International Maritime Organization

International Petroleum Industry Environmental Conservation Association

National workshop on the development of the National Oil Spill / HNS Incident Contingency Plan for the Republic of Cap Verde

Sao Vincente, Republic of Cape Verde,

10-13 August 2010

CAPE VERDE

GLOBAL INITIATIVE FOR WEST AND CENTRAL AFRICA

(GI WACAF)

NOTE

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IMO/IPIECA, 2010: ***National workshop on the development of the National Oil Spill / HNS Incident Contingency Plan for the Republic of Cap Verde, Sao Vincente, Republic of Cape Verde, 10-13 August 2010+***

Attached document to this report: the draft National Contingency Plan, including the draft National Policy for the Use of Dispersant.

Executive Summary

Place and date: Mindelo, Sao Vincente (Republic of Cape Verde), 10 – 13 August 2010, **Type**: National

Organised by:

- Ministério das Infra-estruturas, Transportaes e Mar / Instituto Marítimo e Portuário
- International Petroleum Industry Environmental Conservation Association (IPIECA)

Number of participants: 21 experts

The principal objectives of the Workshop were as follow:

- Review, test and update the draft national oil spill / HNS Incident contingency plan developed by the Republic of Cape Verde (through a table top exercise), including compensation mechanisms;
- Discuss the development of a national policy for the use of dispersant;
- Discuss the cooperation between national authorities, port authorities and oil industry;
- Increase the knowledge of the delegates about the OPRC 90 Convention, OPRC-HNS Protocol and convention related to the compensation following oil spill from tanker and other vessels;
- Validate the oil spill sensitivity maps and support the experts to continue developing the maps.

The involvement of the participants and the efficient running of the workshop allowed the production of the results as follow:

- Awareness of the experts raised about the main international conventions related to preparedness, cooperation, compensation in case of oil spills or HNS incidents from tankers and other vessels.
- Assessment of the draft National Contingency Plan (developed with the assistance of the Spanish cooperation).
- Assessment and validation of the Coastal vulnerability maps developed for Cape Verde (Sotavento Islands).
- Development of a first version of a National Policy for the use of dispersant.
- Development of an Alert and Mobilization procedure.
- Development of a national organization for the management of marine accidental pollution and of an “Island” organization, based on the Tier Level concept and including all involved stakeholders,
    - with main positions identified and the competent organization to fulfil the tasks identified and
    - integrating the port authorities and oil industry, and the international cooperation.
- Development of technical recommendations to finalize the National Contingency Plan
- Development of a National Action Plan for Cape Verde to improve the level of preparedness in Cape Verde, based on the high priority actions for the country.
- Production of an updated version of the draft National Plan, including the National Policy for the Use of Dispersant (with definition of the geographical limits for the spraying of dispersant, approval procedure, etc.).
- Development of general recommendations to the National Authorities to implement the Plan and improve the level of preparedness in the country, and to IMO and IPIECA to continue to support the efforts of the country.

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1 Introduction

The Global Initiative for West and Central Africa (GI WACAF) is a partnership between the International Maritime Organisation (IMO) and the International Petroleum Industry Environment Conservation Association (IPIECA) to enhance the capacity of countries to prepare for and respond to marine oil spills. A key innovative feature is emphasis the promotion of public/private partnership for effective oil spill response making use of existing industry expertise and resources.

The mission is to strengthen the national oil spill response capability in twenty two countries in West and Central Africa through the establishment of local partnership between the oil industries and the national authorities in charge of oil spill preparedness and response at national level.

This program is jointly funded by the International Maritime Organization (IMO) eight Oil Companies members (BP, Chevron, ENI, ExxonMobil, Marathon, PERENCO, Shell and Total) through the International Petroleum Environment Conservation Association (IPIECA).

The scope is to organise workshops, training, seminars and deployment exercises with national authorities in charge of oil spill response, in partnership with local business units.

The GI WACAF is based on an effective management system established six goals of preparedness and key performance indicators to enhance the capacity of countries to prepare for and respond to marine oil spills. These goals cover the requirements of the OPRC 90 convention:

- Goal 1: Legislation: Promote the ratification of the relevant international Convention,
- Goal 2: Contingency plan: Have contingency plan for all the countries of the region,
- Goal 3: Designation of authority: Get clarity in roles and responsibilities for oil spill response,
- Goal 4: Regional agreement: promote exchange and mutual assistance for oil spill response,
- Goal 5: Training: Ensure that training and exercise are developed in each countries on a regular basis,
- Goal 6: National capabilities: support countries in developing their own national response system.

2 Objectives of the national workshop

The objectives of the national workshop were to:

- Review, test and update the draft national oil spill / HNS Incident contingency plan developed by the Republic of Cape Verde (through a table top exercise), including compensation mechanisms;

- Discuss the development of a national policy for the use of dispersant;

- Discuss the cooperation between national authorities, port authorities and oil industry;

- Increase the knowledge of the delegates about the OPRC 90 Convention, OPRC-HNS Protocol and convention related to the compensation following oil spill from tanker and other vessels;

- Validate the oil spill sensitivity maps and support the experts to continue developing the maps.

3 Program of the workshop

The workshop proposed a set of technical presentations on accidental marine polluiton response and preparedness, and encouraged a dynamic and participatory approach to ensure the production of concrete results, even in the short time available, while making the best use of the expertise and experience of the national delegates.

➔ See the programme of the workshop in Appendix 1.

Due to the numerous issues to be discussed, the interest raised by the different topics, the program was amended compared to the original program (in the Appendices).

The section 5 below summarizes the workshop activities.

4 Location, dates, roles & participants

The workshop was hosted by the Instituto Marítimo e Portuário of the Ministério das Infra-estruturas, Transportaes e Mar (Mindelo). IPIECA provided one expert to support the workshop:

- Lindsay Page-Jones, IMO and IPIECA representative.

The Instituto Marítimo e Portuário took care of the general organization of the workshop.

The person in charge of the organization of the workshop was M. Joao Rosario Lopes, from the Instituto Marítimo e Portuário at Mindelo and GI WACAF Focal Point.

The workshop took place in the lecture room of the Instituto Marítimo e Portuário at Mindelo. The room was correctly equipped and suitable for the workshop program (video projector, public address system, internet connection.).

A total of 21 participants attended to the workshop, representing the organizations that would be involved in oil spill response operations, as well as the oil industry.

➔ See the list of participant in Appendix 2.

5 Workshop activities

5.1 Opening Ceremony

The opening ceremony took place in the lecture room of IMP on the 10th of August, and was chaired by Mr José Jorge Costa Pina, member of the board of directors of the Instituto Marítimo e Portuário, in presence of Mr Joao Rosario Lopes (IMP and GI WACAF focal point) and Mr Page-Jones (IMO/ IPIECA representative).

Mr José Jorge Costa Pina officially opened the national workshop. Mr Page-Jones thanked the national authority of the Republic of Cape Verde and stressed the importance of the workshop. He also reminded the objective and the achievement of the GI WACAF project.

The full text of the address of the / IPIECA representative is in Appendix 3.

5.2 Training of the national experts and development of the marine accidental pollution response system for Cape Verde

First day

Presentation of the IMO/ IPIECA GI WACAF project

L. Page-Jones presented the GI WACAF project, supported by IMO and IPIECA, the results obtained since 2006 and the plans for the next biennium.

Workshop objectives, lecturers and participants

L. Page-Jones presented the objectives of the workshop, in the framework of the GI WACAF project.

National Contingency Plan for Cape Verde

Mr Rosario Lopes presented the draft National Contingency Plan developed by the Spanish Cooperation.

Contingency planning principle

L. Page-Jones introduced the general principles of contingency planning for a state. Participants discussed of the draft Plan, and agreed that a number of shortcomings and gaps existed in the draft Plan developed by the Spanish Cooperation.

Tiered Response and the national organization in charge of the management of oil spill response

L. Page-Jones introduced the Tiered response principle, allowing organizing the levels of responsibility in the country between the different stakeholders.

The general structure of a national organization in charge of the management of oil spill response was presented, and the various positions within this organization outlined.

Second Day

National organization in charge of the management of oil spill response for Cape Verde

The participants developed (on the basis of best international practice) the national organization in charge of the management of oil spill response for Cape Verde. They particularly worked on the roles and responsibilities for each position of the Cells of the National Incident Command Team (Planning/ Operations/ Logistics/ Finance-Administrative), and on the identification of the most competent organization in the country to fill in each position.

Coastal vulnerability maps

The leader of the "Coastal vulnerability maps for Cape Verde" presented the results of the previous workshop (July 2010), the methodology adopted and the maps produced.

Participants reviewed and validated the developed maps and recommended that the maps were completed and their geographic coverage extended to the Sotavento Islands.

National Policy for the use of dispersant

L. Page-Jones presented the use of dispersant, the elements to consider for the development of a national policy for the use of dispersant, and a template national policy to be adapted to Cape Verde.

Third Day

National Organization for oil spill response (between islands)

The participants continued to develop the National Organization in charge of the management of oil spill response for Cape Verde. He specific case of the distribution of roles and responsibilities between Sotavento and Barlovento islands was discussed, as well as the necessity to have some representatives of the national competent authorities in charge of oil spill response operations on each islands.

Alert and Mobilization procedure

The Alert and Mobilization procedure was discussed to cover all the territory of Cape Verde.

Legal framework and compensation

The main international conventions related to compensation following oil spill from tankers (i.e. CLC 92, Fund 92) were discussed.

Fourth Day

Working groups

The participants organized themselves in three working groups, each with some specific tasks:

- Group A – "Strategy". The group studied the coastal vulnerability maps developed, the mapping methodology used and the national priorities to finalize a first version of the maps.

- Group B – "National Action Plan". The group assessed the level of oil spill / HNS incident preparedness, identified the high priorities actions and developed a National Action Plan to improve the level of preparedness and the response capabilities of Cape Verde.
- Group C – "Recommendations". The group developed the technical recommendations of the workshop to develop and finalize the document of the National Contingency Plan (responsibility of IMP), and developed the general recommendations of the workshop to the national authorities of Cape Verde to improve the level of preparedness in country.

Debriefing and recommendations

Each group presented their results, which were commented and validated by all participants.

The fourth day ended with the closing ceremony.

5.3 Closing ceremony

The closing ceremony took place the 13th of August chaired by Mr José Figueiredo, President of the Instituto Marítimo e Portuário – IMP, and comprised:

- The closing address of the IMO / IPIECA representative reminding participants of the importance of the development and approval of the National Plan, and thanking the Republic of Cape Verde, the Instituto Marítimo e Portuário for the organization of the workshop and their hospitality.
- The closing speech of M. José Figueiredo, President of the Instituto Marítimo e Portuário, who thanked all participants for the quality of the work carried out during the three days, IMO and IPIECA for their support, and finally declared the workshop closed.
- Distribution to each participants of certificates and USB drives with all workshop support material and additional documents, reference guides and tools.

The text of the closing address of the IMO / IPIECA representative is in Appendix 3.

6 Results obtained

The various activities carried out during the workshop produced the following results.

See also the attached document to this report: the **draft National Contingency Plan, including the draft National Policy for the Use of Dispersant**.

6.1 Assessment of the draft National Contingency Plan (developed with the assistance of the Spanish cooperation)

The draft National Contingency Plan (developed with the assistance of the Spanish cooperation) was discussed with the participants (and during a preparatory meeting held with the GI WACAF focal point) and appeared as a document which was not suitable (as it is) for Cape Verde, mainly due to a lack of communication from the Spanish cooperation with the National Authorities of Cape Verde during the development of the document.

The document was completely re-worked to a more suitable draft version for Cape Verde. The Draft Contingency Plan is provided as an attached document to this report, and includes the draft National Policy for the Use of Dispersant.

6.2 Coastal vulnerability maps

The participants validated the coastal vulnerability maps developed for the Sotavento Islands (during the national mapping workshop eld in July 2010 in Cape Verde) and the methodology used. They recommended:

- Completing the coastal vulnerability maps developed for the Sotavento Islands;
- Developing the coastal vulnerability maps for the Barlovento Islands;
- Identifying the most vulnerable coastal sites and integrating the maps in the National Contingency Plan.

➔ See Appendix 7 for the “Tactical and strategic maps for Barlavento islands”.

6.3 National Policy for the use of dispersant

Using a template policy for the use of dispersant (developed by Mr F.-X. Merlin of hte rench organization “Cedre”), the participants adapted the template document to the needs of Cape

Verde, and issued a first version of the national policy for the use of dispersant, to be completed, validated and integrated into the National Contingency Plan.

➔See Appendix 8 for the "Draft National Policy for the Use of Dispersant".

Note. In the Appendix:

- All inputs of the participants are written in blue.
- All pending issues are written in blue and highlighted in yellow.

Note. The draft National Policy for the Use of Dispersant is also included in the draft National Contingency Plan, provided as an attached document to this report.

6.4 Development of a national organization for the management of marine accidental pollution and of an "Island" organization

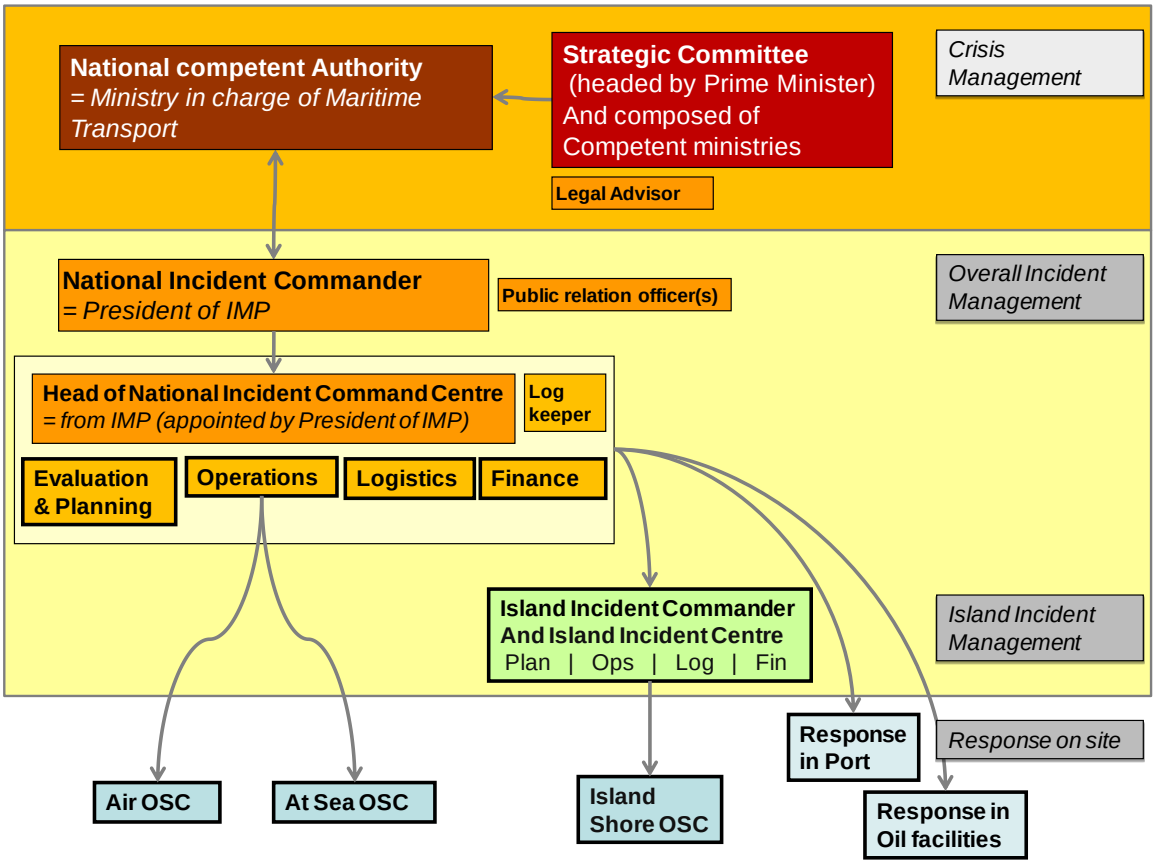
The participants developed a national organization (see figures below) for the management of marine accidental pollution taking into consideration the specific geographic condition of the archipelago, and the need for this national organization to have representatives on each islands, at least for the first response operations.

