



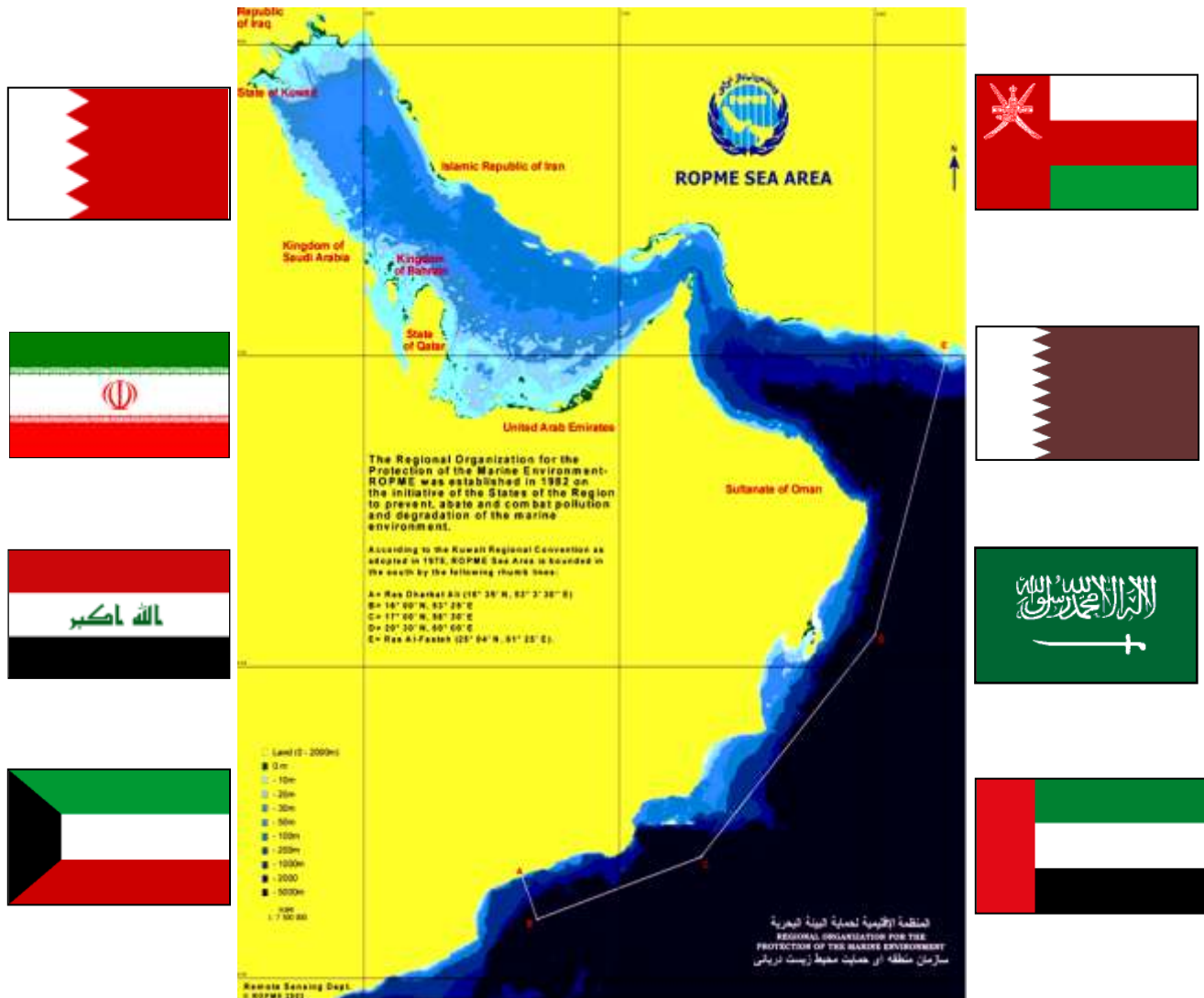
MARINE OIL POLLUTION MANUAL

ROPNE SEA AREA

Marine Emergency Mutual Aid Centre (MEMAC)

MARINE OIL POLLUTION MANUAL

ROPME SEA AREA



Marine Emergency Mutual Aid Centre



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1. MARINE OIL POLLUTION MANUAL

1.1 Introduction

The Kuwait Regional Convention (23rd April 1978) is a comprehensive umbrella agreement for protection of the marine environment. And by ratifying the Protocol (24th April 1978) concerning Regional Co-operation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency, the states of the Region introduced (24th April 1978) more specific obligations to control pollution from a discrete source, or to co-operate in various aspects of environmental management.

This comprehensive Manual has been prepared in accordance with the Marine Emergency Mutual Aid Centre functions set by the Protocol Article III – 3 (c) and all the information provided herewith is in accordance with the Protocol and the ROPME Council Decisions.

The Manual contains information needed for joint pollution combating operations, and to be used as a guideline concerning incident management, policy and strategy. The manual has been tailored to the needs of the Region avoiding duplications and repetition of standard information which already exists and fulfills the requirements. There are other information and manuals available which will be in line with this manual that can be utilized when needed. They are as follows:

- Manual on Oil Pollution – Section IV – Combating Oil Spills - IMO Publication
- Regional Oil Spill Damage Assessment Guidelines - MEMAC Publication
- Oil Pollution Combating Equipment Guide - MEMAC Publication
- Regional Claims Manual - MEMAC Publication
- Marine Environment Protection Legislation guide- MEMAC Publication
- Oil Spill Response Safety Guide - MEMAC Publication
- Use of Oil Spill Chemicals(Dispersants) in ROPME Sea Area - ROPME Publication
- The Loan and Transboundary Movement of Personnel, Equipment and Materials in Cases of Emergency Guidelines - MEMAC Publication

1.2 The Aims of the Manual

The Manual is aimed to enable the Member States to establish prompt and effective response measures to oil or any other harmful substances spilled at sea at National or Regional level.

The manual is also the practical tool intended to assist and:

- Provide timely information to the decision makers and various Command levels.
- The On-Scene Commanders in the execution of response operations.
- Providing instant and adequate information reference to the decision makers in the execution of a joint combating operation involving other Member States.
- Provide an overview of practical response measures which are available to deal with oil spills.

1.3 Manual Preparation Method

- i) The Pollution Manual has been prepared in a number of subjects and indicated by reference numbers and sub reference numbers.
- ii) Each page footer indicates the Manual name and year on the left-hand side, and page number on the right-hand side.
- iii) Whenever there is any update for the existing information, the pages will be changed accordingly.
- iv) In case of replacing any of the existing pages or adding extra pages to the Manual, the replaced pages or the additional pages should take the existing number or the sequence number of the new added pages correspondingly. *i.e.* 6/1, 6/2, .. and so on.
- v) Whenever any new information or data provided, the new sector should be inserted within its relative category of information and will follow the existing sequences of sub numbering.

1.4 Date of the Manual

The Manual has been prepared by MEMAC and revised by the Member States Oil Spill Response Officers according to the data available up to 2016.

1.5 Updating the Manual

The updating of the Manual will take place according to the data and information received from the Member States and whenever necessary. Further, the update and the additional information needed for this Manual should be discussed and recommended by the Oil Spill Response Officers and to be approved by the ROPME Council.

