



Mapping the Oil and Gas Industry to the Sustainable Development Goals: An Atlas

PNUD, IPIECA e IFC

Public Review and Comment:

**IBP (SR COMMITTEE) Suggestions
April, 2017**

IBP – SOCIAL RESPONSIBILITY COMMITTEE

OIL COMPANIES:

- **REPSOL SINOPEC (Chair)**
- **QGEP (Vice-Chair)**
- BP ENERGY
- CHEVRON
- IPIRANGA
- PETROBRAS
- PETROBRAS DISTRIBUIDORA
- SHELL
- STATOIL

SUPPLY CHAIN:

- AKER SOLUTIONS
- ESTALEIRO BRASA
- ODEBRECHT OIL & GAS
- PRUMO LOGÍSTICA
- QGOG
- TECHNIPFMC
- TRANSPETRO
- WÄRTSILÄ BRASIL
- WILSON SONS

LPG:

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CONSULTING:

- COMUNICARTE
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- FIRJAN

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- TN PETRÓLEO

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- RIOVOLUNTÁRIO

UNIVERSITY:

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Introduction

What are the Sustainable Development Goals and why are they important to the oil and gas industry?

Suggestion (Page 4, paragraph three): regarding the contributions of the industry for the sustainable development, include the following information:

- fostering basic research and innovation and the professional education connected to them;
- influencing the construction of public policies (e.g., local content);
- encouraging local entrepreneurship (professionals from large companies in the sector are launching startups to meet specific demands of the oil and gas sector, thus strengthening the local economic activity);

Who is the intended audience?

Suggestion (Page 4 and 5, paragraph one): we recommend that this Atlas also outlines opportunities for those associations that represent the industry and for those companies of the oil and gas value chain (goods and services) to collaborate with other stakeholder groups and leverage the resources to achieve the goals.

How can oil and gas companies use this Atlas?

Suggestion 1 (Page 5, paragraph two): include the term “local public policies” as one of the variables to affect the relevance of each SDG for each company.

Suggestion 2 (Page 6, Diagram): Insert images of the following activities of the value chain:

- biofuels plant, in the “Specialty Operations” section.
- research and technology centers, in the “Specialty Operations” section.
- residences and industries (gas market), in the “Retail and Marketing” section.

How can companies integrate the SDGs into core business?

Suggestion 1 (Page 7, paragraph one): include:

- The commitment of the industry to the SDGs will need to extend beyond social investment and corporate philanthropy, it requires the involvement of all employees of a company and, most of all, of its Senior Management;
- The integration of the SDGs into the companies’ core business is also an opportunity to provide visibility to the best practices of the industry, relating them individually to each SDG or across more than one SDG.

Suggestion 2 (Page 7, paragraph two - item 4): include the Universities, in addition to the communities, governments and other stakeholders with which dialogue and engagement should be established for the implementation of the SDG by the companies.

How to collaborate on the SDGs

Suggestion (Page 8, paragraph two): In the list of the main stakeholders and their roles in relation to the SDGs, include:

- **Universities and Research Centers,** As they are in charge of academic background and basic research, they may align their actions and strategies with those of the SDGs, so that, as from 2030, new professionals and innovation will be already reflecting the goals achieved for sustainable development.
- **Supply Chain,** As they are in charge of direct relationship with the community, they should, just like the oil companies, keep strict controls that ensure legal compliance, respect for human rights, and contribute to a greater dissemination of good practices in the industry as regards the SDGs, mainly in relation to safety and environmental preservation.

Integrated nature of the SDGs: cross-cutting issues and impacts

Suggestion 1 (Page 10 – new paragraph): Triple motto: water, energy and food, considering the production of biofuels, its contributions and impacts to the SDGs: 2, 6, 7, 13 and 15.

Suggestion 2 (Page 10 – new paragraph): Compliance. The improvement of the compliance mechanisms in companies has been relevant and the targeting of such practice for value chain companies will pose a great significance for the range it may achieve, thus benefiting the whole society. This issue affects all SDGs.

Suggestion 3 (Page 10 – new paragraph): Research and Innovation. These two factors are part of the oil and gas companies' business management. The dissemination of research and innovation in the oil and gas industry has benefited the society by generating new techniques, methodologies and products. Research and innovation affects all SDGs.

Suggestion 4 (Page 10 – new paragraph): Education. The oil and gas industry contributes significantly to professional and technical education, mainly in developing countries. The demand of oil companies and those companies in their value chain attracts young professionals to careers that meet the needs of this industry's activities and gives rise to new specific occupations in areas such as engineering, environment, law, geology etc. This issue affects all SDGs.

1. Are there any significant impacts or contributions that the oil and gas industry has / can have on any of the SDGs that are missing from the report?