The national competent authority is the **Ministry in charge of** Transport, who will be assited by a high level **National Strategic Committee** in case of a large pollkution.

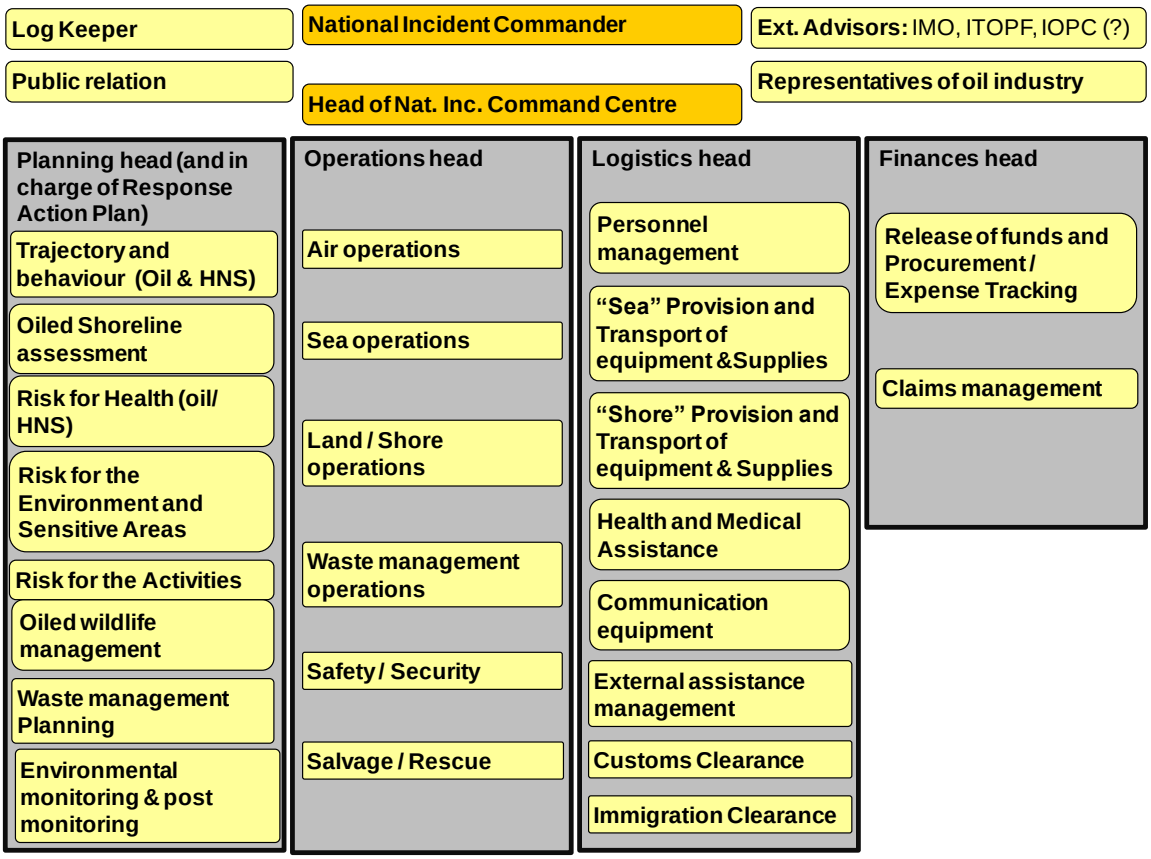
The **National Incident Command team** (headed by the National Incident Commander) is in charge of the overall management of the incident, once the national Contingency Plan is activated, is the only organization in charge of aerial operations and at sea operations, is in charge of the relations with external specialized bodies, is in charge of the management of international assistance and supports and coordinates the shoreline clean-up operations with the **simplified "Island Command Centre(s)"** on each island. Partifcipants identified the positions and members of the Naiotnal Incident Command team.

On each island affected by the spill, a **simplified "Island Command Centre"** is set-up to manage on shore operations at the level of the island, in liaison and under the supervision of the National Incident Command Centre.

The participants recommend that the National Incident Command Centre should be localized at the IMP in Mindelo. However, in case of an incident localized within the Barlovento Islands only, the National Incident Command Centre could be mobilized at Praia. A facility should be identified on each island to host the simplified "Island Command Centre".

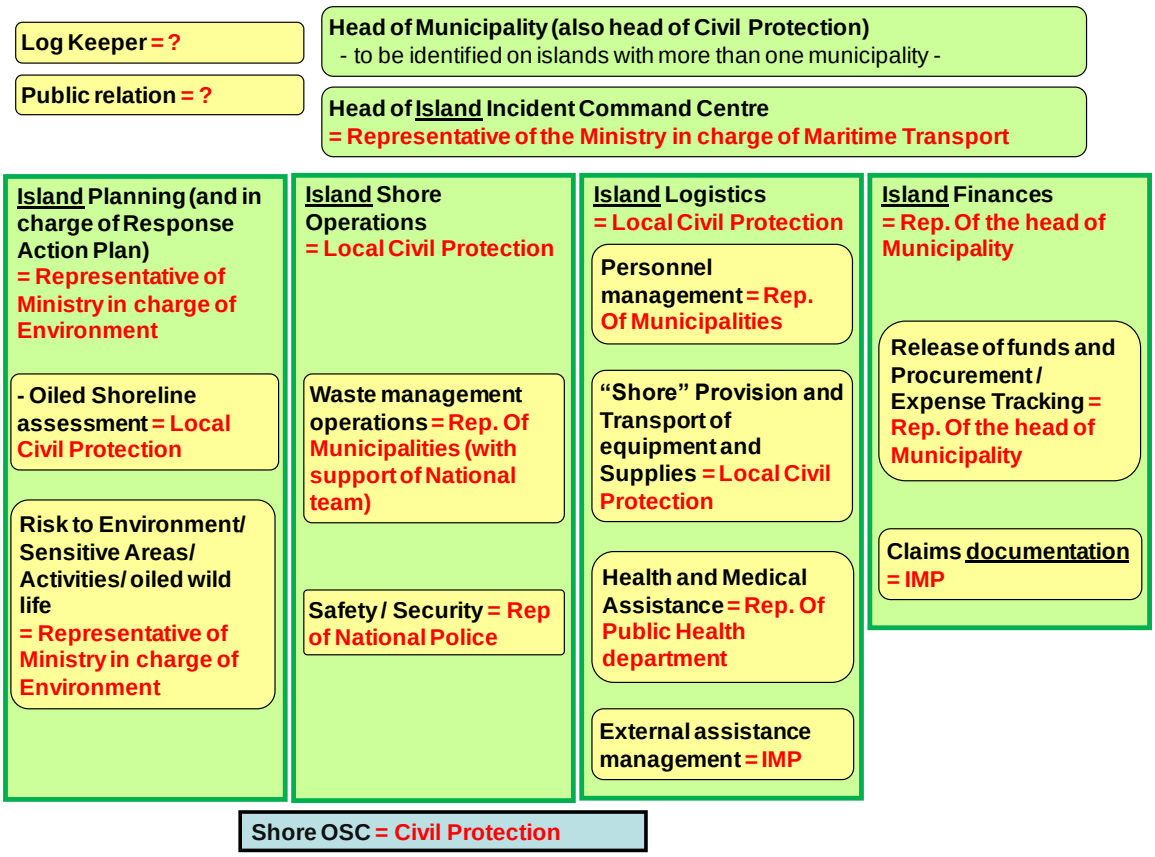


Structure of the national organization for the management of marine accidental pollution, recommended by the participants



Internal organization and positions of the **National** Incident Command Centre, recommended by the participants

➔ Refer to the Appendix 4 for the "Positions, responsibilities and members of the Sections of the National Incident Command Centre".

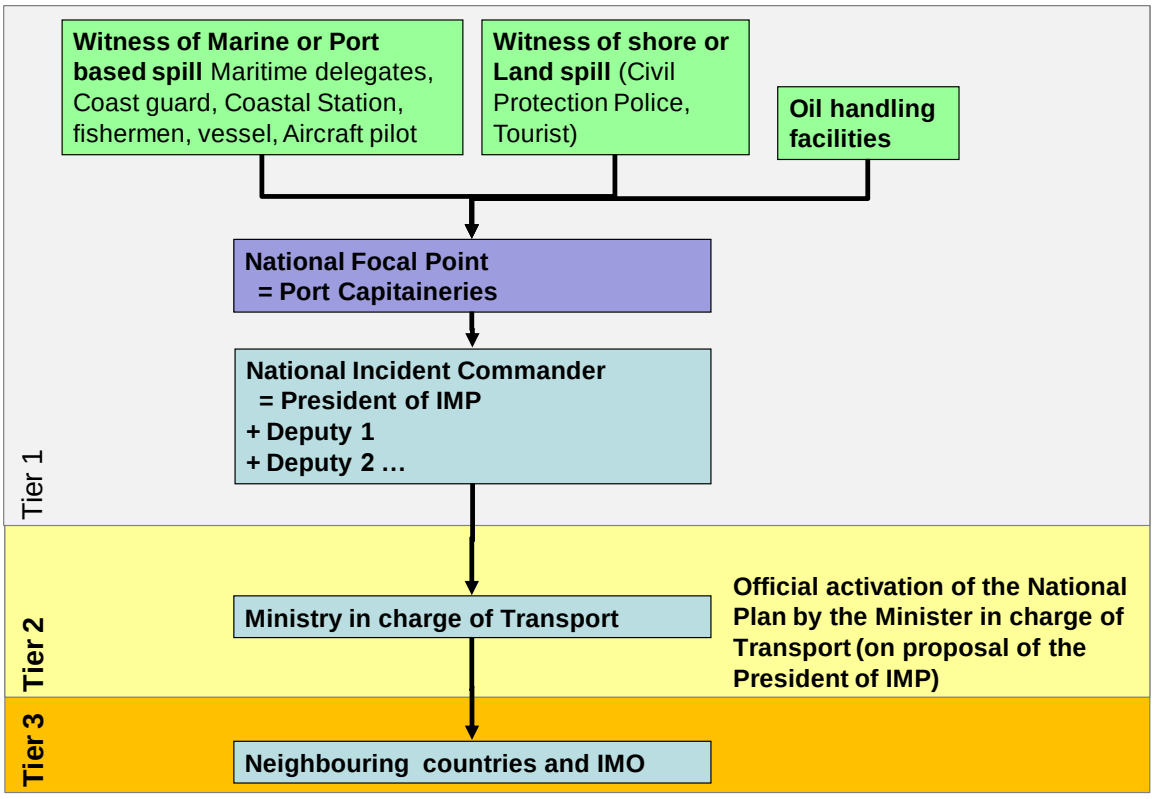


Internal organization and positions of the **Island** Incident Command Centre, recommended by the participants

Note. The elements below are included in the draft National Contingency Plan, provided as an attached document to this report.

6.5 Development of an Alert and Mobilization procedure

The participants recommended the below "Alert and Mobilization" procedure, identifying the **Capitaineries** as the national operational focal point in charge of receiving the alert of any oil spill/ HNS incident; and transmitting it to the national competent authority.



Alert procedure, recommended by the participants

The participants recommended the following **Tier levels** and, accordingly, the levels of mobilization of the various contingency Plans (facility/ port/ national/ international assistance).

Large spill (over few 100's of m3)	**TIER III** **National Plan** (with international assistance)			
Medium spill (few 10's to 100's of m3)	**TIER II** **National Plan**	**TIER II** **National Plan**	**TIER II** **National Plan** (assistance needed on island or 2+ islands affected)	**TIER III** **National Plan**
Small spill (few m3 to 10's of m3)	**TIER I** **Facility Plan**	**TIER I** **Port Plan**	**TIER I** **Island management level** (only one island affected)	**TIER II** **National Plan**
	Close to/ inside facilities (in or outside port)	**Ports**	**Shore & coastal waters** of one or more island(s)	**Offshore** (archipelago waters, territorial waters and EEZ)
	TIER I	**TIER II**		**TIER III**

Tier levels, recommended by the participants

6.6 Development of technical recommendations to finalize the National Contingency Plan

In order to finalize a first version of the National Contingency Plan, the participants recommend the following:

- Use the provided draft National Contingency Plan (based on the Draft version provided by the Spanish Cooperation and on the outputs of the present workshop) as the initial working document.
- Develop a specific national response strategy:
  - Develop the Risk analysis and review the definition of Tier Levels, i.e. level of incidents to activate the Local/ Port/ National Contingency Plan:
    - Location and magnitude of incident,
    - Fate and behaviour of products.
  - Develop the overall response strategy including:
    - National policy for the use of dispersant,
    - Specific waste management procedure.
  - Finalize the first version of the coastal vulnerability maps.
  - Develop site specific protection plan of the most vulnerable sites (based on the vulnerability maps).
  - Assess the minimum oil spill response equipment needed to respond to marine pollution (based on risk analysis and strategy).
    - Assess the suitability of existing equipment and evaluate the need for additional equipment.
- Consider, accordingly to the OPRC-HNS Protocol 2000 (to be ratified), the integration of response to marine incidents involving Hazardous and Noxious substances, HNS, in the scope of:
  - the National Authorities,
  - the National Contingency Plan.
- Carry out a HNS risk analysis, and update the national response strategy and operational sections of the National Contingency Plan accordingly.

- Finalize the National policy for the use of dispersant (refer to the draft version within the draft Contingency Plan):
  - Cape Verde allows the use of dispersant in its waters within certain limits.
  - Only dispersant products authorized by IMP/ Ministry in charge of Environment can be used.
  - As a general regulation, dispersion operations can be achieved in the following limits:
    - Offshore the 20 m isobaths depth and at least at 1 km distance of the shore.
    - On a case by case basis, IMP may decide to use dispersant for large pollution within the above limits.
- Finalize the National Plan, particularly:
  - The Alert and Mobilization procedure,
  - The National Organization in charge of marine pollution response and the "island incident management level",
  - The management of operations within the national command centre, of volunteers and private contractors, of media, of Health and Safety issues , of claims …
  - The Appendices.

6.7 Development of a National Action Plan for Cape Verde to improve the level of preparedness in Cape Verde

The participants assessed the level of preparedness of Cape Verde, using the general matrix of preparedness used for all countries within the GI WACAF Project, allowing them to identify the issues to be dealt with in priority to improve the level of preparedness of the country.

➔The Matrix for the assessment of the level of preparedness for accidental marine pollution response is detailed in Appendix 5.

The participants then developed a National Action Plan addressing each high priority action identified.

➔The action plan is detailed in Appendix 6.

7 General recommendations of the participants

The general recommendations to the National Authorities to improve the national response capabilities are as follow.

General recommendations of the participants to the National Authorities of Cape Verde

The participants recognise the continuous efforts undertaken by the State of Cape Verde to improve the national marine accidental pollution preparedness and response system.

Also recognising the importance of the marine environment, the risk of oil pollution and marine pollution involving Hazardous and Noxious Substances, the need to consider Hazardous and Noxious Substances and to continuously update the national system, the participants have issued the following recommendations:

- Consider and support the recommendations of this workshop for the development of the National Marine Pollution Contingency Plan.
- Support and provide the resources to the two national technical working groups set-up:
    - National technical working group for the National Marine Pollution Contingency Plan (including the National Policy for the Use of Dispersant),
    - National technical working group for the Coastal vulnerability Geographic Information System.
- Regarding the international instruments:
    - To improve the level of preparedness, and facilitate international cooperation in case of marine pollution involving Hazardous and Noxious Substances, ratify the **Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000** (OPRC-HNS 2000 Protocol),
    - To allow Cape Verde to access the international compensation regime in case of spill of bunker fuel from vessels other than tankers, complete the ratification of the **International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001** (Bunker 2001 Convention),
    - To allow Cape Verde to access the international compensation regime in case of marine incidents from ships involving Hazardous and Noxious Substances, complete the ratification of the **International Convention on Liability and Compensation for damage in connection with the carriage of Hazardous and Noxious Substances by sea, 1996** (HNS 1996 Convention), and consider the practical requirements linked to its implementation, especially the reporting of the HNS received in country by vessels.
- Recognise as per the provisions of the International Convention On Oil Pollution Preparedness, Response And Cooperation of 1990 and its Protocol on HNS from 2000:

  - the **Ministry in charge of Transport** as the National Competent Authority with responsibility for marine pollution preparedness and response (oil pollution and marine HNS incident),

  - The **Maritime and Port Institute – IMP** as the national operational agency for marine pollution preparedness and response,

  - The **Port Capitaineries** as the national operational contact points, responsible for the reception and transmission of the marine pollution reports,

  - The **Prime Minister (or the Ministry in charge of Transport by delegation)** as the authority which is entitled to act on behalf of the State to request assistance or to decide to render the assistance requested,

  - Review the laws and codes to domesticate the provisions of these new conventions.