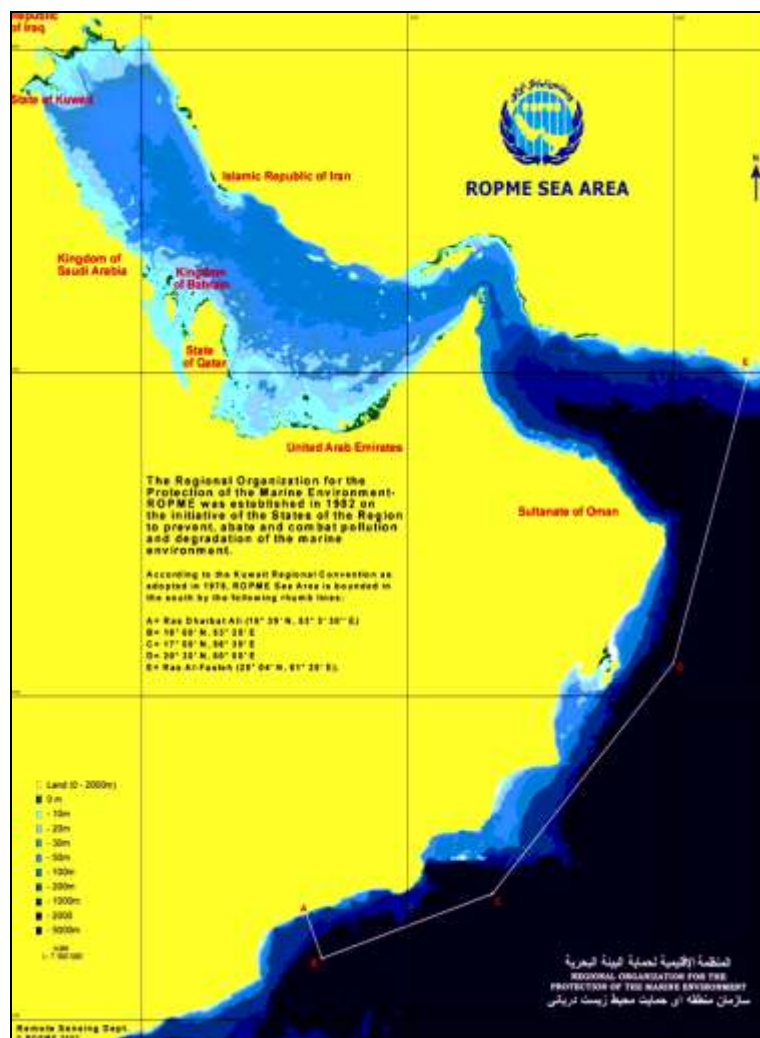
2. The Geographical Coverage

The coverage area is the ROPME Sea Area as identified by the Kuwait Regional Convention for Cooperation on the protection of the Marine Environment from Pollution, Article II (a).

Article II

(a) The present Convention shall apply to the sea area in the Region bounded in the south by the following rhumb lines:

from Ras Dharbat Ali ($16^{\circ} 39' \text{ N}$, $53^{\circ} 3' 30'' \text{ E}$), to a position $16^{\circ} 00' \text{ N}$, $53^{\circ} 25' \text{ E}$; thence through the following positions: $17^{\circ} 00' \text{ N}$, $56^{\circ} 30' \text{ E}$ and $20^{\circ} 30' \text{ N}$, $60^{\circ} 00' \text{ E}$ to Ras Al-Fasteh ($25^{\circ} 04' \text{ N}$, $61^{\circ} 25' \text{ E}$). (Hereinafter referred to as the "Sea Area".)



2.1 Member States Coastal Line Length

<u>States</u>	<u>Km</u>	<u>n. miles</u>	<u>States</u>	<u>Km</u>	<u>n. miles</u>
K. Bahrain	183.5	185	S. Oman	2386	2408
I. R. Iran	2782	2807	Qatar	642	648
R. Iraq	66	67	K. Saudi Arabia	2160	2889
Kuwait	569	574	UAE	1246	1667

Note: The length of the coasts is given approximately, where the coast length of some of the Member States may increase due to reclamation.

3. The Protocol

In accordance with the provision of the Protocol concerning Regional Co-operation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency Article II and XI,

Where Article II states that:

1. The Member States shall co-operate in taking the necessary and effective measures to protect the coastline and related interests of one or more of the States from the threat and effects of pollution due to the presence of oil or other harmful substances in the marine environment resulting from marine emergencies.
2. The Member States shall endeavour to maintain and promote, either individually or through bilateral or multilateral co-operation, their contingency plans and means for combating pollution in the Sea Area by oil and other harmful substances. These means shall include, in particular, available equipment, ships, aircraft and manpower prepared for operations in cases of emergency.

And Article XI states that:

1. Any Member State requiring assistance in a marine emergency response may call for assistance directly from any other Member State or through the Centre. Where the services of the Centre are utilized, the Centre shall promptly transmit requests received to all other Member States. The Member States to whom a request is made pursuant to this paragraph shall use their best endeavours within their capabilities to render the assistance requested.
2. The assistance referred to in paragraph 1 above may include:
 - (a) Personnel, material, and equipment, including facilities or methods for the disposal of recovered pollutant;

- (b) Surveillance and monitoring capacity;
 - (c) Facilitation of the transfer of personnel, material, and equipment into, out of, and through the territories of the Member States.
3. The services of the Centre may be utilized by the Member States to co-ordinate any marine emergency response in which assistance is called for pursuant to paragraph 1 above.
 4. Any Member State calling for assistance pursuant to paragraph 1 above shall report the activities undertaken with this assistance and its results to the Centre. The Centre shall promptly transmit any such report to all other Member States.
 5. In cases of special emergencies, the Centre may call for the mobilization of resources made available by the Member States to combat pollution by oil and other harmful substances.

4. ROPME Council Decision

Furthermore and according to Article III – (b)/(iii), the ROPME Council at its Ninth Meeting decided to approve the regional Guideline of the Loan and Transboundary Movement of Personnel, Equipment and Materials in Cases of Emergency (See Decision 24 of the Meeting).

5. The Region's Response Strategy and prioritisation

1. To stop the outflow of the main source causing pollution by oil spills in order to prevent further spillage of oil by all means .
2. To stop, limit and contain the oil from spreading
3. To recover the oil at sea avoiding reaching the coastal area
4. Further action that each Member State should take is the appropriate procedures to protect different coastal installations according to the National Contingency Plan and prioritization plan of each Member State.

6. How MEMAC deals with incidents

Upon receiving notification of an oil spill incident from any source, the following steps are taken immediately:

- Verification of the incident.
- Collecting complete data about the incident.
- Notifying and transmission of all data to all Member States.
- Notifying local, regional and international private sectors working in the field of combating marine pollution to be on standby in case of necessity.
- Continuous exchange of incident data and monitor development.
- Updated information about the incident status is continuously provided to all Member States.
- Legal and technical advice is continuously provided to the Member States
- Oil Spill Trajectory Model is used for early prediction.
- Obtaining the Satellite images
- In case any assistance is needed, MEMAC liaises with the Member States as well as with other regional and international firms.
- A record about the incident is kept for studying and as a lesson to be learnt for future avoidance of any similar incident.