SDG 7: Ensure Access to Affordable, Reliable, Sustainable and Modern Energy For All

Suggestion 1 (Page 36, paragraph three): include the importance of technological development and technology transfer as a means to ensure access to modern, safe and sustainable energy. This is fundamental to achieve goals 7.3. and 7.3a.

Integrate SDG7 into core business

Suggestion 2 (Page 37, paragraph one): in the sub-item “Improve access to energy services through shared infrastructure”, should include that the common use of energy infrastructures should be performed bearing the aspects of SDG 9 (Industry, Innovation and Infrastructure) in mind, with emphasis on research and development.

Suggestion 3 (Page 38, paragraph five): in the sub-item “Improve energy efficiency in operation and production”, should include that the solution for energy poverty in developed and developing countries should be performed bearing the aspects of SDG 9 (Industry, Innovation and Infrastructure) in mind, with emphasis on research and development.

Collaborate and leverage

Suggestion 4 (Page 38, paragraph one): Include in the paragraph that the aspects of SDG 9 (Industry, Innovation and Infrastructure) should be considered, in addition to the efforts of stakeholders.

SDG 8: Decent work and economic growth

Integrate SDG8 into core business

Suggestion (Page 43, paragraph three): Sub-item “*Encourage local procurement and supplier development*”.

In the case of a supplier development program or a change in the company’s policies towards an adequacy to an operational situation, a note should be included in the paragraph that the UN Guiding Principles on Business and Human Rights must be observed in relation to their internal and external target audiences, as well as the activities of local suppliers monitored in this regard. Moreover, where required, support should be provided for local suppliers to develop their own Human Rights programs, in the light of the UN Guiding Principles.

SDG 13: Take urgent action to combat climate change and its impacts

Suggestion 1 (Pages 61 and 62, paragraph six): include that the increased share of natural gas in the energy matrix will also represent an essential contribution in this net zero GHG emission process.

Suggestion 2 (Page 62, new paragraph): include, after the last paragraph, a new paragraph on the key role of the increased share of natural gas in the energy matrix in a transition to a low-carbon economy in this urgent action to combat climate changes.

Integrate SDG13 into core business

Suggestion (Page 63, paragraph three): include in the paragraph of sub-item "*Mitigate emissions within oil and gas operations*" the acknowledgment that the biofuels are part of the oil and gas industry's efforts to mitigate GHG emissions as they contribute to the adjustment of consumer behavior. However, such approach must be referenced to the issue of the triple motto water, energy and food.

2. Do you have suggestions for additional case studies that illustrate how oil and gas companies can contribute to SDGs? Case studies and examples should ideally include description of results and indicate potential for replication or scale up.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Case studies and initiatives (Page 22, paragraph five)

Health on the Highway Program – Ipiranga Produtos de Petróleo S.A. (IPIRANGA): BRAZIL

The Health on the Highway program has crisscrossed the roads of Brazil providing significant improvement in truck drivers' safety and quality of life. Ipiranga's actions include free clinical examinations for drivers including exams for blood glucose, blood pressure, visual acuity, Body Mass Index (BMI) and vaccinations. Participants also receive information about Sexually Transmitted Diseases (STDs) and dengue fever.

In order to raise awareness and mobilize drivers against the sexual exploitation of children and teenagers on the country's roads, the Health on the Highway project discloses awareness materials produced by the On the Right Track Pact (Pacto na Mão Certa) program.

Health on the Highway has the support of Municipal and State Health Secretariats, universities, the Federal Highway and State Police forces. It is carried out exclusively at Ipiranga's Rodo Rede chain of service stations, specialists in serving highway travelers with special services for truck drivers.

Since 2008, the program visited more than 168 counties, realized 843 events and assisted more than 400,000 people.

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Case studies and initiatives (Page 25 and 26, paragraph five)

Science Education Award – SHELL: BRAZIL

(It may have a connection with SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)

The education sector in Brazil is improving but has multiple challenges, and is recognized by political leaders and wider society as a key constraint on Brazil's ambition for economic development and establishment of a knowledge economy, including growth of the technology sector. The lack of a qualified workforce in science and technical areas is a critical bottleneck to the industry and Brazil's overall development.

Initiatives to improve STEM education are not common in Brazil and our focus on this segment of the education sector has been welcomed by Brazilian authorities and stakeholders. It also provides a logical connection to our business, given that our investments in the oil and gas sector and R&D rely on a strong pipeline of workers with STEM qualifications.

Industry needs: it is widely recognized that a more skilled labour force is required to satisfy expanding labour market demands, especially in relation to the O&G sector. STEM skills are a pre-requisite for this expansion, and are poorly represented in the public school system. There is a significant deficit of STEM skills/ education of the labour force to meet this challenge.