- Ensure the national laws are consistent with the provisions of the conventions already ratified by Cape Verde (particularly regarding compensation), and review the national laws with the objective to update them following the ratification of the new instruments.

- Ensure the national legislative framework allows for adequate and rapid compensation in case of pollution originating from fixed installation on land and at sea, pipelines, storage tanks, etc., i.e. cases not covered by the international compensation regime.

- Ensure a national funding mechanism is in place to finance the preparedness effort of Cape Verde (purchase of oil spill response equipment, training and exercise, equipment of the national incident command centre, etc.).

- Ensure that emergency funds are in place and accessible to the National Incident Command organization to initiate immediately response actions.

- Finalize and approve officially the National Plan:

  - Ensure that a national marine pollution response strategy is developed following an up-to-date risk analysis of oil pollution and incident involving HNS,

  - Designate officially the main competent organizations which would be involved in response operations (national incident commander, head of the Sections of the National Command Centre).

- Implement the National Plan:

  - Sufficient resources accordingly to the response strategy (response equipment, equipment of National Incident Command etc.),

  - Training and exercises (with the industry).

- Develop the cooperation with the oil and shipping industry for preparedness and response to marine pollution.

    - And ensure that port authorities and oil handling facilities have contingency plans in place, emergency contact, reporting procedures, trained personnel and a minimum of oil spill response equipment commensurate with their risk (Tier 1 level).

- Raise the awareness of the delegates of the central administration and of the municipalities about their responsibility for preparedness and response to marine pollution.

- Develop regional assistance agreements for preparedness and response (in the framework of the Emergency Protocol of the Abidjan Convention).

- Inform the international organizations about the competent authorities in Cape Verde, and provisions of the National Plan, i.e. the:

    - International Maritime Organization IMO,

    - ITOPF (International Tanker Owner Pollution Federation) and IOPC Fund.

General recommendations of the participants to the IMO and GI WACAF Project

- Take into account the efforts of Cape Verde and continue to support Cape Verde to improve its response capabilities.

- Facilitate the ratification of the International Conventions.

- Provide a technical assistance for the implementation of the conventions related to compensation.

General recommendations of the participants to the oil industry

- Develop the cooperation with the Government for marine pollution preparedness and response.

- Develop the operational response procedures with the national authorities (joint operations, provision of assistance).

8 Conclusions

The 'key' organization for the development of the National Contingency Plan, were well represented at the workshop, which allowed:

- To remind every stakeholder of the urgency to achieve and approve a first version of the National Plan;
- To take advantage of the expertise of all participants to produce a first set of technical and general recommendations for the development of the National Plan, including a first version of a National Policy for the use of dispersant;
- To consider the specific constraints of Cape Verde for the set-up of an operational marine pollution response system (mainly geographic constraints: islands organized into two main archipelagos).

The active participation and motivation of participants and support of the national authorities for the project, the conjunction of this workshop with the national workshop on the coastal vulnerability mapping (July 2010) are positive and encouraging signs of the commitment of the Republic of Cape Verde to improve his level of oil spill preparedness and response capabilities.

In view of:

- the involvement of the participants,
- the active participation of the representatives of the oil industry,
- the quality and amount of work produced by the participants in only three days,
- and the overall positive evaluation of the workshop by participants.

The IMO/IPIECA representative considers that the national workshop for the development of National Contingency Plan for Cape Verde reached its objectives.

9 Appendices

Appendix 1. Program of the workshop

Day 1 : 10August 2010		
	Opening Ceremony	
08h30	Registration of participant	
09h00	**Opening Ceremony :** - Opening speech of the national authority representative - Speech of the GI WACAF IMO / IPIECA representative	
09h30	**Coffee break**	
	Introduction	
10h00	**General review of the GI WACAF project activities and Results of the Biennium 2008-2009** **Presentation of the workshop objectives, of the lecturers and all course participant** **Presentation of the six elements of preparedness (GI WACAF) to implement the National Oil Spill Contingency Plan** Consultant	
10h30	**Presentation of the draft National Oil Spill Contingency Plan and progress since the 2007 NOSCP workshop** GIWACAF Focal point **IMO / IPIECA video "Working Together"**	
	Preparedness and Cooperation	Objectives
11h00	**Legal framework** Consultant Presentation of the main international convention related to oil spill Preparedness and Cooperation: OPRC 90 and to Hazardous and Noxious Substances Incident Preparedness and Cooperation: OPRC-HNS Protocol And the Abidjan convention and Emergency Protocol	**Name of the four competent authorities?**
12h00	**The oil industry in Cape Verde** Representative of the oil industry Presentation of the oil spill preparedness and response arrangements from the oil industry in Cape Verde (SHELL, ENALCO) **Discussion on** - The features to take into account into the NOCP for the cooperation and assistance - Cooperation features with oil industry	**Existing cooperation and assistance agreement between industry and government?**
12h30	**Lunch break**	
	National Oil Spill Response organisation	Objectives
13h30	**Presentation on general principles to develop a NOSCP** **And first comments on the Draft NOSCP of Cape Verde** Consultant	**Participants aware of objectives and content of a NOSCP**

13h40	**Presentation on the Tier levels concept and application in Cape Verde at national level** And **An example of escalating mobilization in Cape Verde** Consultant	**Definition of** **- Tier levels and** **- Competent authority for each Tier level?**
14h30	**National Oil Spill Response organisation & Project provisions of the NOSCP** Consultant Discussion on the National organisation in charge of oil spill response, general structure, roles and responsibilities of each position, assignment of competent personnel to fill in each position and updates required	**Definition of** **- the general organisation, and** **- the positions (inc. roles and responsibilities)**
15h00	**Coffee Break**	
15h30 to 17h00	**National Oil Spill Response organisation & Project provisions of the NOSCP (Cont'd)** Consultant	**Definition of the competent organisation for each position**

Day 2 : 11August 2010		
	Alert procedures	Objectives
09h00	**Discussion on the Alert, notification and mobilisation procedure in country**. Consultant	**Definition of the Alert, notification and mobilisation procedure in country**
10h00	**Presentation of the process for the development of the "Strategy part" of the NCP** Consultant	**Participants aware of objectives and content of the Strategy Part of a NOSCP**
10h30	**Coffee break**	
	Response strategies	Objectives
11h00	**Response strategies** - Onshore oil spill response strategy (and requirements) overview: Protection, clean-up,, waste management - Offshore oil spill response strategy (and requirements) overview: Monitoring, Containment and recovery, Use of dispersant **Available oil spill response resources in Cape Verde**	**- Definition of the general response strategy in country** **- Assessment of available oil spill response resources**
12h00	**Presentation of the progress for the development coastal vulnerability maps and identification of the most sensitive sites** - Discussion on the coastal sensitivity maps and on the most sensitive sites - Technical validation of the maps GIWACAF Focal point	**Technical validation of the coastal vulnerability maps**
12h30	**Lunch Break**	
	National policy for the use of dispersant	Objectives
13h30	**Chemical dispersion of oil spill (Cont'd)** - The use of dispersants - Elements to consider for a "National policy for the use of dispersant"	
15h00	**Coffee break**	
15h30 to 17h00	**Development of a National policy for the use of dispersant** - Presentation of a draft document of Dispersant Use National Policy - Discussion to complete/ modify the document of the first Dispersant Use National Policy	**Development of a National policy for the use of dispersant (based on a template document of policy)**

Day 3 : 12August 2010	
	Table top exercise
09h00	**Presentation of the table top exercise to test the Procedures for alert and mobilization, the national oil spill response organisation and cooperation between the national authorities and the oil industry** Consultant **Preparation of the table-top exercise** Consultant - Organisation of teams - Practical details of the table-top exercise
09h30	**Table top exercise: alert and mobilisation at national level** Participants - National Authorities - Navy and Army - Port - Oil Industry Other
10h30	**Coffee break**
11h00	**Table top exercise: alert and mobilisation at national level (Cont'd)**
12h30	**Lunch Break**
	Analysis of the table top exercise
13h30	**<u>Debriefing</u> of the table top exercise: alert and mobilisation at national level** Participants - National Authorities - Navy and Army - Port - Oil Industry Other
15h00	**Coffee break**
15h30 to 17h00	**Analysis of the table-top exercise and recommendation to improve the NOCP** Participants - Alert & mobilization - Structure of the National Oil Spill Response organisation – finalization - The National Oil Spill Response organisation functioning with involved personnel, the tools and operational appendices of the NOSCP (Documents and guidelines, forms, list of equipment, emergency contacts, etc.) - set up of an oil spill response Strategy, - communication, - cooperation Government / Oil Industry, and appropriateness of the NOSCP to the other existing organisations - financial features , - regional and international assistance, **Discussion about the incident command post** (Location & equipment)

Day 4 : 13 August 2010	
	Liability and compensation
09h00	**Liability and compensation conventions for accidental oil pollution by tankers:** Consultant - CLC 92 - FIPOL 92 - International Fund for Compensation for Oil Pollution Damage (FUND 92) and the Supplementary Fund - Bunker 2001 - HNS 96 - Claims
10h30	**Coffee break**
11h00	**Discussion about the compensation for damages** Practical issues related to compensation: claims preparation and admissibility Feature to input into the NOSCP to manage the claims
12h30	**Lunch break**
	Recommendations
13h30	**Work groups** - Synthesis of technical recommendations to improve the NOSCP - finalization of the national dispersant use policy - National action plan for the re-enforcement of the response capabilities - Adoption of generals workshop recommendations
15h30	**Coffee break**
	Closing ceremony
16h00	**Closing ceremony** - Provision of certificates and USB keys with training material - Lecture of the recommendations - Closing speech

Appendix 2. List of Participants

Nº	NAME	ORGANIZATION	CONTACTS	E_MAIL:
1	João do Rosário	**IMP**	2324342	rosarlopes@hotmail.com
2	Nuno Ribeiro	**DGA**	261.89.84	ribeironu@gmail.com.com
3	Antonio Moeda	**SHELL**	2307600	antonio.a.maeda@scvsimis.com
4	Manuel Medina	**SHELL**	9916225	manuel.m.medina@scv.simis.com
5	José A. Figueiredo	**IMP**	2324342	jose.a.figueiedo@imp.cv
6	Kahbi Batista	**Coast Guard**	9548798	kahbibatista@hotmail.com
7	Nuno Almeida	**UNI-CV**	989.51.99	nunoduartealmeida@hotmail.com
8	Manuel F. Almeida	**UNI-CV**	991.90.12	meftalmeida@cv.telecom.cv
9	Policarpo G. Almeida	**ENAPOR**	9914720	policarpo_almeida@hotmail.com
10	Marisia S. Lopes	**IMP**	9849190	sofialopes-2007@hotmail.com
11	Celso A. Mota	**IMP**	981.91.72	mottacelso09@hotmail.com
12	Carlos G. Lopes	**IMP**	993.67.04	carlosduartelopes@hotmail.com
13	Albertino Jesus	**IMP**	971.35.37	jesusalbertino@hotmail.com
14	Jandir Leite	**IMP**	9812238	ja-leite@yahoo.com.br
15	Manuel C. Monteiro	**IMP / CPB**	2324342	manuel.c.monteiro@govcv.gov.cv
16	Raul V. Soulé	**IMP**	2324342	raul.soule@imp.cv
17	Zeferino C. Fortes	**President - IMP**	2324342	zeferino.fortes@imp.cv
18	Marcos F. Santos	**Civil Protection**	9915825	ambrelusalda@hotmai.com
19	João de Deus Silva	**IMP - CPS**	9924490	joao.silva@imp.cv
20	joão Guilherme	**ENACOL**	9929344	joaoaguilherme@enacol.cv
21	Samira Gomes	**NGO**	981.61.49	scrgomes82@hotmail.com

Appendix 3. Opening and Closing Ceremony

Welcome address by the representative of the IMO/ IPIECA, L. Page-Jones, 10/08/2010

Dear President of the Maritime and Port Institute

Dear members of the board of Directors of Maritime and Port Institute

Dear Commander of the Coast Guards

Dear Heads of departments, companies and organizations

Dear participants

Ladies and gentlemen

Thank you for your welcome. From a personal point of view, I am very pleased to be in Cape Verde, particularly after hearing my colleague Christophe Carrié speaking about the very fruitful vulnerability mapping workshop held here a few weeks ago.

Secondly, I deem it a great honour to be here this morning to deliver some Opening Remarks on behalf of His Excellency Mr. Effthimios MITROPOULOS, the Secretary-General of the International Maritime Organization, IMO, and M. Richard Sykes, general secretary of the International Petroleum Industry Environmental Conservation Association, the IPIECA.

I would like to welcome you all to this National workshop for the development of your National Marine Contingency Plan.

On behalf of IMO I wish to extend my appreciation to the Government of Cape Verde for hosting this course, and in particular to the Ministry of Infrastructures, Transport and the Sea and the Maritime Administration for its efforts and the assistance provided in connection with all the local planning, arrangements and the logistics for this important event. Without your valuable support and hard work, it had never been possible to organize this Course.

IMO has long recognized the importance of comprehensive and well-rehearsed preparedness and response systems that are needed to ensure prompt action to minimise the impact of a maritime spill. As far back as 1968, one year after the Torrey Canyon disaster, IMO adopted three important, interrelated resolutions to establish arrangements for dealing with oil spills. Some twenty years later, an immediate cascading effect of the grounding of the Exxon Valdez near the Alaskan coast, in 1989, was the fast-track development of the International Convention on Oil Pollution Preparedness, Response and Co-operation. The OPRC Convention was

adopted by IMO in 1990 and was later supplemented by the OPRC-HNS Protocol of 2000 to cover hazardous and noxious substances.

The OPRC Convention provided for the first time a truly global framework to facilitate international co-operation and mutual assistance in preparing for and responding to major pollution incidents. It encourages States to develop and maintain an adequate preparedness and response capability of their own while simultaneously recognizing the importance of co-operation with the oil and shipping industries to deal with major oil or HNS pollution emergencies. It is indeed critically important that national and local governments work closely with experts from industry to build preparedness and response capacity at all levels.

In 1996, the Global Initiative (GI) between IMO and the International Petroleum Industry Environmental Conservation Association (IPIECA) was launched to promote the concept of close co-operation of government and oil and shipping industry for effective oil spill response.

The GI-WACAF project, then, was established 10 years later, in April 2006. The project is jointly funded by IMO and eight oil company members of IPIECA. Today, it covers 22 countries in West and Central Africa. Since its inception significant progress in improving oil spill response capability has been achieved. For instance, it is encouraging to see that from 2006 to 2009 a total of 43 workshops were delivered and more than 3000 persons were trained. And all six key performance indicators of preparedness have progressed. (Legislation; NOSCP; Designation of national authorities; Agreements; Training and exercises; National resources)

Ladies and Gentlemen,

The development of the National Oil Spill Contingency Plan for Cape Verde has been under consideration for quite a few years. Following a national workshop in 2007, a draft National Marine Contingency Plan has been developed with the assistance of the Spanish cooperation.

Your national legislation provides the legal background for the implementation of a number of International Conventions related to oil spill preparedness, response and co-operation. Some of the most important of these conventions are the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990, or the OPRC 1990, the convention on Civil Liability in cases of oil spills from tankers, 1992 and the International Convention for the establishing of an oil pollution Compensation Fund, also from 1992.