7. RECOMMENDATIONS CONCERNING CO-OPERATION FOR JOINT COMBATING OPERATIONS

According to the Protocol Articles, the ROPME Council decisions and the Member States' policy, the joint combating operation should be executed in accordance with the strategy set up within this manual.

7.1 Main Recommendations

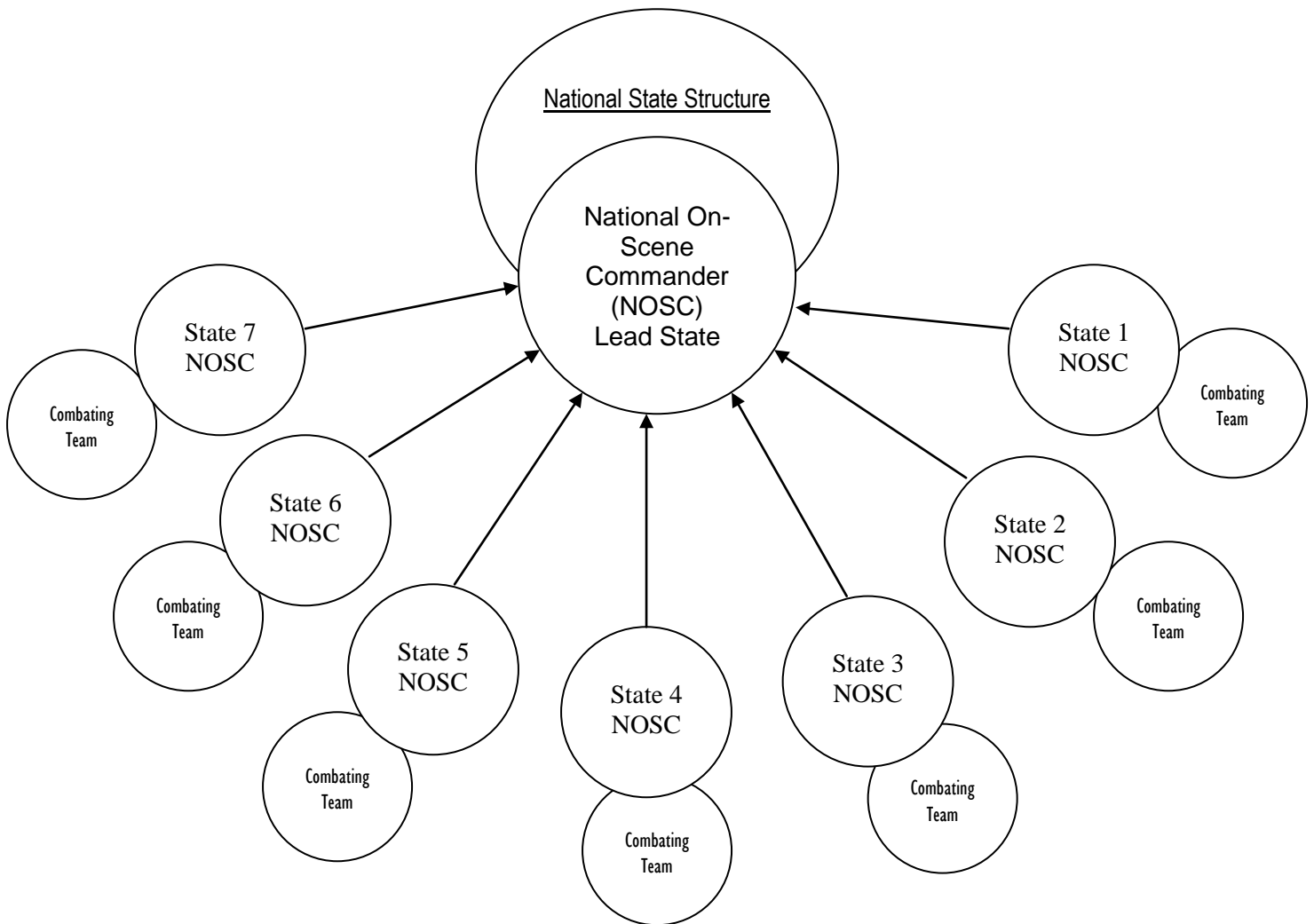
It is RECOMMENDED that:

1. The overall operation should be always under the control and command of the Member State which requested the assistance (Lead State), where each Member State exercises its full control over its territory.
2. In case the spilled oil enters the territory of a neighboring state, the command of the combating operation should be transferred to that state whenever it is practical and agreed upon by the parties involved.
3. The Oil Spill Response Officers involved in the operation should liaise, exchange and provide the information needed.
4. The assistance rendered to the Lead State should be under the control of the National On-Scene Commander (NOSC) where the liaison to be carried out by the Oil Spill Response Officers whenever practically needed.
5. In case of the Exclusive Economic Zone (EEZ) or the International Water, the control of clean-up operation should be carried out by the first team that commenced the operation.

7.2 General Principles of the Command Structure

Once the Member States' National Command Structure is the same on its principle, the Regional Command Structure should be the same and in line with executing the joint combating operations.

The following figure indicates the joint operation command structure:



7.3 The Lead State

The Lead Member State which asks for assistance should be in charge and lead the joint operations.

To this effect the Lead State should carry out, *inter alia*, the following actions:

- 3.3.1 Disseminate a continuous and regular situation status to all the National Response Officers of the state rendering the assistance, including exchanging information and data.
- 3.3.2 Provide and facilitate the administration, operation and logistic support.
- 3.3.3 Identify clearly to each NOSC and his combating team's task of their roles and jurisdiction clearly.
- 3.3.4 Identify the relation between each team and unit to enhance the operation.
- 3.3.5 Establish proper communication network among all units to execute each operational task in order to ensure smooth exchange of information from state to state.
- 3.3.6 In case the assistance is rendered in the form of equipment, the lead state should be responsible for integrating the equipment to the best use within its operation. The Regional reference guideline of The Loan and Transboundary Movement of Personnel, Equipment and Materials in Case of Emergency as well as the Oil Pollution Combating Equipment Guide should be used for the equipment operation.

7.4 Transfer of Operational Control and Tactical Command

- 3.4.1 In case pollution entered the neighbouring state, the command will normally be transferred to the affected state where this state should become the Lead State.

- 3.4.2 Shifting the command from the first state to the second state should take place with a full agreement between both states on the timing of the command shifting, detail of the incident, the operation and its possible sequences should also be exchanged.

- 3.4.3 The new lead state should decide its strategy on continuing the clean-up operation according to its policy.

- 3.4.4 The new Lead State should decide whether there is a need to continue or discontinue of rendering assistance from other Member States.

7.5 Oil Spill Response Officers (OSRO)

- 3.5.1 The Member States may send their Response Officers to participate within the national control centre of the combating operation, where the approval of the Lead Member State is needed.
- 3.5.2 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should act on exchanging opinion, information or rendering assistance. etc. between his own state and the lead state.
- 3.5.3 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should attend the National Coordination Centre of the Lead Member State in order to follow up the operation.
- 3.5.4 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should be given the opportunity to advice and exchange knowledge with the lead state, specially when the matter concerns his combating team or his own state territory.
- 3.5.5 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should work closely and in according to the lead state policy and without any interference.