Social mobility: Providing additional STEM-related learning opportunities has proven to significantly improve the chances of resilient students from disadvantaged backgrounds to develop professionally and move up socially.

The overall goal of Shell STEM programme is to create a positive legacy by improving STEM education learning outcomes for public school students, specifically those from more challenging social backgrounds, to better capture employment opportunities in the oil & gas and other science/ technology industries. The SI programme will specifically focus on stimulating the students' interest for science areas and enhancing skills related to Science, Technology, Engineering, and Maths (STEM), and at the same time achieving visibility and recognition among key stakeholders.

The Science (or Scientific) Education Award was developed based on the understanding that Teachers are the main agent within the Education process / system. And no matter how important a project or discipline (content) is, the learning impact will depend on the ability of the teachers to teach it and how creative they are to capture student's attention and interest.

It is a social initiative with the aim to value and recognize STEM (Science and Math) teachers in public schools who implement innovative projects that have a meaningful and positive impact on their students' lives – increasing their interests for science related areas and potentially careers. At the same time enhancing and encouraging other teachers to develop new projects through the dissemination and promotion of good practices in science projects.

It is a positive “competition”. All STEM public sector teachers from Rio de Janeiro State can participate. It was first implemented in 2014 and is moving to its 4th edition in 2017.

Teachers compete in 2 categories:

- Primary Level II – students from 11 to 14 years old (Ensino Fundamental II) – Science and Math teachers
- Secondary Level / High Schools – students from 14 to 17/18 years old (Ensino Médio) – Physics, Chemistry, Biology and Math teachers

The 3 winners of each category (total of 6 teachers) win an educational trip to the UK to visit world-class STEM organizations and projects (universities, museums, technology centres) and to stay in contact with best practices of STEM education initiatives.

Teachers also win a cash bonus (R\$ 3K – third place, R\$ 4K – second place and R\$ 5K – first place).

In 2016, we added a prize to the schools of the winner teachers – A TV and a projector. Schools' infrastructure in Brazil is very poor. The idea of the prize to the schools is to stimulate Schools' Directors to motivate teachers not only to participate of the Award, but mainly to develop innovative projects with their students.

The Award is an impactful transformation in Teachers' life. They feel they can, they feel they are important, they feel they can influence others and especially, they feel they can change their students' perspective of life.

Many teachers don't believe they could win the award. Especially teachers from the interior of the State. For them it is a dream coming true – especially the international trip. Most of them (not to say “everyone”) have never left the country for a trip and do not even have a Passport document – so, everything is new and aspirational.

The Award not only changes teachers' life, but all the school environment and their happiness cascaded for their students, family other teachers and colleagues.

The idea of this prize is to provide a transformational experience to the teachers remembering to them that they are the “eyes” of their students and responsible for the future of our people!



A very important moment is the Award ceremony. It is a high profile ceremony with the presence of Shell CEO in Brazil, The State Secretariat of Education and other authorities. Teachers say that they felt as an artist and this is a very emotional moment. In 2016, the ceremony took place in the Museum of Tomorrow – the newest Science Museum in Brazil, which is also sponsored by Shell (a very especial place with an impressive and beautiful construction).

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Case studies and initiatives (Page 25 and 26, paragraph six)

Sustainable Development for Coastal Communities - Educative Platform: Repsol Sinopec - Brasil

In addition to our ability to generate socio-economic benefits from our industrial activity, the Company are committed to acting as mediator and inducer of sustainable socio-economic benefits for local communities, aggregating the interests of different stakeholders.

In this way the "Educative Platform", an itinerant project designed and maintained by Repsol Sinopec is realized in order to contribute the professional qualification of the coastal communities of the States of Espírito Santo, Rio de Janeiro and São Paulo. The project activities take place inside a trailer of a truck that transforms into a classroom that can accommodate up to 25 people. Other activities are held outdoors, in squares, beaches or schools, serving more people.

The fisherman is an important stakeholder for Repsol Sinopec. Although the Company is not an operator in the assets in which they participate, Repsol Sinopec understand 's how fundamental it is to maintain a close and collaborative relationship with this community, which has an artisanal manner of fishing, a main means of subsistence. However, for the full exercise of the profession and access to social benefits, specific qualifications are required, conditioned to the completion of naval qualification courses, which are inaccessible to most fishermen. In addition, the approach of fishing boats from oil rigs is a risk factor for both fishermen and the FPSO itself. The level of general knowledge of these communities is still low and lacks extra contributions to assist in their development. In this way, the project aims to contribute to the improvement of the quality of life and facilitate the development of fishermen through courses of professional qualification and diffusion of knowledge on safety, environment, health, social and economic innovations.

