

# OIL SPILL CONTINGENCY PLANNING

A ROADMAP TO EFFECTIVE  
REGIONAL COOPERATION







# INDEX



*What is Regionalization?..... pag. 3*



*Why working towards Regionalization? ..... pag. 4*



*Who are the Stakeholders in the Regionalization? ..... pag. 5*



*Where can Regionalization be implemented? ..... pag. 6*



*When can Regionalization be implemented?..... pag. 6*



*How to implement Regionalization? ..... pag. 8*

*Sharing of Information ..... pag. 8*

*Sharing of Inventories of Equipment and Trained Personnel .... pag. 9*

*Agreements on Transfer of Resources ..... pag. 9*

*Joint Risk Assessment ..... pag.10*

*Joint Contingency Planning ..... pag.10*

*Standardized Training Programs ..... pag.11*

*Combined Spill Exercises ..... pag.12*

*Sharing Equipment ..... pag.12*

*Shared Purchase of Equipment..... pag.13*

*Identify New Partners..... pag.13*

*CONCLUSIONS ..... pag.14*

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# OIL SPILL CONTINGENCY PLANNING

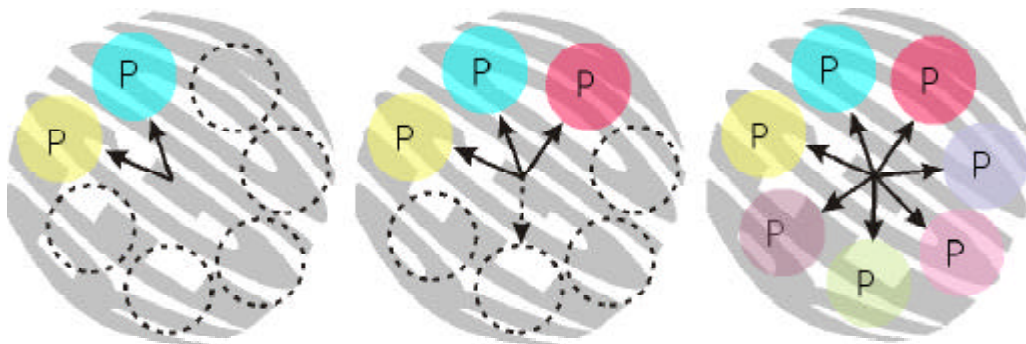
This document deals with the singularities of oil spill contingency planning regionalization in Latin America and the Caribbean, an ARPEL approach that is described in the ARPEL Guideline on "Regionalizing Oil Spill Contingency Planning in Latin America and the

Caribbean". This approach has been perfected with the input of government delegates from the Region, as well as ITOPF, CCC, REMPEITC-Carib, and the international and regional oil industry.

## WHAT IS REGIONALIZATION?

In the context of spill response, regionalization embodies a cooperative approach to sharing knowledge, information, personnel, equipment and

materials in identifiable regions. In short, regionalization is the extension of bilateral cooperation concepts to a larger and identifiable region.



P: Partner

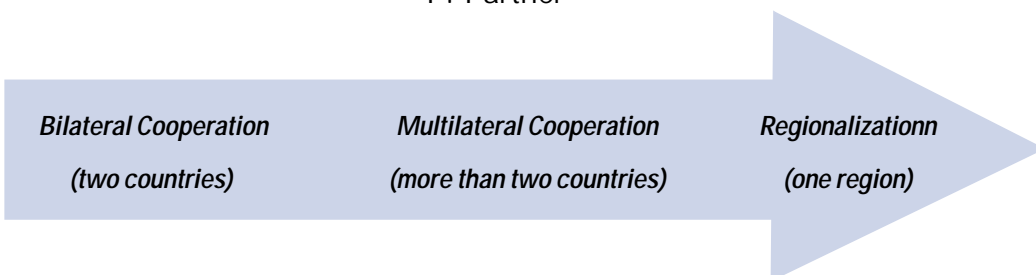


Figure 1: Steps towards Regionalization



# WHY WORKING TOWARDS REGIONALIZATION?

*In the context of regionalization, a «partner» encompasses all the stakeholders identified in the national oil spill contingency plan, headed by the competent national authority*

There are several drivers that support the goal of regionalizing oil spill contingency planning:

## **COST/EFFICIENCY**

In a context of scarce economic resources (as is the case of Latin America and the Caribbean), cooperation means access to more oil spill response and clean-up capability resources without having to pay for the financial burden of the acquisition of all the equipment required to deal with a very large spill. This financial cost can be shared among two or more partners and efficiently used in order to be prepared and respond to an oil spill.