- 3.5.6 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should not communicate with the media, unless requested and approved by the lead state.
- 3.5.7 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should be responsible for their travel arrangement and insurance, unless it is agreed upon for different arrangements by the Lead State.
- 3.5.8 The accommodation and local transport for the National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should be arranged by the Lead State, unless it is agreed upon for different arrangements.
- 3.5.9 The National On-Scene Commander (NOSC), or the Response Officer, whichever is applicable, should be given the necessary communication facilities such as phone, fax, e-mail, .etc. by the lead state.
- 3.5.10 The surveillance activities and information data should be shared among the involved Member States to avoid costly duplication and interferences.
- 3.5.11 In case the response officer could not attend the Command Centre of the affected state, a frequent and continuous exchange of information among the Member States affected by the pollution should take place.
- 3.5.11 MEMAC Response Officer to act as a liaison for the Member States whenever requested by the involved Member State.

7.6 COMMUNICATION

During the clean-up operations there will be communications between several parties involved whether it is carried out at national level or with the co-operation of other Member States to assist, *i.e.*

- Communication between the National Command Centre and the On-Scene Commander.
- Communication between the On-Scene Commander and the combating team.
- Communication between the National Command Centre and aircraft.
- Communication between the On-Scene Commander and other assisting state/s On-Scene Commander.
- Communication between the On-Scene Commander and assisting combating unit.
- Communication between the other assisting state/s On-Scene Commander and their own combating unit.
- Communication between the combating units.

Several types of communication means will be needed among different parties involved and have to be clarified in advance. It is important and attention to be paid to the radio communication by means of VHF, where a multi-nation unit will be involved. In order to avoid disturbance, overlapping and to have smooth communication, the following recommendations should be followed;

1. The Lead Member State should be responsible for obtaining permission from the national authorities to use the maritime VHF and transport cross their boundaries.
2. The Lead Member States should be responsible to nominate the VHF working channel to all vessels involved in combating operations, in order to avoid interference and disturbance to the port and ships' movements and operations.
3. The Lead Member State should be responsible for nominating a second alternative VHF working channel to all vessels involved in combating operations in respect of navigation, manoeuvring and other operational matters use among the working vessels.

4. The Lead Member State should hand over the radio communication set/s to the assisting vessels if the frequencies in use are different than the normal VHF marine band.
5. The vessels in operation should have at least two VHF stations on board where one set to be kept on channel 16 continuously.
6. The communication between the Command Centre and the combating team units should be performed on internal frequencies.
7. The Lead Member State should be responsible for establishing and maintaining the communication between the operational Command Centre and the On-Scene Commander.
8. The number of VHF channels in use should be restricted.
9. The Lead Member State should consider the possibility of using the wireless telefax, email, teleprinter, Satellite Phone. etc.
10. The communication with the aircraft for the Aerial Surveillance should be performed and should remain with the Command Centre only.
11. The assisting vessels and unit could perform communication with their On-Scene Commander on their own private internal frequencies.
12. The working language should be English.

7.7 AERIAL SURVEILLANCE

7.7.1 Introduction

The main purpose of aerial surveillance is to determine the site, quantity, location and the movement of the oil that may threaten the marine environment. It is also necessary to note the changes in the appearance and distribution of the oil over time, as well as to observe and report the effectiveness of response measures. Also it gives a wider angle to observe the pollution size and sources in some occasions, and enhances the enforcement of discharge provisions at sea and improves cooperation among the Member States. Obviously the aerial surveillance data will enhance the combating operation strategy.

7.7.2 Aerial Surveillance Co-Ordination

In accordance with the Protocol concerning Regional Co-operation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency, *Articles, II and VII*, co-operation is the spirit of the protocol, where data could be exchanged among the Member States or through the Marine Emergency Mutual Aid Centre (MEMAC). Among these valuable data which could be exchange are the aerial surveillance data which are of vital importance for advance planning and choosing response options. It is recommended that;

1. The national flight carried out by the Member States over their waters and jurisdiction where information to be transmitted to the command centre of the respective state.
2. The Lead Member State, in according with the protocol, could ask for such assistance, where all the flight permissions should be obtained and facilitated by the Lead Member State which asks for assistance.
3. The nearest neighbouring state/s to the Lead Member State which is involved in the combating operation should transmit the data of their aerial surveillance observation to the lead Member State.

4. All the offshore flight installations should assist in performing the observation according to the Protocol and the OPRC 1990 by reporting to their own state. This information could also be transmitted to the Lead Member State's Command Centre.
5. All the aerial surveillance observation data received by Marine Emergency Mutual Aid Centre (MEMAC) from other sources should be transmitted immediately to the Member States or to the Lead Member State which is affected directly by the pollution.
6. The images of the Satellite Receiving Station of the Regional Organization for the Protection of the Marine Environment (ROPME) should be obtained and utilized here as warning system.
7. The images of the Satellite Receiving Station of the Regional Organization for the Protection of the Marine Environment (ROPME) should be considered as a part of aerial surveillance and early warning system.
8. The images of the Satellite Receiving Station of the Regional Organization for the Protection of the Marine Environment (ROPME) should be considered as a part of the documentation and evidence.

7.8 Trajectory Model

The Marine Emergency Mutual Aid Centre (MEMAC) in cooperation with National Oceanic and Atmospheric Administration (NOAA) has formed a trajectory model for the ROPME Region for many years to enhance the decision making process. This model has proved itself as an excellent tool to predict oil spill movement and advance combating planning. But as this model is, in general, for a small scale, a new model called OASIS is dedicated for the Region to cover a larger scale and with more planning facilities. As all the Member States are using both models, it is recommended that:

1. The Member States to run the model promptly.
2. The Member States affected by oil pollution should check the result of the model with MEMAC headquarters frequently.
3. In case of a joint operation, the Lead State's Command Centre should run the model and to apply it's resulted data for its combating operations. The resulted data from MEMAC and other Member States should be used just for additional verification process.
4. The models should be utilized for frequent staff training during normal working days.
5. The model should be utilized as a part of the spill incident investigations and documentation.

7.9 THE POLLUTION REPORTING SYSTEM

Article VII of the Protocol concerning Regional Co-operation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency states the following:

1. *Each Member State shall direct its appropriate officials to require masters of ships, pilots of aircraft and persons in charge of offshore platforms and other similar structures operating in the marine environment and under its jurisdiction to report the existence of any marine emergency in the Sea Area to the appropriate national authority and to the Centre.*
2. *Any Member State receiving a report pursuant to paragraph 1 above shall promptly inform the following of the marine emergency:*
 - (a) *The Centre;*
 - (b) *All other Member States;*
 - (c) *The flag State of any foreign ship involved in the marine emergency concerned.*
3. *The content of the reports, including supplementary reports where appropriate, referred to in paragraph 1 above should conform to appendix A to this Protocol.*
4. *Any Member State which submits a report pursuant to paragraphs 2 (a) and (b) above, shall be exempted from the obligations specified in paragraph (b) of article IX of the Convention.*

APPENDIX A

Guidelines for the report to be made pursuant to Article VII of the Protocol

1. *Each report shall, as far as possible, contain, in general, the following information:*
 - (a) *The identification of the source of pollution (e.g. identity of the ship), where appropriate;*
 - (b) *The geographical position, time and date of the occurrence of the incident or of the observation;*
 - (c) *The marine meteorological conditions prevailing in the area;*
 - (d) *Where the pollution originates from a ship, relevant details respecting the condition of the ship.*