The Educative Platform project has existed since 2009 and in 2017 is starting its 9th cycle. Between the years of 2009 and 2016 18 cities were visited. In the state of Espírito Santo: Vitória, Vila Velha, Guarapari; In the State of Rio de Janeiro: São João da Barra, Campos, Macaé, Búzios, Cabo Frio, Araruama, Maricá, Niterói, Angra dos Reis and Paraty and in the State of São Paulo: Ubatuba, Ilha Bela, São Sebastião, Caraguatatuba and Santos. People attended: 12,940.

Educative Platform: Repsol Sinopec Program:
<http://www.repsolsinopec.com.br/web/guest/29>

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Case studies and initiatives (Page 25 and 26, paragraph seven)

Environmental Education through Art: Queiroz Galvão Exploração e Produção (QGEP) - Brazil

The QGEP, in partnership with the Portinari Project, took the traveling project “Art and Environment” through more than 7 thousand kilometers off the coast of Brazil between 2010 and 2014. It approached environmental issues in a playful and educational way for children and adults. To do so, it mapped out schools and communities in the cities of two of its assets’ areas of influence and promoted the project, comprising the exhibition of 22 digital replicas of artist Candido Portinari’s works of art depicting Brazilian landscapes, flora and fauna.

Recreational and educational workshops were held for students, as well as training activities for community teachers and leaders, by means of seminars and teaching material made available to municipal schools. The journey began in the BM-J-2’s (exploratory block) area of influence in the Jequitinhonha Basin, south of the state of Bahia, and then it was brought to the BS-4’ (exploratory block) area of influence and impact in the Santos Basin in the states of Rio de Janeiro and Sao Paulo, totaling 17 municipalities. Over four years, more than 212,000 people had access to the artist’s works exhibited on an uninterrupted basis for 632 days.

Moreover, 767 teachers were trained and 534 schools were visited and received full teaching material kits. The project’s transverse and playful language ensured its presence at the United Nations Conference on Sustainable Development (Rio+20), held in the city of Rio de Janeiro in 2012.

SDG 5: Achieve gender equality and empower all women and girls

Case studies and initiatives (Page 30, paragraph five)

Environmental Education Project - Strengthening Community Organization (PEA-FOCO): STATOIL - BRAZIL

The PEA-FOCO is aimed at women who are related to the artisanal fisheries' supply chain of the following fishing communities: Gargau, Sossego, Guaxindiba, Barrinha, Lagoa Feia and Barra do Itabapoana, in Sao Francisco do Itabapoana and Atafona, Açu and Quixaba, in Sao Joao da Barra, totalizing nine (9) communities from two (2) municipalities of the Campos Basin region, in the state of Rio de Janeiro, Brazil.

Bearing in mind that, in the municipalities where the PEA-FOCO is developed, the devaluation of women's work is aggravated by the current state of artisanal fisheries in Brazil and by the historical process of exploitation of women due to the patriarchal system consolidated in the Brazilian society, the PEA -FOCO aims at promoting the emancipation of women and the acknowledgment of their role and action in the economic, social and environmental domains of the region, respecting the interdependence relations that are typical to community life.

The PEA-FOCO develops gatherings with these women, artisanal fisheries supply chain, representatives of civil society and governmental agencies to debate about issues related to this specific economy segment. Moreover, the Project also implement training processes by means of courses for dozens of women, currently known as popular educators. In addition, it established an articulating committee for the PEA-FOCO, with a view to debating regional issues, as well as drafted a common agenda for the nine communities.

Nowadays, the project has two headquarters: downtown the municipalities of Sao Francisco de Itabapoana and Sao Joao da Barra. In addition, a legal entity for the defense of women rights - the Association of Women Supporters of the PEA-FOCO - was formalized with the intent of ensuring their participation in the society's debate forums, such as the Municipal Councils that discuss gender and health issues, as well as other public regional committees.

PEA-FOCO:

<http://www.pea-bc.ibp.org.br/?view=projeto-apresentacao&id=5>

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Case studies and initiatives (Page 40, paragraph seven)

Sugarcane Microbiome: Repsol Sinopec - Brasil

Sugarcane is arguably the most important crop used today for biofuel production, due to its high productivity together with its capability to produce first and second generation bio-ethanol. As economic importance of sugarcane increases, so do the requirements for increased productivity on an environmental sustainable manner. However, massive implantation of the crop impose treats on sustainability as a consequence of increased needs of water and fertilisers. The need for equilibrium of increased productivity/sustainability has encouraged the development of alternatives for enhancing crop yield in a more sustainable manner. Recent advances have placed the plant-associated microbiome as an untapped source of diversity with potential for modulating growth, development, pathogen defence, nutrient acquisition and stress resistance. Repsol Sinopec Brasil has successfully co-developed a database that identifies the genetic signature of the microbial organisms present in Brazilian sugarcane and surrounding soil (microbiome). In partnership with a Brazilian university (UNICAMP), a Spanish university (UPM) and Repsol Technology Centre, metagenomics high-throughput gene sequencing technologies have been utilised to identify the most promising microbial strains. An inoculum that intends to increase crop productivity has been designed and successfully tested in greenhouse controlled conditions. The main achievements of these work are going to be included in a patent that will be submitted in 2017.

