Jonson (Río Tinto)

4.3.2 Opportunities for Biodiversity Management Programs

Identifying and making decisions with regards to opportunities and investment in conservation will require an early and timely analysis of financial, operating, and reputational risks and benefits.

A hasty decision may increase costs and exposure of a specific project, and once the project is in execution, the withdrawal of financial support would end up being highly costly in terms of credibility and reputation.

This exercise will require an assessment (with the direct participation of stakeholders) of the economic, social, and environmental conditions of the project's environment, seeking the most effective programs and strategies to benefit conservation of biodiversity.

a) **In areas with a certain degree of development or industrialization**, the needs for conservation of biodiversity may be the lack of habitat or healthy ecosystems. In such case, the best opportunities for conservation may relate to providing support to cleanup, restoration or rehabilitation of such ecosystems.

b) **In areas that are more developed or have suffered more intervention**, the greatest threat to biodiversity may be indiscriminate felling, illegal burning of forests, poaching of endangered species, among others. There, the most effective conservation opportunities may involve protection of key habitats and ecosystems, supporting the Management of a protected area, or identification of sustainable social and economic alternatives that may substitute (diversify) production activities with negative impacts on biological diversity.

TABLE 7 - CRITERIA FOR DEFINING CONSERVATION PROGRAMS

Considerations to define conservation initiatives	Most common needs for management of biodiversity in the Region	Potential opportunities to contribute to the conservation of biodiversity
1) National, regional, and local priorities for conservation of biodiversity 2) Richness/value of an area's biodiversity 3) Degree of threat or pressure from human activities on biodiversity 4) Risks and opportunities for the company 5) Availability of local collaborators 6) Expected impact 7) Scope of the project 8) Availability of institutional technical skills and management capabilities.	1) Lack of resources/ structure to manage protected areas (or other areas of high value to biodiversity) 2) Significant ecosystems or endangered and unprotected species 3) Lack of government/ scientific skills to study and manage biodiversity 4) Lack of public awareness and/or spaces for participation in conservation.	1) Ecosystems and natural habitats management plans to improve their value 2) Increase in scientific knowledge of ecosystems or species through studies of ecosystems, habitats or species 3) Support to existing conservation initiatives 4) Support to creation of new Protected Areas (PAs) 5) Support to development of technical skills in conservation organizations, agencies, and/or communities 6) Treatment of underlying threats to biodiversity. (e.g., by engaging in initiatives of alternative subsistence means to substitute certain unsustainable economic

		activities, such as depletion of resources, felling, etc.)
		7) Promotion of integrated development and conservation initiatives (connection of conservation actions with local social and economic development)
		8) Development of communications, education and public awareness campaigns

4.3.3 Conservation and Local Productive Development: A Strategic

Implementation of biodiversity conservation projects is an excellent opportunity for companies to engage communities and work together with local governments, strengthening community relations.

Conservation projects may not only be mechanisms to generate local employment, but in addition, there are conservation models that allow for development of parallel sustainable economic enterprises that generate additional sources of income to local role-players.

This is the case of projects to develop markets for environmental goods and services, as well as sustainable ecotourism enterprises, growing medicinal plants, among other types of emerging initiatives that combine conservation actions with promotion of innovative productive operations.

Integration of conservation strategies into local development plans and active involvement and participation of communities will be key factors for the success and sustainability thereof, opening valuable opportunities for socio-economic development to the communities located around hydrocarbon projects, which, in general, have high poverty rates.

Specifically, companies may support a large variety of projects associated with the conservation of diversity, as set forth in Table 8.