2. *Each report shall contain, whenever possible, in particular:*
 - (a) *A clear indication or description of the harmful substances involved, including the correct technical names of such substances (trade names should not be used in place of the correct technical names);*
 - (b) *A statement or estimate of the quantities, concentrations and likely condition of harmful substances discharged or likely to be discharged into the sea;*
 - (c) *Where relevant, a description of the packaging and identifying marks; and*
 - (d) *The name of the consignor, consignee or producer.*

3. *Each report shall clearly indicate, whenever possible, whether the harmful substance discharged or likely to be discharged is oil or a noxious liquid, solid or gaseous substance, and whether such substance was or is carried in bulk or contained packaged form, freight containers, portable tanks, or submarine pipelines.*

4. *Each report shall be supplemented, as necessary, by any relevant information requested by a recipient of the report or deemed appropriate by the person sending the report.*

5. *Any of the persons referred to in article VII, paragraph 1 of this Protocol shall:*
 - (a) *Supplement as far as possible the initial report, as necessary, with information concerning further developments; and*
 - (b) *Comply as fully as possible with requests from affected States for additional information.*

Accordingly the following recommendations should be followed;

1. *In according with the Article VII and its Appendix, a form has been formatted which is given below.*
2. *Each notification disseminated should take the incident name and number to indicate the sequence of the report, especially if the given form is not used and a normal individual letter head is used as in most cases.*
3. *It is understood by all Member States that 50- Barrel oil pollution has to be notified at least to the Marine Emergency Mutual Aid Centre (MEMAC).*

Also, to bear in mind the Protocol Article IX states the following:

Any Member State which transmits information pursuant to this Protocol may specifically restrict its dissemination. In such a case, any Member State or the Centre to whom this information has been transmitted shall not divulge it to any other person, Government, or to any public or private organization without the specific authorization of the former Member State.

- It is highly recommended and as a normal practise to alert the concern parties, the National Focal Points and Response Officers, as first points of contact for combating oil pollution, by phone followed by facsimiles.
- All standard guidelines and forms in accordance with the Protocol are given as Annexes 1, 2 and 3.

7.10 Regional Emergency Drill Exercise

7.10.1 Aim of the Drill Exercise

In accordance with the ROPME Council Decision, the Marine Emergency Mutual Aid Centre (MEMAC) is mandated to convene a Regional Emergency drill exercise every two years in one of the Member States which will act as the Lead State. The aims of the drill to can be summarized as follows:

1. Test and evaluate the National Contingency Plan of the States in general;
2. Test and evaluate the Regional Contingency Plan in general;
3. Test and evaluate the national and Regional capacity and procedures including communication, reporting, transboundary movement of personnel and equipment;
4. Test and evaluate the level of response, capabilities and readiness;
5. Test and evaluate the combating equipment types and adequacy;
6. Test and evaluate personnel skills in handling the emergency clean-up operations;
7. Test and evaluate the estimated time of arrival of the National personnel and mobilization and deployment of equipment at the scene of the incident;
8. Test and evaluate the estimated time of arrival of the Regional rendering assistance personnel and equipment at the scene of the incident; and
9. Personnel familiarising and strengthening co-operation in pollution combating operations.

7.10.2 Preparation of the Drill Exercise

In accordance with the ROPME Council Decision, it is clearly indicated that the Marine Emergency Mutual Aid Centre (MEMAC) to carryout all the preparation, planning setup and arrangement closely with the nominated Member State which will host the Drill Exercise.

7.10.3 The Drill Exercise Report

1. At the end of each drill exercise, MEMAC should prepare a technical report of the event which shall be circulated to all the National Focal Points.
2. Obviously the report will contain a part of some technical private information related to the host Member State, where this part of the report shall be only released by the host state's permission.
3. The report should contain and be in line with the aforementioned aim.
4. The report should contain the lessons learned, suggestions and recommendations for the future improvement.
5. The report should be presented and discussed by the OSRO meeting and main important recommendations shall be presented to the ROPME Council.

7.11 EQUIPMENT

All the Member States Stockpiles are given as Annex 5 to this Manual.

7.12 DISPERSANTS

Oil Spill Dispersants are chemical that are sprayed onto spilled oil and cause the spill oil to be rapidly removed from sea surface and dispersed into water column where it is rapidly diluted to Non- harmful concentration. Dispersants can be used to reduce the threat posed by surface oil to sensitive resources.

The use of dispersants should be in accordance with the Code of Practise for the Use of Oil Spill Dispersants in the ROPME Sea Area. Full detailed information with regard to dispersants is given within the ROPME Publication “USE OF OIL SPILL CHEMICALS IN THE ROPME SEA AREA”.

Nevertheless, some important elements have to be stated within this Manual as a reminder such as;

- The application of dispersants must take place before the oil weathers.
- The oil spill dispersants are best used to prevent shoreline pollution, not as a response to shoreline pollution.
- If dispersants are to be used on amenity shorelines, a consultation and permission should be obtained from the concerned Member State's environmental affairs.
- Dispersants should not be applied to oil sheen
- Dispersants should be applied to thick parts of the slick (dull grey to dark brown appearance).
- Zones pre-approved for dispersant applications are those zones which contain resources which are not highly sensitive to the dispersed oil and where the water depth is greater than 10 meters allowing rapid dilution.
- Zones sensitive to high dispersed oil concentrations, such as for water depth of less than 10 meters, where it is known that there are resources which are sensitive to dispersed oil and where dispersant use is only recommended if the response is likely to result in an overall net environmental benefit.
- Use of dispersants close to water intakes could introduce oil to the system and thus should be avoided.
- The dispersant type should be one of those approved type by ROPME according to the Regional approved procedure method.

List of the Approved Oil Dispersants in the ROPME Sea Area

- **Corexit® EC9500A***
- **Corexit® EC9500B***
- **Dasic Slickgone NS**
- **Finasol OSR 51**
- **Finasol OSR 52 / Ecosperse 52**
- **OD 4000 (PE 998)**
- **Radiagreen OSD***
- **Super - Dispersant 25**
- **Seacare Ecosperse LT23**

*** for sea, but not for beach and rocky shore**

The existing stocks of NU CRU may still be used during the shelf life until it is exhausted.

8. Response to Marine Pollution by Chemicals and other Hazardous Substances

The importance of precautionary measures and prevention in avoiding pollution by Hazardous and Noxious substances in the first instance and the need for strict application of existing international instruments dealing with the maritime safety and marine pollution prevention and also the speedy development of enhanced standards for design, operation and maintenance of ships carrying Hazardous and Noxious substances and offshore units, had led to the development of the Protocol on Hazardous and Noxious substances pollution, preparedness, response and co-operation.

Other than oil pollution types, such as pollution by chemicals and other hazardous substances, the response strategy will remain the same as the response to oil pollution. But the way of responding will be according to the type of the chemicals or the hazardous substances. The response personnel, experts, equipment will be different to those in oil pollution.

MEMAC has already established a list of equipment to be utilised for responding to pollution by the chemicals as well as a training package has been provided along with the Chemical Modelling. The Chemical Modelling is to be consulted and utilized during any chemical pollution for safe and successful combating operations.

9. The Member States' Responsible Authorities

Each Member States will have different authorities than the environmental affairs, the National Focal Point, to carry out specific duties during the process of oil pollution incident complete operation process as from the time of the notification, combating, assessment, etc. till the case is settled. The responsible authorities are given as per each Member State according to the State's administrative structures.