SDG 8: Promote sustained, include and sustainable economic growth, full and productive employment and decent work for all.

SDG 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation;

SDG 10 – Reduce inequality within and among countries;

SDG 17 – Strengthen the means of implementation and revitalize the global partnership for sustainable development

Case studies and initiatives (Page 45, paragraph five)

Iniciativa Jovem e Iniciativa Empreendedora (LiveWire Brazil) – SHELL: BRAZIL

LiveWIRE Brazil, a sixteen years old Shell program, aims to be the biggest network of entrepreneurs from Brazil committed to sustainable development and innovation. In Brazil there are two version of LiveWIRE: in Rio de Janeiro is called Shell Iniciativa Jovem, which means 'Youth Initiative' and in the influence area of upstream business there is Shell Iniciativa Empreendedora, which means 'Entrepreneurial Initiative'.

Both programs leverage businesses with potential to contribute to social and economic development in their communities, supporting them to be innovative, ethical and sustainable, offering technical and management support in a way they be long-lasting in the long run. Last but not least, LiveWIRE Brazil deepens the entrepreneurial culture in the community and stimulates healthy business relations in a network of sustainable enterprises.

LiveWIRE Brazil supports enterprise development through:

- (a) an integrated enterprise training program designed to meet the needs of the entrepreneur at each stage of the business life cycle;
- (b) business networking and awareness raising activities;
- (c) business counselling, coaching and mentoring support;
- (d) awards and prizes;
- (e) seal of Sustainable Enterprise;
- (f) business network where former participants join RESIJ (LiveWIRE Brazil Sustainable Entrepreneurship Network), along with new entrepreneurs, they take part in periodical network meetings and look for mutually beneficial business opportunities.

All of these create a collaborative entrepreneurial community that is committed to a new way of doing business. Strengthen the ecosystem; encouraging ethical practices and an innovative approach promote positive impact in the society, contributing to more just business relations and a better Brazil for all.

SDG 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Case studies and initiatives (Page 49, paragraph five)

Eco-efficient Service Station – Ipiranga Produtos de Petróleo S.A. (IPIRANGA): BRAZIL

An eco-efficient Ipiranga Service Station is one that adopted sustainability solutions right from the start of the civil construction phase. These are solutions that work on several levels to preserve natural resources: reducing the amount of materials used and of waste generated during construction; reduction of energy and water consumption throughout the useful life of the station.

Being a topic in continuously evolution, Ipiranga is constantly developing new solutions and specifying economically feasible technologies that are consistent with its business model.

Constructors follow the guidelines compiled in the Construction Guidelines Notebook for new building sites or station renovations. They consist on work routine guidelines to reduce the use of materials and ensure proper disposal of waste, workplace safety and environmental protection.

By the end of 2016, 1,191 Eco-Efficient Stations distributed throughout the country. In addition, other eight Eco-Efficient Stations received the Procel Building Energy Savings Seal of Approval, totaling 15 stations that are now certified.

In 2016, Ipiranga launched the "Eco-Efficient Consulting", a new way to spread the concept of sustainable construction through the service station chain. The goal is to guide its resellers as to how to reduce energy and water consumption, contributing to the environment and the financial health and sustainability of the business.

Ipiranga offers its technical expertise and experience in the Eco-Efficient Service Station concept on a free and personalized basis, helping its clients invest in improving energy and water efficiency at their stations. During 2016, 250 Eco-Efficient consults were accomplished.

As a recognition, the Eco-Efficient Service Stations and Consulting were present at the ceremony of the Certification Yearbook, a special publication of the GBC Brasil magazine – an institution that supports and promotes sustainable buildings.

SDG 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Case studies and initiatives (Page 49, paragraph six)

Technology that Measures Sensitivity: Queiroz Galvão Exploração e Produção (QGEP) - Brazil

Being aware of the importance of mapping the different environments to carry out its offshore exploration and production activities, the QGEP, in partnership with the Coordination of Graduate Studies and Research in Engineering of the Federal University of Rio de Janeiro (COPPE/UFRJ) and the Federal University of Bahia (UFBA) invested in the *JAPI* Research and Development project, (named after a bird observed on the southern coast of the state of Bahia, northeast region of Brazil).