TABLE 8 - TYPES OF PRODUCTIVE ENTERPRISES ASSOCIATED TO BIODIVERSITY CONSERVATION

- Ecotourism, agro-tourism, or community tourism with special interests (e.g. *birdwatchers*)
- Organic breeding of flowers, native and exotic plants
- Management and marketing of medicinal herbs
- Sustainable agricultural systems
- Development of marketable genetic resources
- Eco-villages and/or integrated farms
- Initiatives related to markets for environmental goods and services
- Community forestry management (agro-forestry)

Encouragement and promotion of local enterprises linking conservation with productive development will provide the following advantages, among others:

a) Contribution with input to the experimental design of integrated production systems based on resources of biodiversity

b) Creation of tools and economic incentives, or innovative enterprises undertaken by local role-players

c) Boosting the creation of markets for environmental goods and services

d) Diversification of local economic development opportunities

e) Valuation of natural (biodiversity), historical and cultural heritage

f) Training and empowerment of local communities

g) Building of skills in local organizations

h) Creation of opportunities for self-employment, cooperative and community work

i) Promotion of good and suitable technological practices for the rational use of resources from biodiversity

The following chart shows an example of a pilot ecotourism and eco-forestry project that accounts for the potential benefits from a conservation project for the development of the local community.

DEVELOPMENT OF A PILOT ECOTOURISM AND/OR ECOFORESTRY PROJECT

Objectives

a) To reduce the pressure on a tropical forest area

b) To increase community awareness with regards to the negative impacts from tree felling and other human effects on biodiversity

c) To diversify local sources of employment and income

d) To strengthen local organizations.

Furthermore, management of wild plants that constitute a rich genetic heritage may provide new and innovating sources of income to the local population. There are various examples of promotion of alternative food sources or medicinal, industrial, ornamental and/or cultural use of species, generating significant contributions to local economies.

4.4 DESIGN OF BIODIVERSITY CONSERVATION PROGRAMS

Specific conservation programs will allow for socio-environmental and corporate social responsibility practices to be implemented, and may become a core element in the dynamics of relations with local communities.

In the design of such programs, the scientific aspects need to be conjugated with participation and cooperation tools, in order to identify which biodiversity shall be protected, and where and how to preserve such biodiversity and measure the effectiveness of the program.

The concept of adjustable management[42] may guide the development of programs, setting goals and priorities, development of strategies, decision-making, and measurement of results.

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[42]Strategy for management of biodiversity which needs to be constantly assessed, so as to include improvements in each cycle.

4.4.1 Setting Priorities and Goals	In the definition of conservation priorities and goals the following issues need to be considered: 1. Describe intended results for biodiversity. It is essential to base priorities and goals on the best scientific information available and consult with local community

groups, regulating entities, teachers, and other stakeholders.

2.   Consider setting long term goals referring to the abundance and geographical distribution of specific species and ecological systems that are necessary to ensure the survival of biodiversity at a wider scale (sub-regional, regional, hemispheric, neo-tropical).

3.   Set priorities i.e. consider which are the places, threats to biodiversity, and strategic opportunities that require conservation actions the most, or promise to have the highest impact on our investment.

4.4.2 Developing Innovative Strategies and	Depending on the priorities set out, innovative conservation strategies need to be designed in order to achieve conservation goals. Strategies shall take into account aspects such as the available scientific information, critical threats to biodiversity, as well as social, political, and economic interests at stake. It will be crucial to search for solutions that will meet the needs of species and

ecosystems, as well as the needs of communities.

4.4.3 Measuring Results	Indicators need to be established to measure the effectiveness of program actions, and to respond to two basic questions: 1) What is the status of biodiversity?

2)   Are our actions having the planned impacts?

The first response will let us evaluate the status of species and ecosystems. The second response will allow us to measure the effectiveness of our strategies and actions.

The exercise of measuring progress and effectiveness will provide the feedback to gradually adjust and adapt the strategy during its implementation, according to the various scenarios and contexts, and under the approach of adjustable management.