9.1 Kingdom of Bahrain: Responsible Authorities

- | | |
|---|---|
| 1. Observation/ Reporting of Offence | The Supreme Council
for the Environment (SCE),
Ministry of Interior (Coast Guard, Flying
Wing) |
| 2. Combating operation | Supreme Council
for the Environment (SCE), Ministry of
Municipalities and Ministry of Interior
(Coast Guard) |
| 3. Collection of Evidence | SCE and Ministry of Interior (Coast Guard,
Flying Wing) |
| 4. Port State Control | General Organization of Sea Ports |
| 5. Assessment of Evidence | Supreme Council
for the Environment (SCE) |
| 6. Prosecution of Offenders | Supreme Council
for the Environment (SCE) |
| 7. Type of Court | Criminal Court (Ministry of Justice) |
| 8. Enforcement of Penalty | Criminal Court (Ministry of Justice) |
| 9. Collection of Statistics | Supreme Council
for the Environment (SCE) |
| 10. Feedback and Follow-up | Supreme Council
for the Environment (SCE) |

9.2 Islamic Republic of Iran: Responsible Authorities

1. Observation/ Reporting of Offence	Ports & Maritime Organization (PMO)
2. Combating operation	Ports & Maritime Organization (PMO)
3. Collection of Evidence	Ports & Maritime Organization (PMO)
4. Port State Control	Ports & Maritime Organization (PMO)
5. Assessment of Evidence	Ports & Maritime Organization (PMO) + Department of Environment (DOE) and Fisheries Organization
6. Prosecution of Offenders	Ports & Maritime Organization (PMO), Coast Guard, Navy and Judiciary
7. Type of Court	Maritime
8. Enforcement of Penalty	PMO Legal Authorities
9. Collection of Statistics	Ports & Maritime Organization (PMO)
10. Feedback and Follow-up	Ports & Maritime Organization (PMO)

9.3 Republic of Iraq: Responsible Authorities

- 1. Observation/ Reporting of Offence Ministry of Health and Environment**

- 2. Combating operation**

- 3. Collection of Evidence**

- 4. Port State Control**

- 5. Assessment of Evidence**

- 6. Prosecution of Offenders**

- 7. Type of Court**

- 8. Enforcement of Penalty**

- 9. Collection of Statistics**

- 10. Feedback and Follow-up**

9.4 State of Kuwait: Responsible Authorities

1. Observation/ Reporting of Offence	EPA, The oil companies group and Coast Guards
2. Combating operation	
3. Collection of Evidence	Coast Guards and Ministry of Communications
4. Port State Control	Coast Guards and Ministry of Communications
5. Assessment of Evidence	Coast Guards and Ministry of Communications
6. Prosecution of Offenders	Criminal Penalty Laws
7. Type of Court	Criminal
8. Enforcement of Penalty	Ministry of Justice, Legal and Ad.
9. Collection of Statistics	N/A
10. Feedback and Follow-up	Coast Guards and Ministry of Communications

9.5 Sultanate of Oman: Responsible Authorities

1. Observation/ Reporting of Offence	Oman Maritime Security Center
2. Combating operation	Ministry of Environment and Climate Affairs
3. Collection of Evidence	Ministry of Environment and Climate Affairs
4. Port State Control	Ministry of Transport and Communication
5. Assessment of Evidence	Ministry of Environment and Climate Affairs
6. Prosecution of Offenders	Ministry of Environment and Climate Affairs
7. Type of Court	Omani Courts
8. Enforcement of Penalty	Ministry of Environment and Climate Affairs
9. Collection of Statistics	Ministry of Environment and Climate Affairs
10. Feedback and Follow-up	Ministry of Environment and Climate Affairs

9.6 State of Qatar: Responsible Authorities

1. Observation/ Reporting of Offence	Minister of Municipality and Environment
2. Combating operation	Navy, Qatar Petroleum (Department Oil Leakages
3. Collection of Evidence	Ministry of Transportation, Ministry of Municipality and Environment
4. Port State Control	Ministry of Transportation (Naval Authority)
5. Assessment of Evidence	Ministry of Transportation (Naval Authority)
6. Prosecution of Offenders	Courts, Public Prosecution
7. Type of Court	Depends upon the type of violation and environmental laws
8. Enforcement of Penalty	Courts, Public Prosecution / Environmental Laws
9. Collection of Statistics	Ministry of Transportation (Naval Authority)
10. Feedback and Follow-up	Ministry of Municipality and Environment

9.7 Kingdom of Saudi Arabia: Responsible Authorities

- | | |
|---|---|
| 1. Observation/ Reporting of Offence | GAMEP, Coast Guard, Ports, Navy, Civil Defense and ARAMCO |
| 2. Combating operation | Ministry of Defense and Aviation (GAMEP and Royal Navy), Ministry of Interior (Frontier Force), Ministry of Petroleum and Mineral Resources and associated organizations and companies, Ministry of Industry and Electricity, Ministry of Municipality and Rural Affairs (Municipalities in the coastal areas), Saudi Ports Authority, General Organization for Distillation of Saline Water, Royal Commission for Jubail and Yanbu, and any other authority having marine or coastal facilities. |
| 3. Collection of Evidence | GAMEP, C. Guard, Port authorities |
| 4. Port State Control | Ports Authorities |
| 5. Assessment of Evidence | GAMEP, C. Guard, Port authorities |
| 6. Prosecution of Offenders | Courts |
| 7. Type of Court | Courts |
| 8. Enforcement of Penalty | Coast Guard |
| 9. Collection of Statistics | GAMEP |
| 10. Feedback and Follow-up | GAMEP |

9.8 United Arab Emirates: Responsible Authorities

- 1. Observation/ Reporting of Offence** Ministry of Climate Change and Environment
- 2. Combating operation**
- 3. Collection of Evidence**
- 4. Port State Control**
- 5. Assessment of Evidence**
- 6. Prosecution of Offenders**
- 7. Type of Court**
- 8. Enforcement of Penalty**
- 9. Collection of Statistics**
- 10. Feedback and Follow-up**

10. Evidence from Various Sources that can be Provided and Exchanged among the Member States

In accordance with the convention and the Protocol in cooperation in the protection of the Marine Environment, any type of the following evidence can be exchanged among the Member States:

- **Witness Statement** : any type of report received (process-verbal) from different sources with regard to a discharge or pollution, to be checked and endorsed by the monitoring agency or any state officials after verification.

- **Official Statement:** an official report (process-verbal) documented and signed by an official officer or the statement in writing taken by an official officer from the witness statement.

- **Photographs** : any photographs taken with a photographic camera or taken by digital cameras with annotation (date, time, and position of the observation).

- **Side Looking Airborne Radar (SLAR) :**
instrument capable of detecting possible surface pollution, based on the difference between the waves suppressed by a slick and the normal waves of the surrounding waters.

- **Infra Red (IR) Sensor:** a sensor which provides a picture of the relative temperature differences which also indicates thicker and thinner parts of the oil slick (short-range).

- **Forward Looking Infra Red (FLIR) Camera:**
similar to IR-sensor but with a different angle of view.

- **Positioning System :** any system used to obtain an accurate position of the observing platform. It includes GPS or any other navigation systems.