## **MARKET OPENING**

The opening of the market in the oil industry business in Latin America and the Caribbean means that the role of the former state-owned company, usually self-regulated and with the full responsibility of supporting the government in the national oil spill contingency plan, will change. There will be more players involved in the national oil spill contingency plan, and this will require an enhanced dialogue among the partners to harmonize management strategies, for the sake of maintaining or improving the efficiency of oil spill preparedness and response.

## **INTERNATIONAL CONVENTIONS**

Article 6 of the "International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990" (OPRC 90) and Article 6 of the "Protocol Concerning Cooperation in Combating Oil Spills in the

Wider Caribbean Region, 1983" (Cartagena Convention) explicitly call for cooperation among the signatory partners. This connotes that if a country is to ratify any one of these two Conventions, the government would have to develop the means to implement practical and effective cooperation agreements.





# WHO ARE THE STAKEHOLDERS IN THE REGIONALIZATION?

Entering into a bilateral oil spill cooperation agreement –the basic unit of regionalization- is a task that will involve several players, most of which already have a specific role in the national oil spill contingency plan. These include:

- Shipping industry is vital particularly in notification procedures.
- Together with hull and cargo underwriters, P&I Clubs play an important role, particularly on risk assessment and advice for “on-the-spot” decision making.

## GOVERNMENT

- Responsible national organizations: Ministries of defense energy, environment, tourism, etc. identified in the national oil spill contingency plan.
- Customs-immigration personnel. Their involvement is critical for a smooth temporary admission of external support (equipment and experts).
- Port Authorities usually handle safety and supervision issues, very important when harmonizing laws and regulations in this regard.

## INDUSTRY

- Petroleum industry, is the main producer, consumer and transporter of oil and derivatives. In this regard, the role of local/national oil industry cooperatives should be considered as a means of “in-country regionalization”.
- Thermal power generation companies are significant consumers of petroleum products.
- Equipment suppliers play an important support role to preparedness and response operations given their products’ technology development focus.

## RESPONSE CONTRACTORS

International industry cooperatives such as the Clean Caribbean Cooperative (CCC) and Oil Spill Response Limited (OSRL) provide services to adequately prepared clients. A bilateral or multilateral agreement among two or more partners does not imply disregarding this type of external support. Due consideration should be given to their participation in any agreement for those scenarios where spill response and cleanup resources exceed those available by the partners.

## NATIONAL/REGIONAL/INTERNATIONAL ORGANIZATIONS

National petroleum associations usually gather important related information for their members and can play a role when attempting to pool “in-country” resources. Several regional and international organizations are, to a greater or lesser degree, involved in actual spills. Given their experience on specific topics, they could be called upon when developing a regionalization agreement.



# WHERE CAN REGIONALIZATION BE IMPLEMENTED?

Regionalization is usually associated to geographically “nearby” located countries.



Figure 2: Regions of Latin America and the Caribbean where Regionalization could be applied

Regions 1 (Northeast Pacific), 2 (Wider Caribbean), 3 (Southeast Pacific) and 4 (Southwest Atlantic) are the well known UNEP Regional Seas Programme areas, also adopted by IMO to help decide the feasibility of establishing and successfully managing sensitive areas (see Figure 2).

A preliminary ARPEL study of the risks associated to exploration, terminals, pipelines and tanker movement operations identifies two areas of relatively high risk in the Region: the Wider Caribbean (2) and the Strait of Magellan (6).