Cape Verde is also in the process of ratifying the Bunker Convention of 2001, and the Convention for the Supplementary Fund.

Cape Verde is also Party to the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central Africa and its Protocol

concerning Co-operation in combating Pollution in Cases of Emergency – the WACAF or Abidjan Convention.

Both the international OPRC Convention and the Regional Abidjan Convention requires that Cape Verde has in place a National Marine Contingency Plan.

In IMO we hope that the present Course will assist you in the implementation of a modern and up-to-date National Marine Contingency Plan and the associated necessary national legislation.

Experiences gained during major oil spills around the world have again and again demonstrated the need for careful planning on action to be taken, should a major oil spill occur. Similar experiences have demonstrated that it is impossible to respond effectively and cost effectively to a major oil spill without prior comprehensive planning.

This National workshop has a very ambitious program with the view to produce documents for next Friday. It will focus on the development of the National Marine Contingency Plan, and more specifically a national response organization, and a national policy for the use of dispersant.

Ladies and Gentlemen, Once again, on behalf of IMO, welcome to this National workshop and my best wishes for a fruitful outcome.

Thank you.

Closing speech of the IMO/IPIECA representative, L. Page-Jones, 10/08/2010

Dear President of the Maritime and Port Institute

Dear members of the board of Directors of Maritime and Port Institute

Dear Heads of departments, companies and organizations

Dear participants

Ladies and gentlemen

We are now closing the National workshop on the development of the National Oil Spill / HNS Incident Contingency Plan for the Republic of Cap Verde.

During this workshop, the participants have very actively participated to the discussions and work group on all key issues such as :

- The definition of a complete national organization for marine pollution response
- The definition of required tasks and the identification of the competent organization to fulfil these tasks in Cape Verde
- The definition of an alert and activation procedure
- The international conventions related to compensation for marine pollution from vessels
- The development of a national policy for the use of dispersant.

Following these discussions, the participants have issued some General recommendations to the National Authorities to improve response capabilities of Cape Verde and Technical recommendations to develop the National Marine Pollution Contingency Plan.

We can appreciate the quality of the work produced by the participants.

on behalf of His Excellency Mr. Effthimios MITROPOULOS, the Secretary-General of the International Maritime Organization, IMO, and M. Richard Sykes, general secretary of the

International Petroleum Industry Environmental Conservation Association, the IPIECA, I want to address our very grateful thanks to the Government of Cape Verde for hosting this workshop, and in particular to the Ministry of Infrastructures, Transport and the Sea and the Maritime Administration for its efforts and the assistance provided

This clearly demonstrates your willingness to better protect you marine and coastal environment.

I wish to thank all participants for their active participation and their cooperation for the development of the National Plan, which helped producing concrete results.

This work will continue with the National Technical Committee. The involvement and support of the Government of Cape Verde will be instrumental.

I also want to thank the representatives of the oil industry for their important contribution during these four days, their willingness to cooperate with the national authorities. This clearly demonstrates the relevance of the Industry/ Government cooperation, and the need to continue and improve this cooperation.

Of course, the assistance of IMO and IPIECA continues in the framework of the Global Initiative for Western and Central Africa – GI WACAF Project.

A report will be submitted to IMO and to the GI ACAF Project Coordinator, outlining the results of this workshop, the on going process of ratification of the international instruments.

Ladies and Gentlemen, Once again, on behalf of IMO and IPIECA, I thank you again for the work produced and for your warm hospitality, and hope the National Plan will soon be approved.

Thank you for your kind attention.

Appendix 4. Positions, responsibilities and members of the Sections of the National Incident Command Centre

This section details the positions, responsibilities and members of the National Incident Command Centre, recommended by the participants.

National Incident Commander

Responsibilities:

- The definition of response priorities and strategic objectives
- The overall management of the incident,
- The support of the operations on the shore of the islands, and the management of the operations at sea,
- The establishment & coordination of the Incident Command Post
- The relations with other operational organizations involved in marine pollution response operations (port authorities, oil industry, etc.).

Roles	In charge
• Receive the alert, confirms the initial assessment and decide of the Tier level. • Alerts the Ministry in charge of Transport, and requires the activation of the National Plan if required. • Decide the initial response at sea, supports initial reponse on shore, and assess the need for external assistance. • Supervise the first actions, and ensure safety of responders and of public. • Ensure the safety.	**President of IMP**

The National Incident Commander and the Head of the National Incident command Team are assisted by:

Roles	In charge
Representative of oil industry • Liaison with the industry	**Focal point of the Oil Industry**
Media/ public relation officer • Liaison with the medias • Prepare media release and press conferences • Advice the incident Commander for interview	**Representative of the Service of Information/ Communication (from Ministry of Transport)**
Log keeper • Record all decisions, calls, faxes, etc. • Collect copies of all meeting reports, survey report, activity report, etc. • Keep a daily (hour by hour) log	**Representative of IMP**

Head of the National Incident Command Team

Responsibilities:

- Coordination of the National Incident Command Team
- Relations with the “Island incident management teams”

Roles	In charge
• Activate and coordinate the work of the National Incident Command Team • Establish a response Action Plan • Supervise response operations • Report to the National Incident Commander (situation, operations, needs, risks) • Liaise with the “Island incident management team(s)” • Prepare a final report on the incident	**Appointed by the President of IMP**

National Evaluation/ Planning Section

Responsibilities:

- Assess the situation at sea and on the shore (fate and behaviour)
- Develop Incident Action Plan to achieve strategic objectives
- Manages information associated with response operations by
    - establishing and maintaining a situation status display *(i.e. Information Centre)*
    - collecting and preserving documentation
- Monitors & evaluates the response operations

Roles	In charge
Head of National Evaluation/ Planning section	**Representative of Ministry in charge of Environment**
Trajectory and behaviour (Oil & HNS) sub-section	**Coast Guard / IMP (with assistance of Oil industry)**
Oiled Shoreline assessment Sub-Section	**Representative of Ministry of Interior (Civil Protection)**
Risk for Health (oil/ HNS) sub-section	**Representative of Ministry in charge of Public Health (General Directorate for Health) – assistance of ARFA**
Risk for the the Environment and Sensitive Areas sub-section	**General Direction of Environment (DGA) (with assistance of research institutes and NGO's as needed)**
Risk for Activities sub-section	**Representative of Ministry in charge of Fisheries and Representative of Ministry in charge of Tourism**
Oiled wildlife management sub-section	**Representative of Ministry in charge of Environment - DGA (with support of INIDA)**
Waste management Planning sub-section	**Representative of Ministry in charge of Environment - DGA (with support of Municipalities)**
Environmental monitoring & post monitoring sub-section	**Representative of Ministry in charge of Environment - DGA**

National Operations Section

Responsibilities:

- Coordinates the response and source control operations at sea (accordingly to Incident Action Plan), and managed on site by the OSC
- supports the shore response operations on the islands
- Assistance to the Evaluation/ Planning Section

Roles	In charge
Head of National Operations section	**Representative of the Ministry in charge of Maritime Transport (IMP)**
Aerial observation sub-section	**Rep. Of the Coast Guard (Liaison officer)**
At Sea operations sub-section	**Rep. Of the Coast Guard (Liaison officer) with ENAPOR**
Land/ Shore operations sub-section	**Rep. Of the Civil Protection (Liaison officer)**
Waste management operations sub-section	**Rep. Of the Civil Protection (Liaison officer) with support of Municipalities**
Safety / Security sub-section	**Rep of National Police**
Salvage / Rescue sub-section	**IMP (with the support of Coast Guard)**

The **On-Scene Commander** is responsible for managing response operations at the scene with the On-Scene Response team

- Communications and Documentation
- Task leaders
- Staging area manager and logistics support
- Safety officer etc.

Aerial observation On-Scene-Commander	**Coast Guard**
At Sea On-Scene-Commander	**Coast Guard / Capitaineries**

National Logistics Section

Responsibilities:

- Supports response operations by procuring the personnel, equipment and supplies needed to carry out the operations
- Arranges for the services necessary to sustain response operations, including food, water, housing, clothing, transportation, security, fuel, spare parts, and anything else needed to keep people and equipment working in a safe and productive fashion.
- Also monitors the arrival, departure, allocation of resources.

Roles	In charge
Head of National Logistics Section	**Representative of Civil Protection**
Personnel management sub-section	**Representative of IMP**
"At Sea" Provision and Transport of equipment and Supplies (inc. monitoring of arrival, allocation, departure) sub-section	**Representative of IMP**
"On Shore" Provision and Transport of equipment and Supplies (inc. monitoring of arrival, allocation, departure) sub-section	**Representative of Civil Protection**
Health and Medical Assistance sub-section	**Representative of Health Department (assisted by RedCross)**
Communication equipment sub-section	**Representative of Civil Protection (and IMP and Civil Aviation)**
External assistance management sub-section	**Representative of IMP (with support of Civil Aviation)**
Customs Clearance sub-section	**Representative of the Customs**
Immigration Clearance sub-section	**Representative of the National Police**

National Finance Section

Responsibilities:

- Ensures the financial and administrative management associated with response operations
    - Monitoring and documentation of all costs
    - Accountancy of operations
- Prepares and manages reimbursement and claims (post-spill)
    - compilation of documentation needed to support requests for reimbursement from insurance carriers,
    - receipt and processing of third party claims.
- Also responsible for attending to all human resources issues that arise during the conduct of emergency response operations
- Provides a financial summary of the incident.

Roles	In charge
Head of National Finance Section	**Representative of the Ministry in charge of Transport**
Release of funds and Procurement / Expense Tracking sub-section	**Representative of the Ministry in charge of Finance**
Claims management sub-section	**Representative of IMP**

Appendix 5. Matrix for the assessment of the level of preparedness for accidental marine pollution response

- **For an element in place** : indicate **DONE**
- **For an element in Progress** : indicate **IP**
- **For an element to be implemented (or inprogress),** identify the level of priority of the elements
    - 1 (Low priority) ; **2 (medium priority)** ; **3 (high priority)**

Name of country: Cape Verde		
1. Legislation : To adapt the legal and institutional national framework and ensure sustainability of the NCP		**Status**
Ratification	Ratification of the Abidjan Convention and Emergency Protocol	**IP**
	Ratification of the OPRC 90 Convention	**Done**
	Ratification of the Protocol OPRC-HNS 2000	**IP/ 1**
	Ratification of the Convention CLC 92	**Done**
	Ratification of the Convention Fund 92	**Done**
	Ratification of the Convention Bunker 2001	**IP/ 3**
	Ratification of the Convention HNS 96	**IP/ 1**
Implementa-tion	Implementation of the Nairobi Convention and Emergency Protocol	**IP/ 3**
	Implementation of the Convention OPRC 90	**IP/ 3**
	Implementation of the Protocol OPRC-HNS 2000	**IP/ 1**
	Implementation of the Convention CLC 92	**IP/ 3**
	Implementation of the Convention Fund 92	**IP/ 3**
	Implementation of the Convention Bunker 2001	**IP/ 3**
	Implementation of the Convention HNS 96 (not yet in force)	**IP/ 1**
Approval	Approval of the National Contingency Plan	**3**
	Approval of the National Policy for the Use of Dispersant	**3**
	Approval of the National policy for waste management	**3**
Others ?...		

2. National Marine Contingency Plan : To have a standardised oil spill preparedness and response system in place		**Status OIL**	**Status HNS**
Management system	Setup of a national working group/ coordinator for the development of the National Contingency Plan	**Done**	**IP/ 1**
	Development of the National Contingency Plan	**Done**	**IP/ 1**
	Crisis management system	**IP/ 3**	**IP/ 1**
	Reporting & Alerting systems	**IP/ 3**	**IP/ 1**
	Dedicated crisis management communication system	**IP/ 3**	**IP/ 1**
	Information of the Public / Public Relation Officer / Communication advisor	**IP/ 3**	
Policy	National Dispersant use policy: (List of Approved Dispersants; Pre-approved area of use; Conditions of Use)	**IP/ 3**	
	National policy for waste management	**IP/ 3**	
	Policy for in-situ burning	**IP/ 3**	
Risk assessment and sensitivity mapping	Coastal sensitivity maps and identification of most sensitive sites for OIL and HNS pollution	**IP/ 3**	**IP/ 1**
	Trajectory Modelling (surface for OIL and sub-surface for dispersed OIL and HNS)	**3**	
	Atmospheric dispersion models		**1**
	Risk Assessment (probability/ consequence)	**3**	
	Oil Spill and HNS incident risk and scenarios	**3**	
Coordination with local plans	Integration of local contingency plan (port, terminals)	**3**	
	Integration of oil industry contingency plan	**3**	
Finance	Compensation system and claims management system	**2**	
	Financial commitment/ Compensation claims / Claims follow-up	**2**	
	Procedures for samples and evidence	**2**	
Others ?...			
3. Designation of authority : To ensure that all requested authorities (in regard of national/ international laws and NOSCP) are officially designated.		**Status OIL**	**Status HNS**
Designation	Competent National Authority with responsibility for marine pollution preparedness and response officially designated	**Done**	**1**
	National operational contact point(s) responsible for the reception and transmission of marine pollution reports	**Done**	**1**
	National organisation(s) in charge of oil pollution preparedness and response	**Done**	**1**
	Authority which is entitled to act on behalf of the State to request or provide assistance	**Done**	**1**
Others ?...			

4. Trans-boundary and mutual assistance agreement : To ensure that cooperation and assistance at bi-lateral/ regional level is developed.		**Status OIL**	**Status HNS**
Agreements	Regional agreement	**IP/ 2**	**1**
	Sub-regional agreement	**2**	**1**
	Bilateral agreements	**2**	**1**
	Government industry mutual assistance and equipment exchanges	**2**	**1**
Access to external assistance	Mechanisms to access and mobilize external (sub-)regional assistance in place and tested?	**2**	**1**
	Mechanisms to access and mobilize external international assistance in place and tested?	**2**	
	Mechanisms of management of the assistance in place? - Customs and Immigration procedures? - Logistics support for storage, transport and deployment of assistance?	**3**	
Others ?...			
5. Training and exercise developed by the country: To develop the expertise and competence in the country.		**Status OIL**	**Status HNS**
Sustainability	Policy to sustain the implementation of the NCP?	**2**	**2**
	Policy for the re-enforcement of the national response capabilities in place?	**2**	
	Policy for the regular audit and update of the NCP?	**2**	
		3	
Training	Policy for the training of the nationals in place? Yearly training program for all personnel involved at all level? (consistent with international standards and customized to the needs of the country)	**2**	
	Introductory level	**2**	
	OPRC level 1	**2**	
	OPRC level 2 / OPRC-HNS Supervisor level	**2**	
	OPRC level 3 / OPRC-HNS Manager level	**2**	
	Train the trainers	**2**	
	Other seminar and workshop developed by the country	**1**	
Exercise	National exercise program, including local operators and the oil industry	**3**	
	Crisis management exercise (Table top)	**3**	
	Notification exercise	**3**	
	Mobilisation exercise	**1**	

	Government deployment exercise	**1**	
	Industry deployment exercise	**1**	
	Joint Industry government exercise	**1**	
Others ?...			
6. National resources : To ensure that sufficient and appropriate equipment is available in the country to: - Deal with oil spill incidents up to a certain level (i.e. minimum Tier 1 equipment) - Enable prompt alerting procedures as well as operational communications (i.e. communications equipment and infrastructure)		**Status OIL**	**Status HNS**
Response equipment	Storage facilities and maintenance of equipment	**2**	**1**
	OIL spill and HNS incident response equipment acquisition	**3**	
	Communication equipment acquisition	**1**	
	Equipment Inventories	**3**	
Logistical support	Organisation of the logistical support in place for offshore and onshore operations? Realistic? Rapid to mobilize?	**2**	
	System for the sharing of public and private response resources in place??	**2**	
Centre	Response Centre (Communications, Meeting Rooms)	**3**	
	Training centre (documentation – resource centre for oil spill and HNS incident response and preparedness)	**2**	
Others ?...			

Appendix 6. National Action Plan for the improvement of the oil spill response capabilities of the country

The National Action Plan (in the table below) was developed by the participants, based on the high priority actions identified in the Matrix for the assessment of the level of preparedness for accidental marine pollution response (see section above).