- Oil Sample Analyses by GC/MS :

Gas Chromatography / Mass Spectrometry is a technique that can give a detailed spectrum of the analyzed oil, i.e. its “finger print”.

- Darkness Identification :

identification of a ship’s name in darkness by electronic means or by searchlight.

- Satellite :

satellites can provide information on possible discharges.

The image should be considered as a limited tool complementing a normal observation.

- Use of Colour Code:

the colour of the oil spill depends on the layer thickness, and/or the type of oil. With the colour code, it is sometimes possible to estimate the amount of spilled oil.

- Radio Recording :

conversation with the suspected violator recorded on tape recorder or video recorder.

- Port Inspection Reports :

a report from the Port State Inspector with copies of all relevant documents. On request, the Port State Officer can take oil samples to be analyzed at a later stage.

- Computer Modeling :

Trajectory Model (digital calculation model) can be used to backtrack from the position of a detected oil spill, with the objective of finding the original position of the discharge. The same model can also predict the drift of the slick.

11. The National Focal Points

The Member States' National Focal Points or their nomination are the responsible authorities for receiving reports of oil pollution, requesting mutual assistance, dealing with media and all related matters.

TABLE 1: INITIAL CONTACT POINTS

THE NATIONAL FOCAL POINTS

STATE	INITIAL CONTACT POINTS	ADDRESS
K. BAHRAIN	The Supreme Council for the Environment	P.O. Box 18233, Bahrain Mall
I. R. IRAN	Department of the Environment Marine Environment Bureau	Pardisan Natural Park Shahid Hakim Highway, Tehran
R.IRAQ	Ministry of Health and Environment	P.O.Box:10062,Baghdad Republic of Iraq
KUWAIT	Environment Public Authority	P.O. Box 24395, 13104 Safat
Sultanate of OMAN	Ministry of Environment and Climate Affairs	P.O. Box 323, Postal Code 100, Muscat
QATAR	Ministry of Municipality and Environment	P.O. Box 7634, Doha
K. SAUDI ARABIA	The General Authority of Meteorology & Environmental Protection (GAMEP)	P.O. Box 1358, Jeddah 21431
U.A.E.	Ministry of Climate change and Environment	P.O. Box: 1509, Dubai

11.1 The Member States' National Focal Points

11.1.2 Kingdom of Bahrain



Environmental Affairs

H.H. Sh. Abdulla bin Hamad Al Khalifa
President of Supreme Council for Environment

P.O. Box 32657
Tel: +973 17-386666

Kingdom of Bahrain
Fax : +973 17-386668

H.E Dr. Mohammed Mubarak Bin Daina

Chief Executive of the Supreme Council for the
Environment
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Mobile:+973 66636333
Fax : +973 17386006, +973 17386551
E-Mail : mbindaina@sce.gov.bh

RESPONSE OFFICERS

In case of any type of Pollution it should be reported to the Response officers as given below

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Senior Environmental Specialist
Kingdom of Bahrain
Tel:+973 17386599(O)
Mobile :+973 36667006(M)
Fax : +973 17920213
E-Mail : hmarzooq@sce.gov.bh

Col. A. Rahman Juma

Coastguard Headquarters, Ministry of
Interior
Kingdom of Bahrain
Tel:+ 973 17 340575
Mobile : + 973 39455778
Fax :+ 973 17 243827
E-Mail: abdulbaskt@hotmail.com

11.1.2 Islamic Republic of Iran



Department of the Environment

H.E. Dr. Massoumeh Ebtekar

Vice President and Director
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.....

Dr. Parvin Farshchi

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Marine Environment Division
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RESPONSE OFFICERS

In case of any type of Pollution it should be reported to the Response officers as given below

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Maritime Environment Protection Office
Ports and Maritime Organization
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Vanak Sq, Tehran,I.R. Iran
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Mobile : +98 91 26301713
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Mr. Morteza Norouzi

National Oil Response Officer
Ports and Maritime Organization
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Mobile : +98 9126133304
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11.1.3 Republic of Iraq

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RESPONSE OFFICERS

In case of any type of Pollution it should be reported to the Response officers as given below

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11.1.4 State of Kuwait



H.E. Dr. Ali Saleh Al - Omair

Minister of Oil / Chairman of the Higher Council of the Environment

.....
Assistant Under-Secretary for Economic Affairs
Ministry of Finance Kuwait
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Fax : +965 2423038
.....

Sheikh Abdullah Ahmad Al-Hamoud Al-Sabah

Chairman of the Board & Director General
Environment Public Authority

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Kuwait

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RESPONSE OFFICER

In case of any type of Pollution it should be reported to the Response officer as given below

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Kuwait

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hamza_a_k@epa.org.kw

11.1.5 Sultanate of Oman

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H.E. Najeeb bin Ali bin Ahmed ALRawas

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RESPONSE OFFICERS

In case of any type of Pollution it should be reported to the Response officers as given below

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11.1.6 State of Qatar



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State of Qatar

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55564474 (M)
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RESPONSE OFFICERS

In case of any type of Pollution it should be reported to the Response officers as given below

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998(Emergency)
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Mr. Ahmad Manookh Al-Enazi

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11.1.7 Kingdom of Saudi Arabia



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Mr. Ziad Dagistani

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Director of GAMEP Eastern Province

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+966 138575300
Fax: +966 138576752

RESPONSE OFFICERS

In case of any type of Pollution it should be reported to the Response officers as given below

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+ 966 553088228
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11.1.8 United Arab Emirates



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RESPONSE OFFICER

In case of any type of Pollution it should be reported to the Response officer as given below

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Acting Director of Marine Transportation Affairs
Ship Incident Notification
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+971 504818801
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Annex – 1

Guidelines for Preparation of an Oil Spill Incident Final Report

Guidelines for Preparation of an Oil Spill Incident Final Report

GUIDELINES FOR THE PREPARATION OF AN OIL SPILL INCIDENT FINAL REPORT

COUNTRY :
DATE :
INCIDENT :

PART I DESCRIPTION OF THE INCIDENT

1. THE INCIDENT
Describe the incident in details giving clear information on the pipeline, the vessel(s) involved and any other cause
2. DATE and TIME OF THE INCIDENT
3. LOCATION OF THE INCIDENT
4. TYPE OF OIL SPILLED
Specifying its API, Viscosity, etc.
5. QUANTITY OF OIL SPILLED
6. RESOURCES AND OTHER NEIGHBOURING STATES AT RISK
7. ANY OTHER CASUALTIES
8. REQUEST FOR ASSISTANCE

PART II PROCEDURES FOLLOWED-UP DURING THE INCIDENT

1. EQUIPMENT AND RESOURCES MOBILISATION
2. CONTAINMENT AND RECOVERY
Quantities and types of booms, skimmers, barges, etc
3. DEFLECTION
4. CLEAN-UP
5. DISPERSING

PART III EFFICIENCY OF PROCEDURES

1. QUANTITY OF OIL SPILLED
2. QUANTITY OF OIL RECOVERED/RETRIEVED
3. QUANTITY OF OIL DISPERSED

4. DISPOSAL OF RECOVERED, RETRIEVED OIL AND/OR OILY WASTE
5. ASSISTANCE RECEIVED

PART IV ENVIRONMENTAL IMPACT OF SPILLED OIL AND COMBATING/CLEAN-UP OPERATIONS

1. RESOURCES IMPACTED
Such as fisheries and the fishing fleet, birds, turtles, tourism, jetties, etc.
2. ECOSYSTEMS IMPACTED
Corals, mangroves, sea grass beds, etc
3. BEACHES OILED
Total area, extent of oiling, shore installments, etc.