There is another area where, although the risk of oil spills is relatively minor, it is advantageous to consider a regional approach and that is the Rio de La Plata (5) where two nations (Uruguay & Argentina) share waters and associated risks.

Efforts aiming at regionalization should consider these broad areas.

# WHEN CAN REGIONALIZATION BE IMPLEMENTED?

Regionalization is a tiered process. There are two important steps that need to be fulfilled by the involved parties before even trying to start a regionalization process. These steps involve several activities that can be simultaneously addressed through a coordinated effort among the stakeholders already indicated.

The first step is the setting up of a legal framework. The establishment of the Competent National Authority, the development of related legislation and regulation, as well as the ratification of the relevant International Conventions are the very first actions and are mostly the responsibility of the governments.





The second step is the elaboration of the national oil spill contingency plan (including the reporting mechanisms, risk assessment, sensitivity maps and trajectory modeling chapters). In this step, industry and government have specific activities to develop.

Only then can the parties start working towards the implementation of a regional contingency plan.

Oil spills risks and the responses they require are usually classified according to the size of spill and its proximity to the shore. This is the Tiered Approach concept (see Figure 3).

Tier One spills are usually dealt with through local contingency plans, while Tier 2 and Tier 3 spills require the

activation of the national oil spill contingency plan with -most probably- external support.

It is clear that the scenarios where bilateral and multilateral cooperation will be required are those of Tier 2 and 3 spills. The yellow shaded area in Figure 3 demonstrates the wide applicability in which a regionalization approach could provide a benefit to the partners that enter into cooperation agreements. We can also infer from this figure, the need of countries having developed their national oil spill contingency plan, *through a joint work between government and industry*, before even thinking of implementing regionalization.

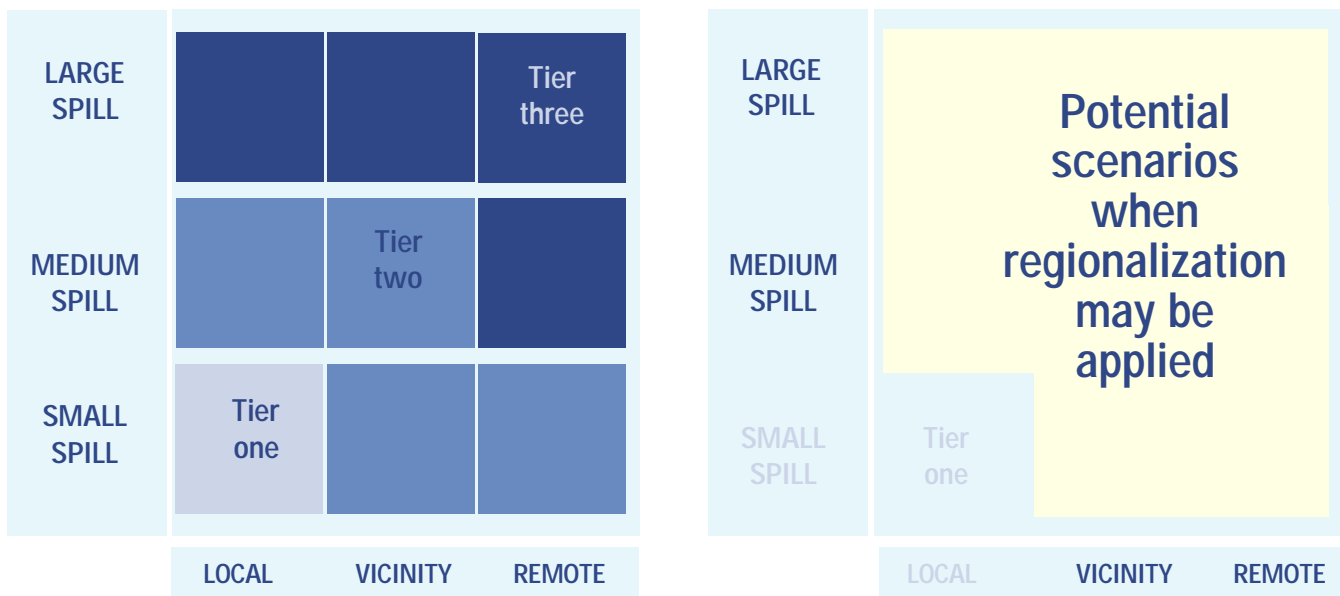


Figure 3: The Tiered Approach. Scenarios when Regionalization could be applied





# HOW TO IMPLEMENT REGIONALIZATION?

Regionalization is a tiered process. The comprehensiveness of any cooperation agreement may have different levels of commitment among the partners (see Figure 4).