The joint effort, which began and was carried out between 2011 and 2014, resulted in 22 maps that place into a hierarchy the various types of coastal contour – mangroves, beaches, riverbanks and others – of the municipalities of Canavieiras, Una and Belmonte, according to the degree of sensitivity of each type of coastal contour to potential oil spills.

More than that, the maps have been designed to correlate the times of the year and tidal influences with the degrees of greater or lesser sensitivity of each environment. That is the most comprehensive and detailed study of the kind carried out in Brazil so far. Its great methodological innovation lies on the introduction, among other elements ordinarily considered when preparing environmental sensitivity maps, of the temporal variable: the variations of currents, winds and river flows according to the seasons of the year and tidal hours.

The work also provided with a surprise: the intense and rapid erosion of the coastline in the region. The phenomenon had already been observed by the dwellers, but its surprising speed and intensity were revealed by analyzing satellite imagery. All the material was made available to the local communities in order to provide them with important tools for local preservation. The study is also available to all interested parties through a specially developed website.

Website: <http://projetojapi.lamce.coppe.ufrj.br/>

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Case studies and initiatives (Page 56, paragraph four)

Jogue Limpo – Reverse Logistics System for Post-Consumption of Lubricating Oil Plastic Packaging: Multiple - Brazil

A reverse logistics system for post-consumption of lubricating oil plastic packaging, set up and made available free of charge by associated manufacturers for registered generating stations.

Through recycling, Jogue Limpo deals with the environmentally safe disposal of the used packaging collected, transforming it into industrial products, preventing damage to nature.

Founding Members: Castrol, Chevron, Cosan Lubrificantes, Ipiranga, Petrobras, Petronas, Shell, Sindicom, Total e YPF.

How it works

- Jogue Limpo: hires management companies (logistics operators) in the states where it operates.
- Logistics operators: responsible for the registration of generating stations, pickup/collection of packaging and administration of storage plants.
- Truck fleet: equipped with high technology, compliant with security requirements, control and environmental standards.
- Monitoring system: allows route follow-up and information on the weight of plastic collected at the registered generating stations.
- Packaging reception: at reception, a real-time receipt specifying the weight is transmitted to the generating station using a barcode reader from smartphones available in each truck.

Operation

- **Visits of the Itinerant Collection System:** conducted at the registered dealers on a scheduled and regular basis.
- **Weighing:** During the weighing, a receipt is issued that may be required by the environmental authorities for the licensing procedure.
- **Collecting Stations:** packings are drained and sometimes sorted by color, they are then pressed or ground in order to be packed and sent to the registered recyclers.
- **Recyclers:** if necessary, the material is crushed. After decontamination of the residual lubricating oil, the material is transformed into raw material for new packings and other plastic products and reintroduced into the production chain.



Facts and Data: *4 logistic operators, generating 192 direct jobs; + 42,000 generating stations registered; 4,070 tons of recycled plastic in 2014 and + 400,000,000 packginscollected since 2005.*

SDG 13: Take urgent action to combat climate change and its impacts

Case studies and initiatives (Page 67, paragraph ten)

The Oil and Gas Climate Initiative – OGCI: Multiple

The Oil and Gas Climate Initiative is a CEO-led initiative which aims to show sector leadership in the response to climate change. OGCI is made up of ten oil and gas companies that collaborate on action to reduce greenhouse gas emissions.

The ambitious agreement reached by the United Nations climate change conference (COP 21) in Paris is an important milestone in the attempt to transform our energy systems. We welcome the result, and recognize that meeting the challenging aim it sets will require new approaches, new policies and practical action, both in the energy sector and elsewhere.

OGCI's mission is to use our collective resources to accelerate actions that mitigate the greenhouse gas emissions from the oil and gas industry's operations and the use of its products, while still meeting the world's energy needs.

In November 2016, member companies announced the formation of OGCI Climate Investments, an investment of one billion dollars over the next decade to accelerate the development of innovative technologies that, once commercialized, have the potential to reduce greenhouse gas emissions on a significant scale.

The strategic assessment explored the actions identified by the IEA and others as having the potential to reduce greenhouse gas emissions sufficiently by 2040 to remain on track for a 2°C scenario.

Combined, OGCI members produce over one-fifth of global oil and gas production and over 10% of energy supply. Member companies include:
BP, CNPC, ENI, PEMEX, RELIANCE, REPSOL, SAUDI ARAMCO, SHELL, STATOIL E TOTAL.