PART V POST INCIDENT PROCEDURES

1. TERMINATION OF COMBATING/CLEAN-UP OPERATIN
2. FACTS AND EVIDENCES COLLECTED
3. FINAL DISPOSAL OF COMBATING/CLEAN-UP WASTES
4. CLEANING AND SOTRING OF THE UTILISED EQUIPMENTS
5. COST OF COMBATING/CLEAN-UP OPERATIONS

PART VI DAMAGE ASSESSMENT AND CLAIMS

1. ASSESSMENT OF ALL DAMAGES, MONETARY ITEMS
2. TOTAL RESPONSE OPERATION COST
3. LEGAL ACTION TAKEN AGAINST POLLUTER AND PENALTIES ENFORCED
4. CLAIM PREPARATION AND CLAIMING PROCEDURES

PART VII EVALUATION

1. NOTIFICATION AND REPORTING
2. RESPONSE ACTION
3. INTERNATIONAL/REGIONAL CO-OPERATION

Annex – 2

Notification/Alert Form

NOTIFICATION/ALERT FORM

(To be used for oil spills exceeding 50 barrels of oil)

TO	:	MEMAC- BAHRAIN, FAX NO: 00973 17 274551
		e-mail memac@batelco.com.bh
FROM	:
COUNTRY	:
DATE	:	/ /
TIME	:
INCIDENT	:	COLLISION, GROUNDING, WAR RELATED, ACCIDENT, PIPE RUPTURE, LOADING, UNKNOWN REASONS
LOCATIONS	:	LAT (..... DEG) (..... MIN) (..... SEC)
		LONG (..... DEG) (..... MIN) (..... SEC)
TYPE OF OIL	:
QUANTITY	: BARRELS
VELOCITY OF THE SLICK	:
DIRECTION OF THE SLICK	: DEGREE
POLLUTION THREAT	:	HIGH RISK, MODERATE RISK, LOW RISK, NO RISK
HELP REQUIRED	:	YES, NO STAND-BY
TYPE OF HELP	:
WHEN NEEDED	:
NAME:		SIGNATURE

Annex – 3

Oil Spill Progress Report

NOTIFICATION AND REPORTING FORMAT FOR OIL SPILLS
(To be used for oil spills exceeding 50 barrels of oil)

OIL SPILL PROGRESS REPORT

REPORT NO. _____

1		Date of Incident and Time (Local Time)				
2		Spill Location	Name of Country	Place of Spill	Co-ordinates Lat Long	Present Spill Location Lat..... Long.....
3		Type of Spill.....		Volume & Velocity		
4		Amount of oil spilled and the rate of discharge (in barrels)..... Spill Trajectory				
5		Source and Cause of Pollution		In case of vessel V/L Name..... V/L Nationality..... V/L year Built..... V/L Place Built..... V/L Displacement..... Masters Name..... Quantities loaded.....		
6	6.1	Pollution Threat - Nearest Sensitive Areas (Location, Distance)..... - Category of Risk (High Risk, Normal Risk, Low Risk, No Risk)				
	6.2	Weather Conditions - Wind Speed/Direction		- Forecast for the next 24 hours		
		- Air Temp				
	6.3	Sea State State and Visibility..... - Current Speed		- Direction..... - Tide for the next 24 hours		

7		Action Taken in Response to the Spill in Brief:		
		- Booming.....	- Skimming.....	- Dispersion, etc
8		If Dispersant has been used please specify: a. Trade Name b. Manufacturer..... c. Quantity used d. Method of application e. Area Covered f. Depth & Distance from Shoreline g. Nature of nearest shore		
9		Oil Recovery Rate (Barrels/hour)		
10		Necessary action taken for protection of sensitive areas (in brief).....		
11		Any sub-regional or regional assistance required (identify material, equipment type and quality required and when needed)		
12		Any other relevant information		

- P.S. 1. Please use additional pages if required/
 2. This form should be completed in capital letters or typed.

AUTHORISED SIGNATURE & POSITION

Annex – 4

Evidence From Various Sources That Can Be Provided By Contracting States

	BAHRAIN	I.R. IRAN	KUWAIT	OMAN	QATAR	SAUDI ARABIA	UAE
1. Written Statement		Yes			Yes	Yes	
2. Photographs		Yes			Yes	Yes	
3. Video		Yes				Yes	
4. Side Looking Airborne Radar		No				No	
5. Infra Red Sensor		No				No	
6. Ultra Violet Scanner		No				No	
7. Forward looking Infra Red Camera		No				No	
8. Position System		Yes				Yes	
9. Oil Samples		Yes			Yes	Yes	
10. Darkness Identification		No				Yes	
11. Satellite		No				Yes	
12. Use of Colour Code		No			Yes	Yes	
13. Radio Recording		Where is available				Yes	
14. Ports Inspection Report		Yes				Yes	
15. Computer Modeling		Yes				Yes	

The following definitions have been used in Table 3: -

Statement: a statement contains the information collected when observing the MARPOL 73/78 violations, which can take the following form according to national law:

- witness statement : a report from a person of the general public with regard to a discharge or pollution;
- official statement : an official report (process-verbal) written and signed by an accredited officer or the statement in writing taken by an accredited officer from the witness statement.

Photographs: taken with a photographic camera or taken by special cameras with annotation (date, time, and position of the observation etc.).

(Side Looking Airborne Radar) SLAR: instrument capable of detecting possible surface pollution, based on the difference between the waves suppressed by a slick and the normal waves of the surrounding waters.

Data annotation: a line of data presenting e.g. date, time, position heading superimposed on any imagery (data annotation can be obtained from navigation systems and integrated into sensors).

(Infra Red sensor)IR: a sensor which provides a picture of the relative temperature differences which also indicates thicker and thinner parts of the oil slick (short-range).

(Forward Looking Infra Red camera) FLIR: similar to IR-sensor but with a different angle of view.

Positioning system: a system used to obtain the exact position of the observing platform. It includes Decca, GPS or other navigation systems.

Oil sample analyses by GC/MS: Gas Chromatography/Mass Spectrometry is a technique that can give a detailed spectrum of the analysed oil, i.e. its “finger print”.

Darkness identification: identification of a ship’s name in darkness by electronic means or by searchlight.

Satellite: satellites equipped with SAR (radar) can at regular intervals (depending on the orbits) provide information on possible discharges. The system should be considered as a limited tool complementing aerial surveillance.

Use of colour code: the colour of the oil spill depends on the layer thickness, and/or the type of oil. With the colour code, it is sometimes possible to estimate the amount of spilled oil.

Radio recording: the conversation with the suspected violator recorded on tape recorder or video recorder.

Port inspection reports: a report from the Port State Inspector with copies of all relevant documents. On request, the Port State Officer can take oil samples to be analysed at a later stage.

Computer modeling: A digital calculation model can be used to backtrack from the position of a detected oil spill, with the objective of finding the original position of the discharge. The same model can also predict the drift of the slick.



Annex – 5

(The Equipment Stockpile)