This chapter will try to provide some guidance on the actions required to be dealt with while aiming at increasingly higher levels of commitment.



Figure 4: Increased levels of commitment of cooperation

## LEVELS OF COOPERATION

### LEVEL 1 Sharing of Information

Sharing basic information is the first level of commitment in the regionalization approach.

- The partners should make their national contingency plans available to understand the approach and basic policies usually adopted during an oil spill. To support the development and harmonization of a contingency plan, IMO and ARPEL have produced excellent documents widely utilized regionally and worldwide.
- The partners should exchange information regarding existing arrangements in the country. For example, knowing of any in-country oil industry equipment cooperatives or of the membership to a Tier 3 Center may tell the other partner of the resources potentially available during an emergency.
- Related legislation, such as the areas where the use of dispersants is banned or the type of dispersants allowed -if any- will clarify the



countermeasures that could be jointly agreed when entering into a cooperation agreement.

- Environmental, meteorological and oceanographic data will allow for the understanding of sensitive resources at risk, the type of equipment required in different spill scenarios or the time of the year where the risk may be higher due to -for instance- hurricane seasons.
- Knowing each other's experience in previous spills will allow for a gap analysis to concentrate efforts in avoiding potential difficulties when aiming at developing a bilateral agreement.

### Sharing of Inventories of Equipment and Trained Personnel

A higher level of commitment would imply the methodical exchange of resources available to the partners.

- Information on equipment should not only include simple descriptors such as "belt skimmer" or "300 meters of boom" but rather information such as model, performance, availability (fees), location of depot, means of transport, etc.
- Counting with experts in all the scientific areas involved in an oil spill is practically impossible in our countries (e.g., treatment of oiled birds, fate and impact of oil in

specific ecosystems, etc.)

The potential for sharing experts between partnering countries will make more attractive the opportunity of getting into a cooperation agreement.

### Agreements on the Transfer of Resources

Now the partners should start thinking on how to make operational the transfer of overseas equipment and personnel during an emergency. Several agreements failed in the past because this fact was not considered.

Agreements should give due consideration to: aircraft landing permits, waivers of duties and bonds, customs and immigration pre-approvals, visas, and work permits.





## Joint Risk Assessment

Risk assessment is a systematic framework used to identify and describe the sources and causes of risk.

The purpose of a risk assessment is to provide information to decision-makers in a form that allows for the comparison of risk reduction alternatives.

Assessment methods are not consistent among companies, countries or regions thus making difficult the comparison of results. ARPEL developed a Guideline that presents a framework for conducting oil spill risk assessments using various but consistent approaches that allow for their comparison.

In the context of regionalization, there is a wealth of data and experience that can be shared among partners when developing this activity, thus making it more cost/efficient. In this regard, partners should:

- Share information on oil and shipping industry operations (e.g., tanker movement).
- Focus their joint risk assessment in areas where the risks are shared (e.g. shared water bodies and ecosystems).
- Identify specific types of spill response equipment.  
The response equipment required

based on the risk assessment of local incidents (Tier 1), is usually different than the one required to respond to a Tier 2 or 3 (when regionalization is triggered).

## Joint Contingency Planning

This is the level of commitment where the partners can begin thinking of a regional contingency plan. In this regard, partners should harmonize their response management.

The Response Management System (RMS) is the backbone of any oil spill contingency plan. A RMS is the combination of organizational structure, management processes, individual roles, and operational strategy employed during an oil spill response. Thence, partners of any bilateral or multilateral cooperation agreement should harmonize their RMS's to ensure a successful coordinated response. In a coordinated RMS, partners maintain their independent identity, but cooperate to achieve mutual goals. This is vital to have partners accepting the regional oil spill contingency plan.