OGCI: <http://www.oilandgasclimateinitiative.com/>

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Case studies and initiatives (Page 71, paragraph four)

Autonomous Oil Spill Detection: Repsol Sinopec - Brasil

Oil spills are considered the higher environmental risk in offshore operations, and any new technology that may minimise this risk is welcome by the industry. Repsol Sinopec Brasil is co-developing a proprietary autonomous early detection system for aquatic surfaces. This new development is the next generation of the well-known HEADS technology developed by Repsol and Indra, which combines state-of-the-art sensors (radar and infra-red camera) with real-time imaging data processing. HEADS is already in operation in several Repsol sites and also commercially available for third party licensing. In partnership with two Brazilian universities (UFRJ and PUC-Rio) and a start-up company (13Robotics) and together with INDRA and the Repsol Technology Centre, the new evolution will introduce several improvements, being the most important its ability to work on dynamic environments, such as floating producing systems and drilling rigs. A robotic electromechanical stabilisation system is currently being developed, and a prototype will be available for testing in early 2018. A fully functional pre-commercial demonstration test is expected to be initiated by the end of 2018, and the technology is expected to be available during 2019.

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Case studies and initiatives (Page 71, paragraph five)

Artificial Reefs at Pernambuco Park – WILSONSONS: BRAZIL

An artificial reef (RA) is a structure deliberately placed at the bottom of the sea, totally submerged, that seeks to imitate some of the characteristics of natural reefs. The popularity of these structures is due to the basic principle of their operation, which causes slight changes in the currents that are the source of noise at the bottom of the sea, these sounds are detected by the fish, which by simple curiosity are attracted to the reefs.

These structures provide substrate in the form of refuge and habitat for the marine environment, allowing the establishment of a food chain and ecological relations around the reef. The colonization of artificial structures is an ecological process where the environment, initially sterile, becomes occupied by several organisms. The studies from local University, found presence of more than 90 species, and 3 in threat of extinction.

Objectives:

Scientifics:

- To study the process of the colonization of the wreck, right from scuttling.
- To catalog and make an inventory of the species present, identifying their abundance, frequency of occurrence per family and species, and also their diversity. Frequency, vertical distribution and food chains.
- To gather information on ecological aspects, especially information related to the behavior, reproduction and nutrition of the species related to shipwrecks.
- To evaluate the impact of underwater Eco-tourism/ diving activities on the diversity, abundance, distribution and behavior of marine wildlife associated with shipwrecks.

Environmental:

- Protect and restore the biological community in coastal regions impacted due to mankind. In addition to the initial proposal of minimizing the loss of natural resources by increasing the population of the marine wildlife.

Social:

- Development of the activity related to Eco-tourism/underwater diving.
- Increased artisanal fishing due to the growth of marine wildlife.

Economical:

- Benefits for the local community, city of Recife, and the state. The project stimulates the flow of diver-tourists in the city, leading to an increase in the tourism activity, and the entire production chain involved.

Results: Increase of fish stocks, generation of biomass with the settlement of over 90 species, 20% increase in resources from diving tourism.

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Case studies and initiatives (Page 71, paragraph six)

ENVIRONMENTAL MAPPING FOR EMERGENCY RESPONSE AT SEA – MAREM: MUTIPLE - BRAZIL

Introdução:

MAREM - The Brazilian Unified Shoreline and Cleanup Project and the Wildlife Protection Project.

Being aware of the its representativeness in the sector, the Brazilian oil companies established an unprecedented consortium to develop this project together. In the process, all the social players involved have won.

Recent events demonstrate that oil spills are a continuous challenge to the oil industry. The industry is always developing and implementing new safety requirements to prevent oil spills from happening. Nonetheless, the risk of an oil spill is inherent to the upstream and downstream activities. If preventing oil spills from occurring is the most important priority, with technological assessment of equipment and procedures, the development of strategies to prevent that spills reach the shore and impact the vulnerable wildlife, are the next aspects in importance to be considered. The coastal environment is where a great part of state/country's assets are located, where important economical activities take place, and where corals, marshes and estuaries, that are nursery and feeding grounds for hundreds of marine species, are found. Brazil has a coast of over 7000 km (4,300 miles), however oil and gas exploration and production activities, in recent years, has been concentrated mainly in the Campos and Santos basins, in the Southeast of the country. With the 11th bid round in 2013, new exploratory frontiers have changed Brazil's E&P map, expanding the activities to the North and Northeast. To develop integrated strategies to map the sensitivity of all Brazilian shoreline and identify wildlife in vulnerability situation, several oil companies decided to join efforts and work together to elaborate the Unified Shoreline Protection and Cleanup Project (PPLC) and the Wildlife Protection Project. Both projects incorporate the MAREM, acronym for Environmental mapping for offshore emergency response (Mapeamento Ambiental para Resposta a Emergência no Mar). The PPLC consists of a strategic data basis obtained from primary data for each coastal segment. For each segment, information such as access, physical description, sensitivity index, coastal type and recommended response strategies were identified. The Wildlife Protection Project is a strategic data basis obtained from secondary data for birds, mammals and chelonians in each geographic unit. For each unit, information such as species and areas to be protected, response strategy recommended, as well as oil vulnerability, habits and behavior, concentration areas, extinction information and others were obtained. All the data was plotted in GIS systems to assist in decision making processes, has been integrated to the National Wildlife Emergency Plan and will be used as a tool by the Brazil's