N°	High Priority Actions	Challenges/ blockages	Process(es) to overcome challenges and blockages	Person / authority / organisation in charge of implementing	Estimated time line for completion
1	RATIFICATION BUNKERING CONV.2001	PARLIAMENT AGENDA INCLUSION	PROPOSAL TO MINISTER	IMP	FIRST TRIM 2011
2	RATIFICATION OF ABIDJAN CONV. AND PROT.	PARLIAMENT AGENDA INCLUSION	PROPOSAL TO MINISTER	IMP	FIRST RIM 2011
3	IMPLEMENTATION OF THE ABIDJAN CONVENTION AND EMERGENCY PROTOCOL, OPRC 90, BUNKER CONV. CLC 92, FUND 92	RATIFICATION	PARLAMINET	IMP	LAST TRIM 2011
4	APPROVAL OF OPNCP, NATIONAL DISPERSANTS USE POLICY AND WASTE MANAGEMENT,	LEGAL FRAMEWORK AND FINANCE	NATIONAL WORK GROUP FOR OPNCP	NATIONAL WORKING GROUP, DGA, REPRESNTATIVE OF FINANCE	2010
5	CRISIS MANAGEMENT SYSTEM, REPORTING AND ALERTING	INSTITUTIONAL APPROVAL	PROTOCOL SIGNATURE	NWG	2010

N°	High Priority Actions	Challenges/ blockages	Process(es) to overcome challenges and blockages	Person / authority / organisation in charge of implementing	Estimated time line for completion
6	RISK ASSESSMENT AND SENSITIVITY MAPS	INSTITUTIONAL APPROVAL	NATIONAL WORK GROUP FOR OPNCP	DGA/IMP	2010
7	OPNCP INTEGRATION WITH LOCAL PLANS	LEGAL FRAMEWORK	INSTITUTIONAL APPROVAL	NATIONAL WORK GROUP FOR OPNCP	2010
8	TRAINING AND EXERCICES	LEGAL FRAMEWORK			2011
9	EQUIPMENT INVENTORIS		NATIONAL WORK GROUP FOR OPNCP		2010
10					
11					
12					

Appendix 7. Tactical and strategic maps for Barlavento islands

The maps below were developed by the experts of Cape Verde, during a workshop organized in the framework of the GI WACAF Project, and supported by IMO/ IPIECA.

The maps were developed using a GIS and are currently being updated, and the geographic coverage of the maps extended to cover the Sotavento islands.

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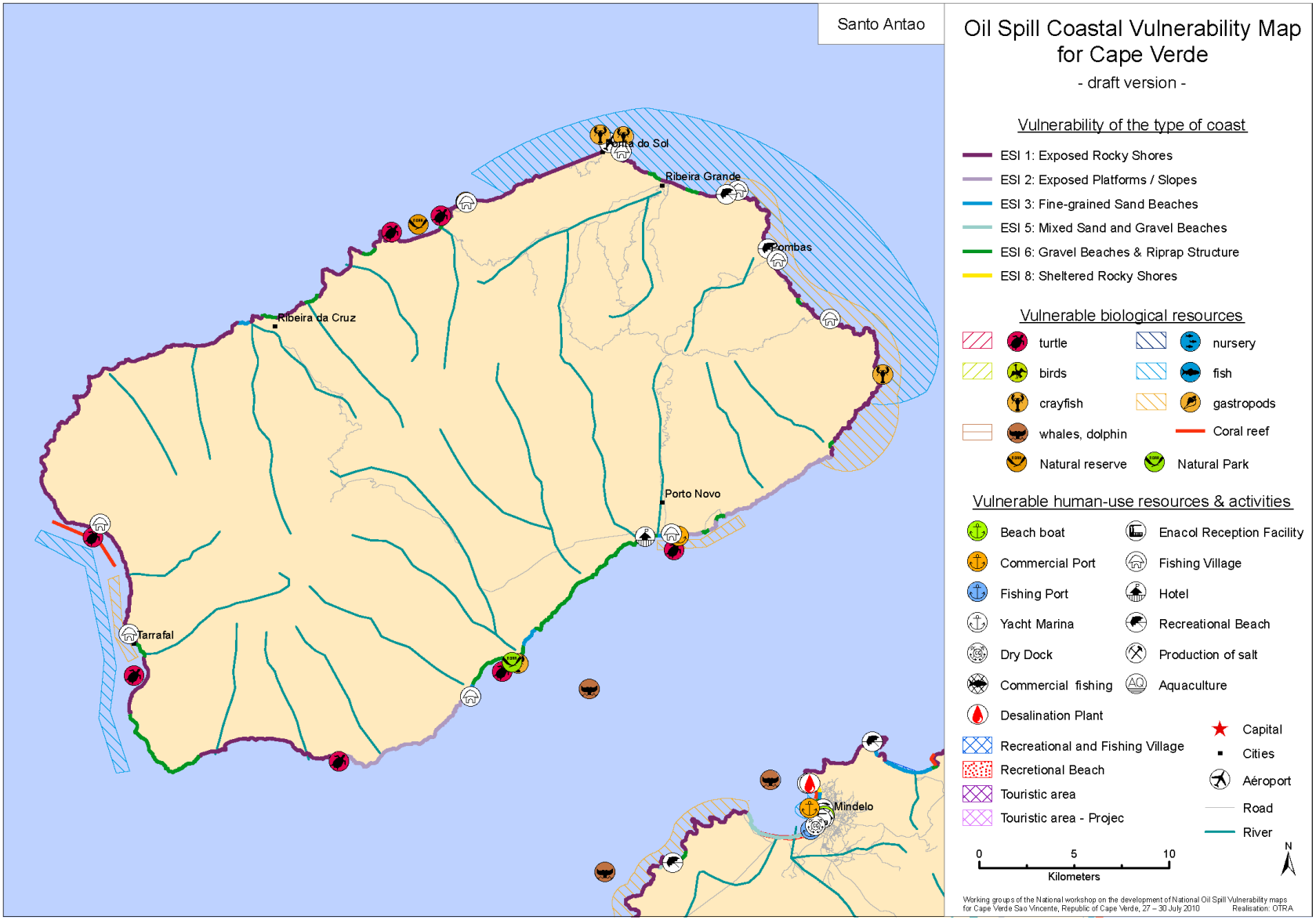
Refer to

IMO/IPIECA, 2010: Report of the National workshop on the development of national Oil Spill Vulnerability maps for Cape Verde - Sao Vincente, Republic of Cape Verde, 27 – 30 July 2010