Sensitivity maps play an important role in the overall contingency planning process. A large percentage of the total volume of operations in Latin America and the Caribbean takes place in areas for which there is not easily accessible information in the event of a spill.



However, there is a great potential in the Region for the elaboration of sensitivity maps, since separate knowledge of the physical, biological and human environment is considerably greater than the amount of maps in existence. To assist in the development and harmonization of sensitivity maps, ARPEL produced a Guideline that leads the user in a step-by-step manner to develop these maps from scratch.

Computerized trajectory models to track oil spills are valuable tools to prepare for and respond to oil spills. If a cooperation agreement is developed, partners should try to have their output harmonized. This will also imply that the data gathered to input into the model will be similar and thus, the data gathering efforts by the partners will be optimized.

It will be vital to agree in advance the acceptable (by law in each country) countermeasures and cleanup procedures in order to define joint strategies and equipment to be utilized. For example, it would be useless for partners to agree on acquiring and stockpiling dispersants for its use during an oil spill if the government of one of the partners does not allow its use in jurisdictional waters.

The Caribbean Oil Spill Contingency Plan would serve as a format for developing bilateral cooperation agreements, and ultimately a regional plan.

### **Standardized Training Programs**

Training is an important chapter in any oil spill contingency plan and even more in a regional plan. Partners will have to identify the areas of expertise where they have some weakness and define the required training. A standardized training program will allow for a better understanding of what an “expert” may –and may not- be able to perform in the event of an oil spill.

The International Maritime Organization has developed (and provides) model training courses for oil spill preparedness and response. They can be adopted as models to standardize training programs during regionalization.





## Combined Spill Exercises

An oil spill contingency plan, be it local, national or regional, which is not tested periodically has very low chances of being successful when implemented in a real spill. When performing drills in the context of a bilateral or multilateral cooperation agreement, partners should consider the following:

- Performing regional drills in shared waters may provide a certain sense of national interest by the partners.
- When planning the list of participants, the exercise coordinators should not forget to include customs and immigration personnel. By doing so, these personnel will not only be aware of the importance of the cooperation agreement being tested, but will also provide most important input in any legal and administrative details involved in the transboundary transfer of oil spill equipment and experts.
- Partners may find useful to invite to these exercises other organizations as observers (IMO, ITOPI, REMPEITC-Carib, ARPEL, CCC, IPIECA), even though they probably don't have any operational official involvement in the regional contingency plan. By having an international or regional coverage, these organizations may provide their experience, and support any gap analysis developed at the end of the exercise.



## Sharing Equipment

Sharing the equipment already available at the depots of the partners may not be as simple a matter as it sounds. Partners will have to define policies on the use, repair, replacement and return of the equipment under loan. This is very important to ensure that this equipment exchange process is transparent and will continue once implemented.





If certain equipment is going to be utilized by both partners, then, field personnel should be trained in its use and in other related issues (e.g., safety considerations). Equipment compatibility aspects should be addressed by the partners; for example boom connectors or voltage utilized in electric equipment (110 volts or 220 volts).

If the partners involved in a cooperation agreement are members of a Tier 3 Center, they may want to consider the use of specific resources of this Center in case of an emergency instead of loaning the equipment from the partner they have an agreement with.

Compatibility, geographic location of the depots, and training in the use of the equipment, is also important as indicated above.



**LEVEL 1 Shared Purchase of Equipment**

Probably the ultimate level of commitment in a cooperation agreement is the shared purchase and operation of new equipment among the partners, since this involves joint commercial transactions and not only joint management of resources.

It should be borne in mind that the equipment to be purchased would be mainly utilized in a Tier 2 or 3 scenario and in the context of the previously agreed countermeasures, as well as clean-up and disposal options. For example, buying fire-resistant booms if in-situ burning of spilled oil is not allowed (by law) by the government of one of the partners, would be senseless.