National Contingency Plan, currently in elaboration by the E&P industry, the Brazilian Regulatory Agencies and the Brazilian Navy.

Relevant Data:

- 19 states, 282 municipalities, 2,139 localities and 1,006 coastal islands, mapped;
- 4,343 assessed species;
- 120 priority species for conservation cataloged; and
- 78 priority areas for conservation identified.

Founding Members:

Anadarko, BG Brasil, BP, Chevron, Ecopetrol, ExxonMobil, HRT, Maersk Oil, OGP, Perenco, Petrobras, PremierOil, QGEP, Repsol Sinopec, Shell, Sonangol Starfish, Statoil, Total e Vanco.

To view the geo-referenced map containing all information surveyed in the Environmental Mapping for Emergency Response at Sea. Click here:
<http://www.marem-br.com.br/webapp/index-en.html>

SDG 16: Peace, Justice and Strong Institutions: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Case studies and initiatives (Page 79, paragraph four)

QUIPEA Project – SHELL: BRAZIL

QUIPEA - Quilombos on Environmental Education Project is a SI required project (IBAMA) for Shell Brazil Deep Water assets (BC-10 and BJSA) since 2010.

The company chose to work with the Quilombo Communities by the relevance of their presence in the area of influence of Shell projects, since it is a territory historically occupied by slave labor.

These communities are affected by impacts such as internal migration, the disorderly occupation of urban land, the large flow of people in search of jobs and income generated by the oil industry, factors that threaten the preservation of historic sites in those cities.

Target audience: Traditional/vulnerable communities of Black African Slaves' descendants (Quilombolas) protected by federal law in Brazil.

Location: 8 municipalities at Zone of Influence - 21 Communities encompassing about 2.500 families or more than 10.000 people.

Objective: Enhance social organization by leadership capacity building.

Goals:

- Create and develop 1 representative Committee of 21 communities;
- Strengthening leadership by capacity building processes;
- Strengthening communities' organizations by workshops and courses;
- Enhance Ethnical and Cultural Heritage by yearly Cultural Events and Exchanges;
- Promote inclusion by supporting their participation in key management forums;
- Promote participatory and integrated project management.

SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Case studies and initiatives (Page 82, paragraph five)

Empower to Foster Transformations: Queiroz Galvão Exploração e Produção (QGEP) - Brazil

In the south of Bahia, Brazil, the QGEP implemented the fishing activity compensation plan (PCAP), carried out with full participation of the local extractive workers.

The PCAP with artisanal fishermen potentially affected by the offshore drilling activity in Block BM-J-2 allowed the identification of different organizational scenarios of the fishing class in the Area of Influence of the activity.

The plan was implemented bearing specific methodological approaches in mind for the artisanal fishermen from the municipality of Ilheus and the area covered by the Extractive Reserve of Canavieiras (RESEX), which comprises the municipalities of Una, Canavieiras and Belmonte.

In the case of RESEX, due to the level of the extractive workers' organization, the assumption adopted was the strengthening of the environmental conservation unit as a legitimate institutionality of the fishermen.

Educational dialogues were carried out and analysis of the demands was presented by the extractive workers, who consulted their communities' bases. The approvals took place in audience format with the attendance of representatives of the extractive workers, the QGEP and the licensing environmental agency (IBAMA).

The complexity of the challenge posed was proportional to the group's responsiveness and a legitimate endogenous development process. In an unprecedented manner, the licensing agency approved the community members as financial managers of the funds assigned by the QGEP, rendering accounts for the activities carried out as the implementation progressed, thus empowering the extractive community.

Organized in mutual-aid groups, they carried out the implementation of the PCAP, which included the construction of the associations' headquarters – spaces that magnify and strengthen the struggles of the class. Generally speaking, this experience reaffirmed our belief that the quality of the results is a product of the quality of the relationships established within the different audiences. Working on a participatory basis produces more sustainable gains and enables the progress in the establishment of its own community project management logic that dialogue with established institutional processes.