Santo Antao
Oil Spill Coastal Vulnerability Map for Cape Verde
- draft version -
Vulnerability of the type of coast
ESI 1: Exposed Rocky Shores
ESI 2: Exposed Platforms / Slopes
ESI 3: Fine-grained Sand Beaches
ESI 5: Mixed Sand and Gravel Beaches
ESI 6: Gravel Beaches & Riprap Structure
ESI 8: Sheltered Rocky Shores
Vulnerable biological resources
turtle
nursery
birds
fish
crayfish
gastropods
whales, dolphin
Coral reef
Natural reserve
Natural Park
Vulnerable human-use resources & activities
Beach boat
Enacol Reception Facility
Commercial Port
Fishing Village
Fishing Port
Hotel
Yacht Marina
Recreational Beach
Dry Dock
Production of salt
Commercial fishing
Aquaculture
Desalination Plant
Recreational and Fishing Village
Recretional Beach
Touristic area
Touristic area - Projec
Capital
Cities
Aéroport
Road
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Kilometers
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Working groups of the National workshop on the development of National Oil Spill Vulnerability maps for Cape Verde Sao Vincente, Republic of Cape Verde, 27 – 30 July 2010
Realisation: OTRA
Porto do Sol
Ribeira Grande
Pombas
Ribeira da Cruz
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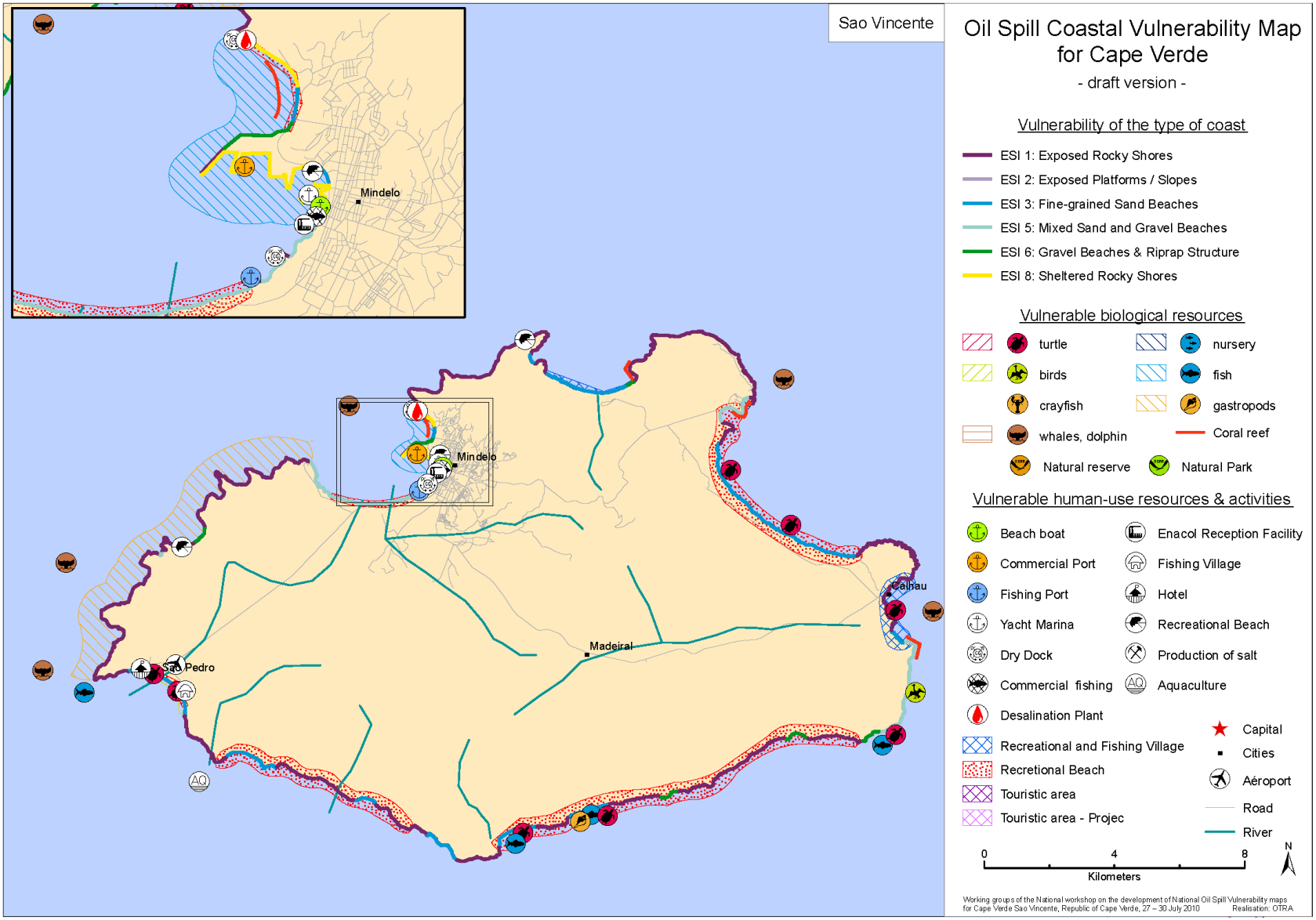
Sao Vincente
Oil Spill Coastal Vulnerability Map for Cape Verde
- draft version -
Vulnerability of the type of coast
ESI 1: Exposed Rocky Shores
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Vulnerable biological resources
turtle
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birds
fish
crayfish
gastropods
whales, dolphin
Coral reef
Natural reserve
Natural Park
Vulnerable human-use resources & activities
Beach boat
Enacol Reception Facility
Commercial Port
Fishing Village
Fishing Port
Hotel
Yacht Marina
Recreational Beach
Dry Dock
Production of salt
Commercial fishing
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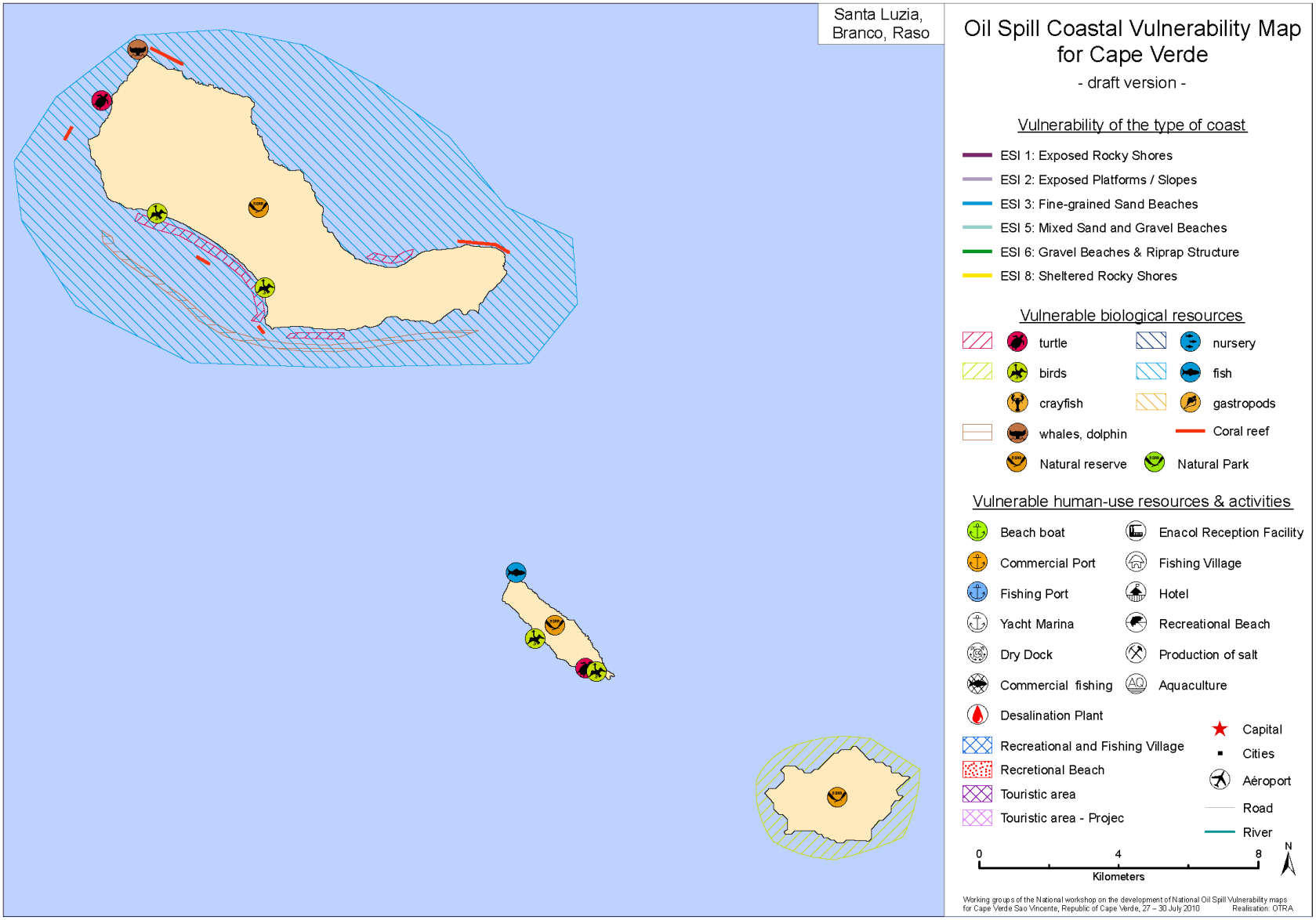
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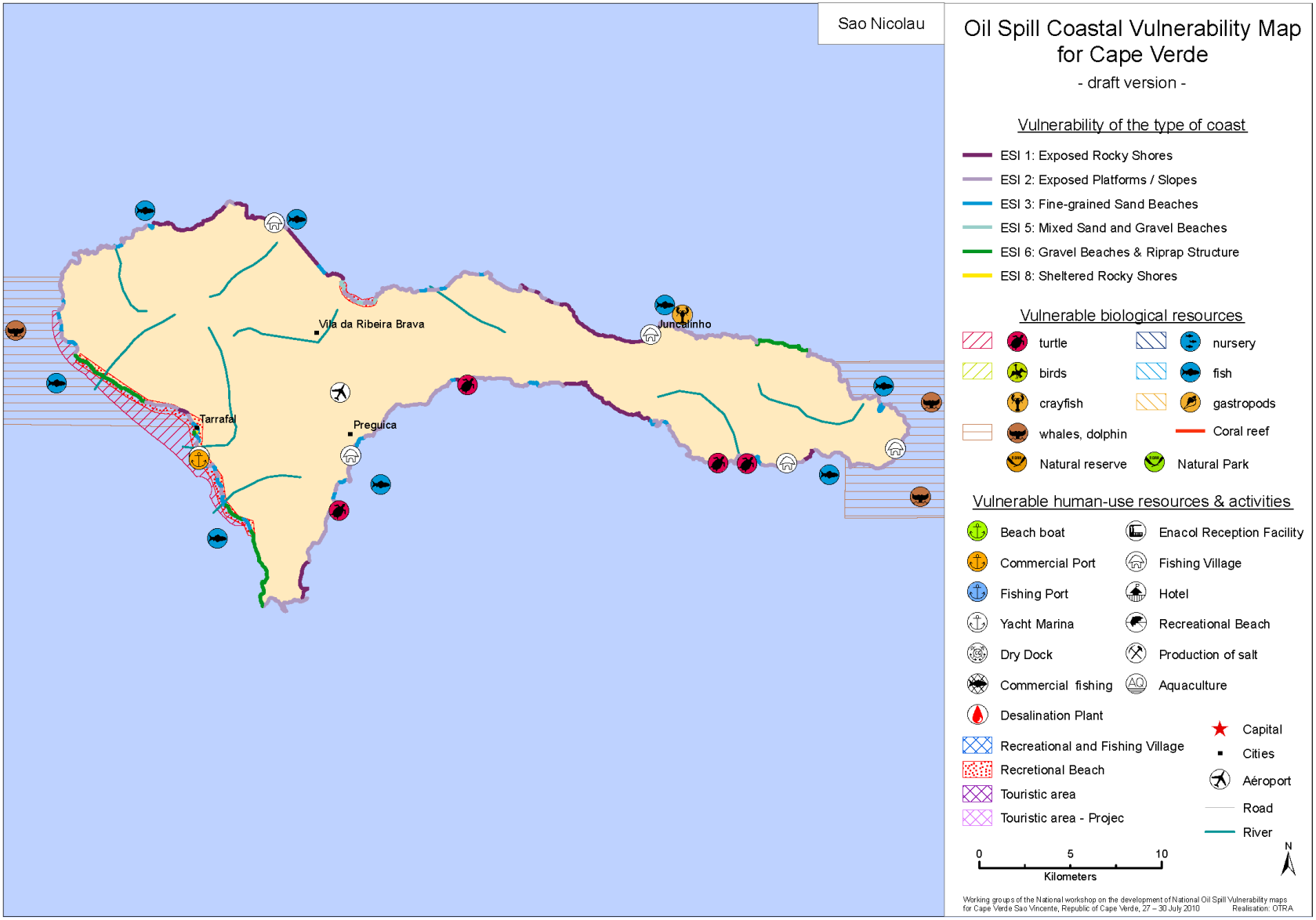
Sao Nicolau
Vila da Ribeira Brava
Juncalinho
Tarrafal
Preguica
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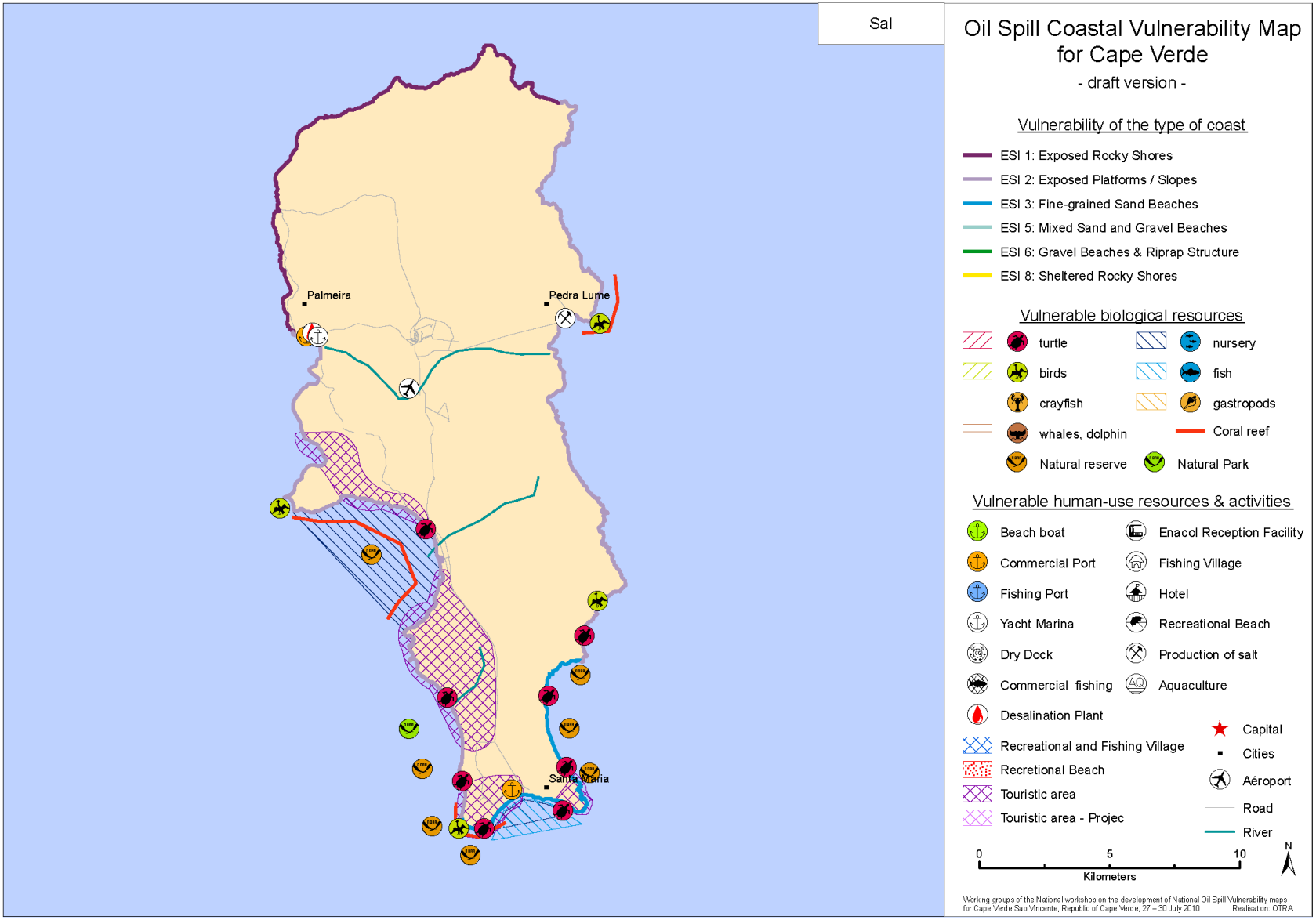
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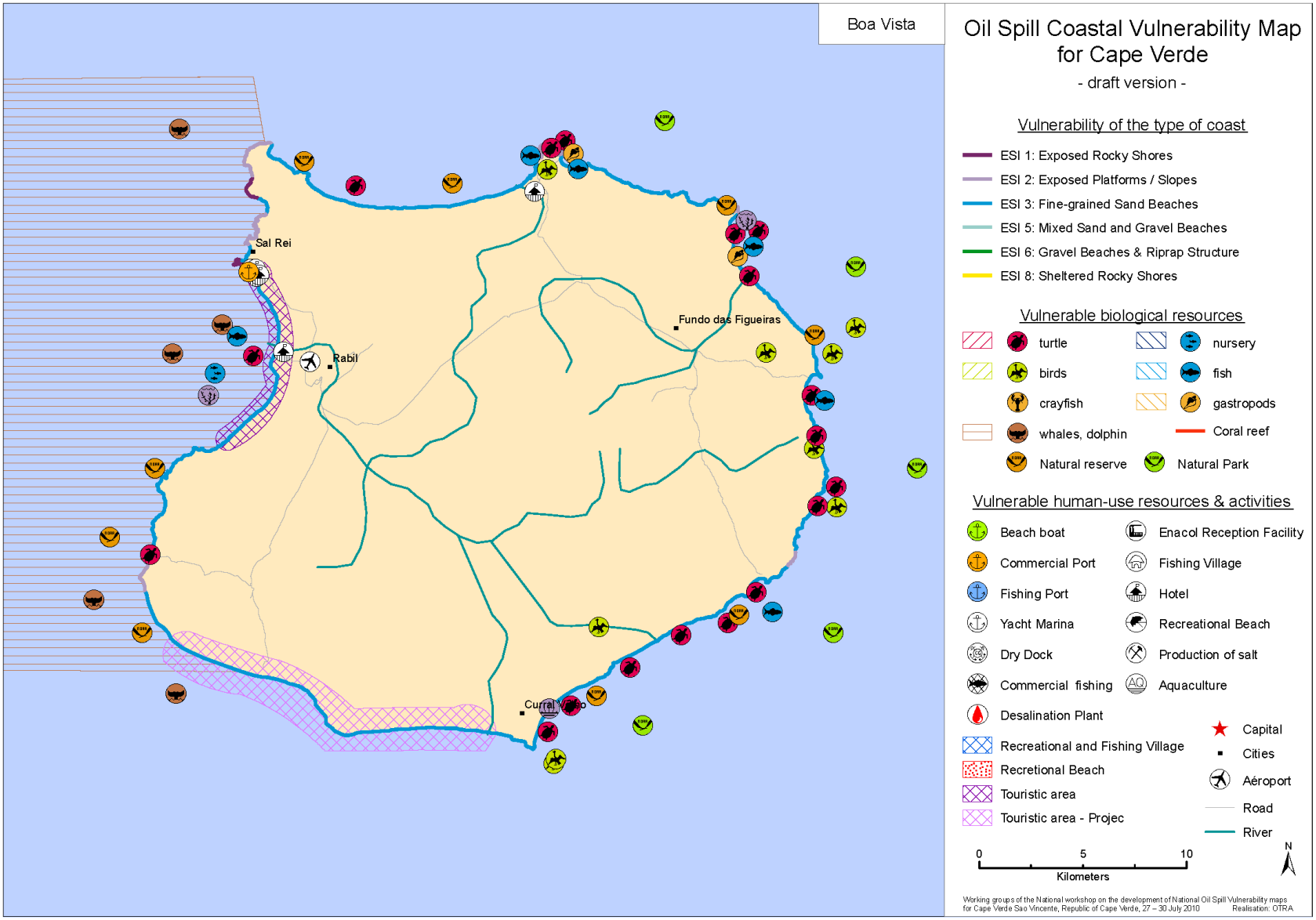
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Rabil
Fundo das Figueiras
Curral Velho
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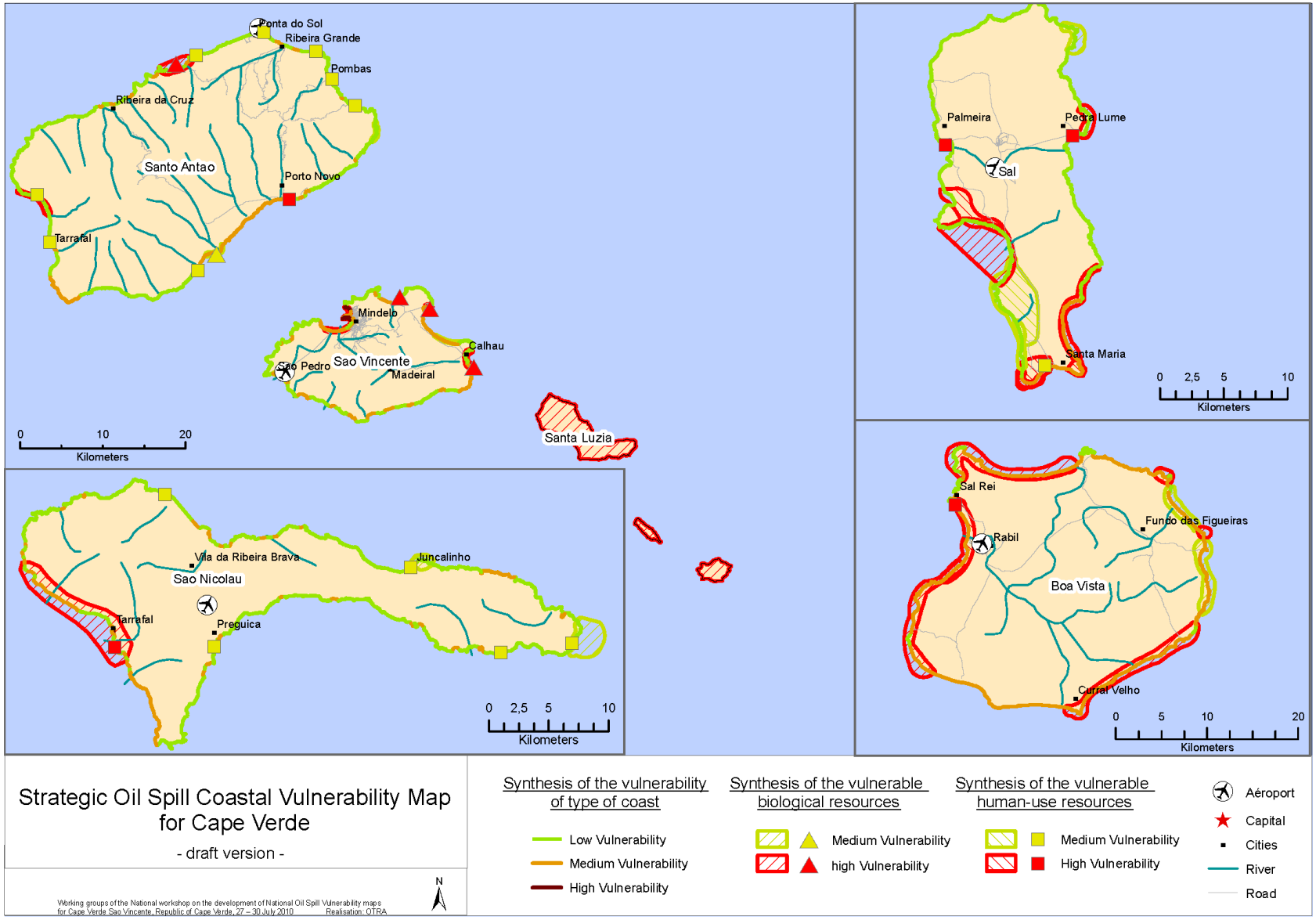
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Juncalinho
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Sal Rei
Fundo das Figueiras
Rabil
Boa Vista
Curral Velho
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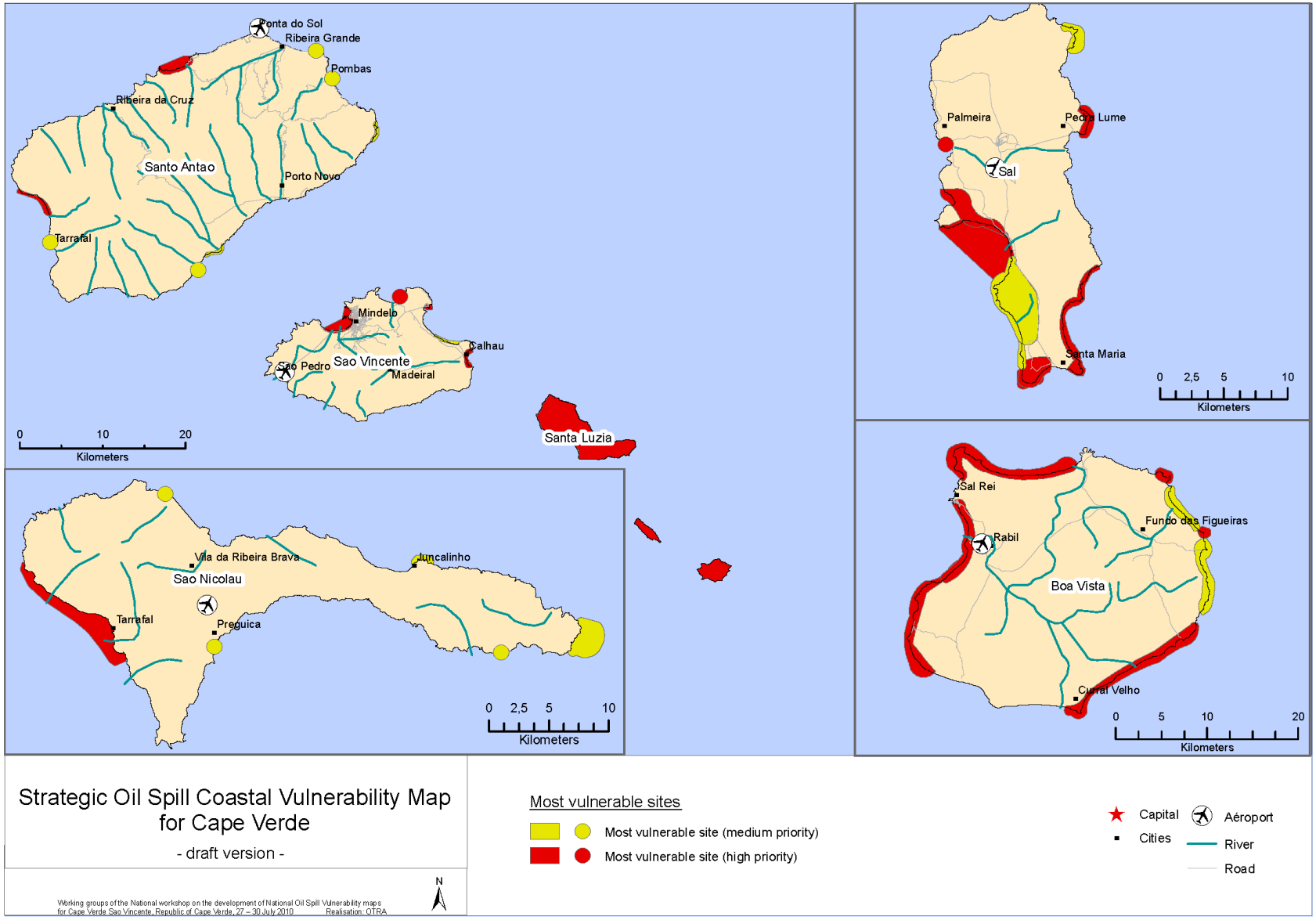
Kilometers
Strategic Oil Spill Coastal Vulnerability Map for Cape Verde
- draft version -
Working groups of the National workshop on the development of National Oil Spill Vulnerability maps for Cape Verde Sao Vincente, Republic of Cape Verde, 27 – 30 July 2010 Realisation: OTRA
N
Synthesis of the vulnerability of type of coast
Low Vulnerability
Medium Vulnerability
High Vulnerability
Synthesis of the vulnerable biological resources
Medium Vulnerability
high Vulnerability
Synthesis of the vulnerable human-use resources
Medium Vulnerability
High Vulnerability
Aéroport
Capital
Cities
River
Road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Kilometers
Strategic Oil Spill Coastal Vulnerability Map for Cape Verde
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Realisation: OTRA
N
Most vulnerable sites
Most vulnerable site (medium priority)
Most vulnerable site (high priority)
Capital
Cities
Aéroport
River
Road