TABLE 9 - REFERENCE MODEL FOR THE DEVELOPMENT OF A CONSERVATION PROGRAM

OBJECTIVES	LINES OF ACTION	ACTIVITIES
GENERAL: To promote the rational use of biodiversity in areas of influence of company operations. SPECIFIC: To facilitate spaces and coordinate role-players for conservation of biodiversity. To encourage public Communication, Education, and Awareness initiatives for environmental, economic, and cultural valuation of biodiversity. To promote and participate in the implementation of management actions and conservation of biodiversity. To secure environmental security in significant areas against the occurrence of hydrocarbon spillages.	Environmental education to communities in the area	Generation of educational material for the local population. Promotion of local action groups.
	Incentives to and participation in scientific research	Logistic support to field investigation actions. Promotion and participation in research studies. Facilitation of processes for incorporation of sites (and key role-players) into international investigation and conservation networks.
	Management Plans as conservation strategy	Facilitation of processes and participation in management plans, territorial planning, vulnerability analysis, and risk management, and implementation of restoration actions in degraded areas. Coordination of role-players (public, private, and local communities) for implementation of good governance systems.
	Strengthening worker skills	Generation and distribution of information material (manuals, guides and brochures). Training and teaching interesting subjects (conservation of biodiversity, oil operations in fragile ecosystems, vulnerability, and risk management, etc.)
	Leadership for exchange of experiences and know-how	Organization of and convocation to assemblies for the transfer and exchange of information and learning, for discussion, cooperation and promotion of conservation (forums, seminars, technical work groups).
	Environmental security and risk monitoring	Reporting of environmental audits in areas of operating risks and/or where prioritized ecosystems are present. Optimization of contingency systems upon spillages of hydrocarbons and byproducts thereof (use of technology, rescue plans, qualified personnel).

5.0   GLOSSARY

PROTECTED AREA: A geographically defined area which has been designated, regulated, and/or administered in order to reach specific conservation goals or maintenance of biological diversity and its associated natural and cultural resources.

CONSERVATION: Rational Management of biological resources to achieve the real maximum sustainable benefit while maintaining the potential resources to meet the needs of future generations. Conservation includes preservation, maintenance, sustainable utilization, restoration, and improvement of the natural environment.

ECOSYSTEM: Dynamic complex of communities of plants, animals, and microorganisms and their non-living environment, which interact as a functional unit in a specific location.

SPECIES: Each group that genders are divided into and formed by individuals. The species is sometimes divided into varieties or races.

ENDANGERED SPECIES: Species facing a very high risk of disappearing in their natural state in the near future.

NATIVE SPECIES: Species, sub-species or lower taxonomy living within their natural field of action (past or present), including the areas they may reach or eventually occupy by their own means or due to external factors.

EXTINCTION: Irreversible process by which a species or biological population ceases to exist.

FRAGMENTATION: Deterioration of a habitat, ecosystem or use of land into smaller plots, frequently isolated, thus reducing the number of species such habitat, ecosystem or use of land may sustain.

GENES: Elements of all living organisms that convey their hereditary characteristics, which, when expressed, make each individual different from the others.

HABITAT: Physical and biological surroundings on which a given species depend for survival; the place or type of area where an organism or population is naturally produced.

SECONDARY IMPACTS: Indirect results from project activities (operations). Such impacts may cut across the areas of the project's implementation, or even the concession limits, and may start earlier or extend beyond the life cycle of such project.

MITIGATION: Measures and actions taken to prevent, minimize, reduce, correct and/or compensate the negative impacts from any development.

NATURAL RESOURCES: Resources produced by nature, commonly subdivided into non-renewable resources, such as fossil fuels and minerals, and natural renewable resources which propagate and sustain life and are self-renewing in a natural manner when adequately managed, including plants and animals, as well as soil and water.

BIOLOGICAL RESOURCES: Genetic resources, organisms, or parts thereof, populations or any other biotic component of ecosystems with a potential or real use or value for humanity. Contrary to non-living resources, biological resources are renewable if preserved, and destructible if not preserved.

ECOSYSTEM SERVICES: Benefits to the natural surroundings or to the people, resulting from the functions of an ecosystem. Examples include, support to the chain of food and supply of freshwater.

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