**LEVEL 2 Identify New Partners**

Once the described levels of commitment are completed, and probably once the joint contingency planning has been tested, or before, new partners can be identified to then evolve from a bilateral cooperation agreement to a multilateral cooperation agreement. Then the process with the new partner starts again and then evolve into a regional contingency planning approach composed of various sub-regions.



## CONCLUSIONS

***The crucial factor, to which ARPEL is committed to work in, is to focus oil industry and governments' efforts to work towards regionalization.***

There are several drivers to work towards regionalization in Latin America and the Caribbean. The Caribbean is a sensitive area given the high risk of oil spills, proximity of various nations with coral reefs, mangroves, tourism beaches, and limited resources to devote to this matter. Cooperation agreements will provide a cost-effective solution to enhanced oil spill preparedness and response.

The evolvement from a Tier 1 scenario – managed by industry- to a Tier 2 or 3 scenario when governments activate their national contingency plan should be as smooth as possible. Furthermore, the spill management response of industry and government, should be consistent. Then, it is vital that oil industry work with governments to develop a clear, common interpretation of the national requirements and the responsibilities foreseen during an oil spill.

There are several tools already available, such as guidelines, reports, studies, databases, methodologies, and software, which may assist oil industry and governments in their quest for regionalization. Once governments state their willingness to work towards regional cooperation with other countries, they should bring together efforts with the oil industry to implement those tools to the reality of the region under consideration.

The crucial factor, to which ARPEL is committed to work in, is to focus oil industry and governments' efforts to work towards regionalization.







## *LIST OF ACRONYMS*

• ARPEL	Regional Association of Oil and Natural Gas Companies in Latin America and the Caribbean
• CCC	Clean Caribbean Cooperative
• IMO	International Maritime Organization
• IPIECA	International Petroleum Industry Environmental Conservation Association
• ITOPF	International Tanker Owners Pollution Federation Ltd.
• OPRC 90 Convention	International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990
• OSRL	Oil Spill Response Limited
• P&I Clubs	Protection and Indemnity Clubs
• REMPEITC-Carib	Regional Marine Pollution Emergency Information and Training Center Caribbean
• RMS	Response Management System
• UNEP	United Nation Environmental Program



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<i>Carlos Benavides</i>	<i>ECOPETROL</i>
<i>Tiburcio Zazueta Ramos</i>	<i>PEMEX</i>
<i>Dave Henry</i>	<i>BP</i>
<i>David Davidson</i>	<i>TEXACO</i>
<i>Karen Purnell</i>	<i>International Tanker Owners Pollution Federation</i>
<i>Patrick Keane</i>	<i>REMPEITC-Carib</i>
<i>Paul Schuler</i>	<i>Clean Caribbean Cooperative</i>

*ARPEL Executive Secretariat  
May 2001*

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

*ARPEL is the only Regional Organization of Oil and Natural Gas Companies in Latin America and the Caribbean. It was created in 1965 and its 25 Member Companies (local, regional and international) represent more than 90% of the regional upstream and downstream operations. It is a business forum for debating on the strategic issues concerning the Oil and Gas Industry, working pro-actively to anticipate the effects of trends, policies and regulations, which may affect the industry's activities.*

### ***The ARPEL Mission***

*ARPEL's mission is to promote and facilitate the development, integration and optimization of the Oil and Natural Gas Industry in Latin America and the Caribbean, being a forum for all key issues of interest to its Member Companies.*

### ***The ARPEL Vision***

*To be the focal point of the Latin American and the Caribbean Region for all issues related to the oil and natural gas industry: environment, legislation, integration, technology and society.*

### ***The ARPEL Values***

- *Knowledge*
- *Cooperation*
- *Social Responsibility*

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

Javier de Viana 2345 - P.O. Box 1006 - CP 11.200 Montevideo - URUGUAY

Telephone: (598 2) 400 6993\* - Fax: (598 2) 400 9207\*

E-mail: [arpel@arpel.org.uy](mailto:arpel@arpel.org.uy) Internet: <http://www.arpel.org>