Appendix 8. Draft National Policy for the Use of Dispersant

Draft National Policy

for the use of dispersant

in CAPE VERDE waters

Document from the workshop held in August 2010 in Sao-Vicente In the framework of the GI WACAF

(Source of initial draft document:

M. François MERLIN, Cedre, France, www.cedre.fr)

Note.

All inputs of the participants are written in blue.

All pending issues are written in blue and highlighted in yellow.

CONTENT

9 Precautions and operational recommendations

9-1 Drills

9-2 Training

9-3 Protection of persons and equipment

ANNEX 1

General considerations on the use of dispersants in or close different resources / habitats

ANNEX 2

List of items to be taken into consideration when managing a dispersion operation *(to be completed)*

ANNEX 3

Reference documents and useful addresses and contacts

Draft National Policy

for the use of dispersant

in Cape Verde waters

1- Preamble

Chemical dispersion is one of the response options to combat oil spillages.

This technique is designed for the offshore situations and not for on shoreline situations.

This technique has clear operational advantages however it requests some precautions; these points are developed in this document.

This document is to be used in conjunction with the NOSCP

2 – Objectives of chemical dispersion

Chemical dispersion aims at minimizing the impact of oil pollution

The use of dispersants at sea aims at reducing the amount of oil which would reach the coast, or environmentally or economically sensitive areas

The use of dispersant generates the scattering of the oil as dispersed form into the marine environment which is favourable to degradation processes (particularly biodegradation)

3- The chemical dispersion process

Applied onto oil slicks, dispersants tend to reduce the interfacial tension between the water and the oil and allow the natural mixing generated by the waves to split the oil into a myriad of tiny droplets suspended in the water column: the oil is dispersed. Then turbulences and streams disseminate this dispersed oil into the marine environment

By removing the oil from the surface it helps to stop the wind effect on the oil slick's movement that may otherwise push the surface slick towards sensitive areas (often the shoreline).

Dispersants also prevent coalescence of oil droplets and reformation of oil slick

4- Role of the dispersant response option in the combating strategy

At sea there are different response options: Recovery possibly associated with Confining, Chemical Dispersion, In Situ Burning (applicable mainly in Arctic region), Monitor and Wait for action –(ref: IMO manual).

In the decision making process, each of these options considered alone and/or combined should be examined in a comparative way.

Chemical dispersion is generally not compatible with the other responses options (especially the confining and recovery); however, in the same case of pollution, the use of chemical dispersion simultaneously with other response options can be considered on different locations.

5- Advantages and disadvantages

5-1 Advantages

Dispersant can be generally used in more difficult situations (wind and sea state) than the other active response options, (especially containment and recovery)

Dispersion does not produce wastes to be disposed.

When dispersed the pollutant is no longer drifted by the wind, and then follows the stream; therefore, when carried out upwind sensitive areas, dispersion contributes to reduce the amount of pollutant which would drift towards these locations.

Dispersants help in reducing the contamination (oiling) of some resources sensitive to the floating oil (surface slick), e.g. mammals and birds

Chemical dispersion enhances the (bio) degradation of the oil in the marine environment.

5-2 Disadvantages

Dispersant are not efficient towards all oil pollutants, especially those which presents a high viscosity (cf 6-1-1).

Dispersion increases temporary and locally the toxicity of the oil, as the dispersed oil is more bioavailable for living organisms living in the water column.

Dispersion is not applicable everywhere, particularly where the possibility of dilution and dissemination is reduced (cf. 6-1-2).

When initially efficient, chemical dispersion is applicable only for the first hours/days of the operation, before the oil become not dispersible (cf 6-1-1)..

On significant pollution, chemical dispersion is not applicable in too calm sea state (sea state 0, 1 possibly 2 according to the situation).

Pollutant is not removed but only dispersed

6 DISPERSANT FORMULATIONS AND TYPES

Oil spill dispersants are composed of two main groups of components:

- Surface-active agents (surfactants)
- Solvents

Nowadays, there are different types of dispersants

Dispersants of 2nd generation (conventional dispersants):

Products with a low content of surfactant; they are not very effective

In the UK classification *(LR 448 specification, 1983)* these products are classified as "type 1 dispersant"

Dispersants of 3rd generation (concentrate dispersants)

Products with an high content of surfactant; they are much more effective than the 2nd generation. They can be applied neat or pre-diluted into sea water but the neat application should be recommended as more effective

In the UK classification *(LR 448 specification, 1983)* these products are classified as "type 2 dispersant" when approved to be applied pre-diluted and "type 3 dispersant" when approved to be applied neat.

Dispersant type (IMO)	UK classification	Application	Typical dispersant oil dosage
2nd generation Conventionals	Type 1	Neat (pure)	1:3 to 1:1
3rd generation Concentrates	Type 2	Pre-diluted into sea water	1:20 *(i.e. 1:5 dispersant+water – oil)*
	Type 3 *("self mixing dispersant")*	Neat (pure)	1:20

7- Recommendations for the use of dispersants

7-1 Recommendation for the decision making on the use of dispersants

Taking into account that dispersants can be efficient only during the beginning of the oil release, it is of utmost importance that the decision to use or not to use dispersant can be taken very quickly, without loss of time in assessment and discussions.

The speed of decision depends on a close preparation in which decision criteria will have been first studied from the physico-chemical, environmental and logistic viewpoints.

7-1-1 Oil dispersible and not dispersible

The effectiveness of chemical dispersion depends on the nature of the pollutant; the viscosity of the pollutant at ambient temperature constitutes one of the most important factors.

Chemical dispersion is usually possible for the pollutants not exceeding a viscosity of 5 000 cSt; (with some exceptions, as example, in the case of hydrocarbons containing strong paraffin contents).

Beyond 5000 cSt the chances of success decrease quickly; dispersion often is not adapted for the pollutants having a viscosity of 10.000 cSt and more.

The viscosity of an oil pollutant increases with the time spent in the environment (since the release), under the effect of ageing (evaporation, emulsification), its dispersibility decreases with time: in general, an oil pollutant is dispersible only during a certain time - we speak about “window opportunity for dispersion”.

To have an idea of the viscosity of an oil pollutant, and/or its “window opportunity for dispersion”, certain data-processing models designed to estimate the evolution of a pollutant according to its nature and the environmental conditions can be used (model of ageing: ADIOS freeware from US EPA).

When the pollutant has a significant viscosity, the more agitated is the environment (state of sea), the higher are the chances for dispersion

On the other hand, in terms of environmental concerns, non persistent oils -refined products, (e.g. petrol, diesel oil, kerosene….) do not require the application of dispersant as they are expected to evaporate and self disperse when released at sea. More, these light products contain toxic light ends which would generate a greater impact if dispersed in the water column.

On these products the chemical dispersion could be considered only for safety reasons (reduction of the fire or explosion hazard).

Generally accepted viscosity limits	
Light refined product (petrol, kerosene, diesel oil…)	no chemical dispersion
Pollutant viscosity < 500 cSt	Dispersion is generally easy with a concentrated dispersant, applied neat or prediluted in seawater
500 cSt < Pollutant viscosity < 5 000 cSt	Dispersion is usually possible with a concentrated dispersant applied neat
5 000 cSt < Pollutant viscosity < 10 000 cSt	Uncertainty as to the result: dispersion is sometimes possible with a concentrate applied neat but you had better check on part of the slick whether the dispersant is effective before extending the treatment to all of the slick
Viscosity > 10 000 cSt	Dispersion is generally impossible

Reminder in order to prepare the dispersion response option:

For oils regularly imported in Cape Verde harbours specific studies should be conducted on these oils in order to assess the windows of opportunity for dispersion (time delay during which the oil remains dispersible); (1- weathering study using modelling (ADIOS); 2- completion of lab tests to asses oil dispersibility)

Results from these studies are given in the document XXX in form of tables giving the oil viscosity and the window of opportunity of each studied oil according different environmental conditions (temperature, wind)- – to be done by IMP in collaboration with the oil industries.

7-1-2 Locations where the chemical dispersion can be undertaken

The toxicity of the dispersed oil can affect marine fauna and flora, hence chemical dispersion is not applicable everywhere.

Chemical dispersion is not generally adapted on or in the immediate vicinity of the ecologically vulnerable or sensitive areas and in areas where the possibilities of renewal and mixing of water do not offer conditions for rapid dilution of the dispersed oil.

The definition of the areas where chemical dispersion can be reasonably undertaken is a relatively complex and long process since it must take into account different local environmental parameters and data (current, biological diversity…). Such a task would be hardly carried out during an incident. Areas where chemical dispersion can be reasonably undertaken from an environment point of view should be pre-established and geo-localised: geographical limits for the use of the dispersants.

The choice of these areas should be based on studies of scenarios which aim at comparing the evolutions and the environmental and socio-economic impacts of the pollutant of dispersed and non-dispersed oil (reference to the concept of “NEBA” Net environmental benefit analysis – IMO/UNEP Guidelines). These studies of scenarios would take into account all local specificities: type of ecological and socio-economic resources, -national parks and halieutics resources-, currents, seasons - climate variations and migrations of the marine species of interest (a summary of these issues is given in the table below).

The geographical limits have been defined for increasing spill scenarios, corresponding to pollution situation of Tiers 1, Tiers 2 and Tiers 3

As a general regulation, dispersion operations can be achieved in the following limits:

- Offshore the 20 m isobaths depth and at least at 1 km distance of the shore.
- On a case by case basis, IMP may decide to use dispersant for large pollution within the above limits.

The charts of the limits are integrated in the contingency plan. They assist persons in charge of the response to decide without delay to disperse or not, (to decide as long as the pollutant is still dispersible

However, a commission led by IMP (with DGA and ARFA) will examine and study, when necessary, (on areas of special interest such as harbour entrance (risky area), national

marine park (high environmental interest), etc.…) modifications of these general limits at local scale to take into account local specificities (environmental and socio-economic). This commission can take advantage of consulting the competent Ministries, and Non Governmental Organisations dealing with marine conservation, scientific experts in marine environment.

The local specific regulations to the use of dispersants decided by the commission are presented (or described) as charts in the Annex XXXXXXXX (to be created).

These charts are regularly updated by the commission led by IMP. This commission is also in charge of defining and studying the scenarios.

Note: considering harbour areas, the possibility of using dispersant should be examined on realistic scenarios in terms of quantity of oil to be involved in expected spill incidents, the main locations where the risk for incident is the most important, the prevailing weather conditions, the tidal stream and the surface agitation. These scenario studies will aim at comparing realistically (according to the available equipment) the possibilities for containment and recovery, chemical dispersion and letting oil to come ashore for shoreline cleanup. For each of these options the environmental damage and the associated cost will be considered and compared in order to determine the most appropriate option.

Summary: basic principles to set environmental considerations to the use of dispersant particularly in coastal waters

As a first approach, the following basic principles can be considered:

- 1) Consider the use of dispersant in open sea / offshore / ahead sensitive resources, to avoid oil to reach the shoreline or possibly sensitive items (where water quality need to be preserved)

- 2) Generaly spreaking no use of dispersant on or in the immediate vicinity of sensitive items

- 3) On coastal areas where several sensitive items are of concern, NEBA based on realistic scenarios is needed.

- 4) When NEBA needed,
  - Local sensitive items should be listed and their possible vulnerabilities assessed
  - Think the NEBA comparison in terms of vulnerability rather than sensibility (vulnerability=sensitivity and restoration time)
  - If conflicting conclusions:
    - Preserved the habitat before the species
    - Preserved the reproduction possibilities rather the young stages (however young stages are more sensitive than adult stages)

7-1-3 Logistics for dispersant application

Logistics required for the application of dispersant include the spraying systems, the products, and other related items.

These products and means required are listed in the contingency plan (location, quantities, characteristics, compatibility, availability, operational limit conditions and mobilisation and deployment timeframe) such as:

- operational stocks of dispersant,
- shipboard spraying systems,
- vessel on which spraying equipment can be used,
- vessel-equipped with spraying systems
- aerial spraying aircrafts
- facilities from where means would be deployed (airports, ports…).

and eventually:

- aerial surveillance aircrafts aiming at following, and guiding the operations,
- communication means,
- transport means,
- etc….

The plan must include information (characteristic, performances, requirements, and conditions of availability .....) related to the means which are likely to be mobilized.

- at national level public and private means,
- at regional level means available through bilateral or regional agreement(s) with neighbour countries,
- at international level means available through international agreements or through contracts with international cooperative companies.

The plan provides details on the persons in charge of the various means (contact person).

IMP in cooperation with the stakeholders (private companies, ports….) is in charge of keeping the listing of equipment and related logistics up to date.

7-1-4 The decision making process

The decision at the time of the accident is led through 3 questions:

- Q1) is dispersion a priori possible or not from a physicochemical point of view? : is the viscosity of the pollutant compatible with dispersion? This question refers to the recommendations put forth in § 6-1-1.

- Q2) is dispersion acceptable from an environmental point of view? Is the pollution located in an area where a priori dispersion is possible? This question refers to the recommendation mentioned in § 6-1-2.

- Q3) is dispersion feasible from a logistic point of view? Are the available means (product and spraying equipment) a priori available and sufficiently mobile to conduct the operation within the time limit (period when chemical dispersion remains effective "window of opportunity for dispersion")? This question refers to the recommendation mentioned in § 6-1-3

The decision is taken by IMP by delegation of the Ministry in charge of Transport.

7-2 Selection of dispersant products

The dispersant used in the area of competence of Cape Verde must exclusively products accepted (approved) by the authorities.

Note: such acceptation (or approval) does not prevent a dispersant to comply with the general regulation on chemicals.

The Cape Verde authorities refer to the list of dispersant approved in four countries (France, United States of America and Australia) and, on a case by case basis, in the other countries of the European Union, (as long as these products have been tested for efficiency, biodegradability and toxicity).

For efficiency prospective only concentrated dispersants are recommended for use in the Republic of Cape Verde waters.

For safety reasons dispersant products flash point should be above 60°C.

The products should be documented through manufacturer's recommendations.

Dispersants should be guarantee by its producer to be stable and to keep its properties for 5 years minimum when stored in proper conditions

The products approved are registered on a list of approved products constantly revised. This list is available on the web site of IMP and DGA.

In the event of pollution concerning neighbouring countries, the decisions related to the use and to the application of dispersant must take into account the existence of bilateral (or regional) agreements with the neighbouring country(ies). These agreements refer to: the dispersants approved by the related country(ies), the application means which can be polled, and the integration in the Cape Verde response system of response capacities brought from the related country(ies).

As a principle, in case of joint operation at the regional level, dispersants approved in the partner countries will be accepted if they have been tested for effectiveness and toxicity.

In the event of major pollution, requiring international means (Tier 3), dispersants can then be products which will have been examined at least from the point of view of their effectiveness and their toxicity and which are accepted in the countries listed above.

The approval procedure and its possible revision is under the responsibility of a commission led by IMP and the Ministry of Environment.

7-3 Choice of application equipment

The equipment used for the application of the dispersants is specialised materials or materials converted for this purpose (e.g. agricultural plane equipped with proper nozzles or mobile spraying equipment to be set in (or under) transports planes).

The equipment ensures a regular spraying and distribution of the dispersant (diameter of the drops, rate of application).

The equipment is regularly maintained (individually checked once a year at the warehouse). and is tested periodically through exercises (cf 8.1).

The choice of the application equipment should be approved by IMP with technical advice of specialised administrations such as Civil Aviation (for aircraft).

7-4 Logistics related to dispersion application

A dispersant operation requires a complete logistics; in addition to the spraying equipment, it is necessary to envisage the means carrying this equipment (ships, helicopters and planes), the required consumable (in particular fuel), adapted facilities (port, airport and runways) as well as other related provisions (ex. means of transport of the material or products) (see Annex 2).

Aircrafts can be in Cape Verde or coming from external countries; they can belong to public sector or to private companies.

In case of aircraft owned by external private or public body, contracts should be set to ensure the availability of the equipment at the time of the incident (e.g. availability within 6 hours..)

More, for these aircrafts, the different authorisations linked to the Civil Aviation regulations should be prepared in advance in order to allow a fast deployment of the aircrafts at the time of the incident.

Reciprocal compatibilities of the equipment and materials deployed must be checked in order to guarantee the reliability of the whole logistic chain (e.g: compatibility of the spraying systems with the ships, compatibility of planes or helicopters with the local facilities…).

Operational stocks of dispersant:

In order to ensure prompt dispersion application, dispersant stockpiles must be set up. These stockpiles should be quickly deployed or localised near to the spraying systems. They must be also dimensioned to enable a day of dispersion with the spraying system available at the location. Regarding the vessel-mounted spraying systems, stockpiles should be located preferentially in the ports where the vessels are located. Concerning the aerial spraying aircrafts, stockpiles should preferably be available at the airport.

The date of manufacture of the product must be given by the supplier.

The dispersant must be stored according to the manufacturer's instructions and their material safety data sheet (MSDS).

The batches of dispersant of the operational stockpiles are checked periodically (physicochemical parameters, effectiveness….) to check their good conservation. (Periodic checking plan: 5 years after purchase if the product has been kept in its original tank/drum, and further every 2 years)

Disposal of unusable dispersants is the responsibility of the dispersant owner The dispersant must be disposed off in environmentally acceptable norms akin to any chemical substances which are disposed in accordance to the environment regulation that are in force (tracability).

An inventory of stockpiles s of dispersant and spraying system should be kept up-to-date. This inventory must takes into account stockpiles of the countries or entities with which bilateral agreements or agreements of assistance exist as well as the industry capacities.

The public stockpiles of dispersant is under the responsibility of IMP.

Considering the aerial application equipment, IMP will carry out an inventory of the available resources at a regional level (e.g. existing spraying aircraft)

Considering application equipment taking into account that private resources will be needed contracts must be set with bodies owning this equipment.

IMP is in charge of establishing these contracts

At national level IMP keeps updated the inventory of equipment and products available from public and private sector.

8 Application procedures

8-1 On location dispersion efficiency test and dispersion monitoring

The weathering degree of the oil is generally unknown; therefore the dispersibility of the pollutant remains uncertain when start the treatment and further.

For this reason, any treatment operation should begin with a careful observation of the treatment effect (e.g; visual observation to look for brown plume under the sea surface corresponding to dispersed oil). It is necessary to carry out when starting the treatment with a test spraying run in order to decide whether to continue or to stop the dispersant application. Such a test should be repeated along the operations to check periodically the dispersant keeps efficient.

IMP (the department in charge of the prevention and combating pollution) must designate the person on location who will complete these controls in order to inform IMP on the efficiency of the application. This person should have appropriate training.

IMP with consultation of the Ministry in charge of the Environment decides to continue or to stop the treatment

8-2 Dispersion application procedure

Success of an operation is based on the respect of treatment procedures. The treatment should be conducted:

- On the thick parts of the slick (colour brown to black) without taking into consideration the thinnest parts (iridescence, shine…),
- In a systematic way, taking into account the wind

(reference appendix 6 –operational procedures from IMO/UNEP recommendations on dispersant application).

As often as possible, treatment means (especially ships) are guided during the spraying operations by a spotter aircraft which indicates the slick zone where the dispersant application must be targeted. When necessary, these parts to be treated can be marked out (with buoys or smoke canisters).

As often as possible, the treatment is monitored in order to assess it efficiency; such a monitoring can be carried out by taking waters samples on the treated slick before and after treatment for further oil concentrations measurements, or by aerial photography or remote sensing techniques (e.g. IR) to assess the amount of oil remaining on sea

surface (reduction of the slicks due to the dispersion process). This monitoring can be useful to justify the decision to use dispersant and to claim for compensation.

IMP with the help of Ministry in charge of the Environment is responsible for organising the monitoring of the efficiency of dispersants.

8-3 Assistance to foreign experts

In case of large incident (Tier 3) involving foreign experts (from neighbouring countries, international service companies….) it is necessary to plan national contact persons in charge of welcoming these external teams and facilitating their involvement in the national context (ex: a contact person on the airport to take care of a foreign crew in charge of running an spraying aircraft, for accommodations, jet-fuel supply, various authorisations….)

8-4 Involvements on fisheries activities

The dispersion of significant amounts of oil can impact some environmental resources as fisheries (e.g. tainting of sea food following contact with oil droplets). For sanitary reasons and to justify afterward claims for compensation it is useful to monitor water column quality which may have been in contact with oil as well as the quality of the sea food, and possibly to ban temporarily fishing.

The monitoring of the effects of dispersant use as well as the decision to ban fishing is under the responsibility of the Ministry in charge of the Fisheries

9 Precautions and operational recommendations

9-1 Drills

Drills are organized periodically to validate the combating procedures, to train the operators and to check the capability of the contingency plan (through paper exercise to check the availability of persons to be mobilized-level 1 exercise) and of the combating equipment to respond to a pollution situation (through real simulation, mobilizing people and equipment on site-level 2 exercise).

One level 1 exercise per year should be organised in each coastal region, and one level 2 exercise per year should be organised at the national level, in a different region each year. Level 2 exercise could be organised in the frame of the whole NOSCP (National Oil Spill Contingency Plan) (involving other techniques than dispersion). Corrective actions will be taken according to the observations made during the exercises.

Drills are managed by IMP with the concerned organisations, and especially the Coast Guards, the Civil Aviation, Ministry in charge of the Environment and the Civil Protection.

9-2 Training

People in charge of running the treatment equipment are specifically trained. This training can be integrated in the general training plan planed in the NOSCP (National Oil Spill Contingency Plan)

IMP organises and supervises the training with the support of the regional and international organisations.

9-3 Protection of persons and equipment

People in charge of the spraying operations are protected against mist of dispersant (Individual Protective Equipment; e.g. mask, protective impermeable clothes, gloves…). Solid surfaces (especially ship decks) which may receive sprays of dispersant are flushed with water to avoid being slippery for people.

Materials and equipment in contact with dispersant are flushed with water to avoid any deterioration (of paint, rubber seals…). Spraying equipment is rinsed with fresh clear water after use

ANNEX 1

GENERAL CONSIDERATIONS ON THE USE OF DISPERSANTS IN OR CLOSE DIFFERENT RESOURCES / HABITATS

For the purpose of these guidelines, special considerations should be taken for use of dispersant on or in the vicinity of this habitats / resources referred as sensitive in the sensitivity map.

a) Coral reefs

In most cases, oil slicks will float over reefs without causing damage to the submerged corals and associated organisms. Using dispersants close to the reef is likely to increase the exposure to oil, with possible damage to some of the organisms. As far as possible, dispersants should not be used over or near coral reefs.

Occasionally, there is a danger of oil slicks becoming stranded on the upper parts of coral reefs (the reef flats) during low tides. If this happens, there is likely to be serious damage to the reef organisms. Damage can be minimised by dispersant spraying of the slicks before it reaches the reef, as far away from the reef as possible.

b) Industrial facilities

Use of dispersant close to water intakes of industrial facilities, such as desalination plants, power stations and refineries, may increase the chances of oil passing under protective booms and entering the water intakes. This can cause damage to these facilities, so dispersant use should be avoided near such intakes. If oil enters calm harbours and docks in and industrial areas, conditions are relatively good for physical removal of the oil.

c) Sea grass beds

There is a possibility that dispersed oil in the water column could affect submerged sea grasses more than oil slicks floating on the surface above them. As far as possible, dispersants should not be used over sea grass beds in shallow water.

For the purpose of this guidelines dispersant may be used by considering factors.

A) Amenity and tourist resources

Recreational areas, such as bathing beaches, yacht club boat marinas, are important for some local economies, and dispersant use **offshore** is an option for protecting these. Such areas are usually of low importance from the biological point of view, and dispersant use may be considered even relatively close to the shore

b) Birds habitats

Oiled birds commonly die of hypothermia and/or the effects of ingested oil. Moreover, if oil is transferred to eggs, hatching success can be much reduced. It is therefore important to protect bird habitats, and dispersant spraying is one option for achieving this. Dispersants should be sprayed as far from aggregations of birds as possible, to minimize the risks of dispersant spray hitting the birds (with high damaging effects). There are seasonal variations in the distribution of many bird species, so it may not be necessary to protect habitats at all times of the year.

c) Fish and shellfish mariculture facilities (near shore)

Near-shore aquaculture facilities include moored fish cages and buoyed ropes or nets for mollusks such as mussels and oysters. With these facilities large-scale mortalities do not usually occur either with untreated oil or dispersed oil. In both cases, there is likely to be tainting, or at least a perception of a tainting problem, and as consequence difficulties in marketing the product. Dispersant use on slicks approaching aquaculture structures may help minimize fouling and subsequent clean up or replacement of equipment (e.g. of timber and netting).

d) Mangroves

Mangrove trees commonly die when oiled, and their death results in the loss of habitat for a great diversity of birds, fish and invertebrates. Oiled mangroves are difficult to clean, and in any case cleaning may not save the trees if oil has already entered the sediments and damaged the root systems. It is therefore of great importance to protect mangroves. They tolerate dispersed oil, so dispersants may be used offshore from the mangroves if necessary. Dispersant use may be considered even in shallow near-shore water or creeks within the mangroves.

e) Marine mammals

Mammals which depend on their fur for insulation are particularly vulnerable to oil. If fur is oiled, animals may die of hypothermia and/or the toxic effects of oil ingested during grooming. It is of

great importance to protect the habitats of these species, and dispersant use is a viable option. Ideally, application should be as far from the mammal habitats as possible because the animals are sensitive to disturbance, but if necessary dispersants may be used near or in the habitats.

f) Mud flats

Oil can penetrate intertidal mud if there are biological pathways such as worm and crab burrows or plant root systems. Serious biological damage can result if much oil enters these burrows. In contrasts, oil does not penetrate easily into intertidal mud without such pathways, because such sediments are waterlogged and have low porosity.

Biologically productive mud flats are often important feeding grounds for birds, and dispersant use **offshore** is an option for protecting them. Dispersant application should be as far offshore as possible, to minimise the possibility of high concentrations of dispersed oil entering burrows.

g) Rocky shores

Rocky shores exposed to wave action self-clean relatively quickly. Sheltered rocky shores have relatively high biological productivity and natural clean-up and biological recovery is relatively slow. Offshore dispersant use is an option to protect sheltered rocky shores.

h) Sandy beaches

Sandy beaches generally have low biological productivity. Those exposed to heavy wave action naturally clean relatively quickly. If oiled they are relatively easy to clean. However, protection of sandy beaches by using dispersants offshore may be important in special cases. For example:

=> The top of the beach is used by turtles for egg-laying, and the egg-laying season is approaching; or

=> The beach is important for tourists, and the tourist season is approaching.* *Source IMO*

ANNEX 2

LIST OF ITEMS TO BE TAKEN INTO CONSIDERATION WHEN MANAGING A DISPERSION OPERATION *(to be completed)*

Spraying system :

Availability and time required for its deployment,

Compatibility (dimensions, fixations, certifications) with the transport means (vessel, helicopter, aircraft).

Dispersants

Availability, quantity, characteristics, location of the products

Logistics and time required for the deployment onsite

Transport means

Availability, time required for their deployment

Feeding requirement in particular fuel (Type of fuel required)

Compatibility of facilities (ex length and resistance track…).

ANNEX 3

REFERENCE DOCUMENTS AND USEFUL ADDRESSES AND CONTACTS

Useful documents:

1995 – IMO/UNEP Guidelines on Oil Spill Dispersant Application including Environmental Considerations.

2001 - IPIECA - Dispersants and their role in oil spill response

2006 - CEDRE - Using dispersants to treat oil slicks at sea - Response manual

2006 - EMSA - Applicability of Oil Spill Dispersants

Useful website address:

Indian Ocean Commission : www.coi-ioc.org/

OMI : www.imo.org/

ITOPF : www.itopf.com/

EMSA : http://www.emsa.europa.eu/

OSRL : www.oilspillresponse.com/

Cedre : www.cedre.fr/

Approved dispersants in France: http://www.le-cedre.fr/fr/technique/prod/dispersant_em.pdf

Approved dispersants in UK: http://www.defra.gov.uk/environment/Marine/oilspill/oiltreat.pdf

Approved dispersants in US: http://www.epa.gov/oilspill/ncp/dsprsnts.htm

Appendix 9. Photography of the Workshop

Participants