NATIONAL OIL SPILL CONTINGENCY PLAN (NOSCOP)

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LIST OF AGENCIES AND ACRONYMS

AFP- Armed Forces of the Philippines
BFAR - Bureau of Fisheries and Aquatic Resources
BFP – Bureau of Fire Protection
BID- Bureau of Immigration and Deportation
BOC – Bureau of Customs
CHED – Commission on Higher Education
CSO – Civil Society Organization
DENR – BMB - Department of Natural Resources Biodiversity Management Bureau
DENR – Department of Natural Resources
DENR-EMB – Department of Natural Resources – Environment Management Bureau
DepEd – Department of Education
DFA – Department of Foreign Affairs
DICT – Department of Information and Communications Technology
DILG – Department of Interior and Local Government
DOE - Department of Energy
DOF – Department of Finance
DOH- Department of Health
DOJ – Department of Justice
DOLE – Department of Labor and Employment
DSWD – Department of Social Welfare and Development
LGU- Local Government Code
MARINA- Maritime Industry Authority
NAMRIA – National Mapping and Resource Information Authority
NDRRMC – National disasters Risk Reduction and Management Council
NEDA – National Economic and Development Authority
NGA – National Government Agencies
NGO- Non-Government Organizations
NSC- National Security Council
NTC – National Telecommunications Commission
OCD – Office of Civil Defense
OSRO- Oil Spill Response Organizations
PA – Philippine Army
PAF – Philippine Air Force
PAGASA – Philippine Atmospheric Geophysical and Astronomical Services of Administration
PCG – Philippine Coast Guard
PIA – Philippine Information Agency
PIP – Philippine Institute of Petroleum
PN- Philippine Navy
PNP – Philippine National Police
PPA – Philippine Ports Authority
UP – MSI - University of the Philippines – Marine Science Institute
UP – University of the Philippines

PART 1
CONTINGENCY PLANNING GUIDELINES

"It is better to plan when it is not needed,
than not to have when it is necessary"

National Contingency Planning Guidebook, 2018

Note: Part 1 of the NOSCOP must be read pre-planning. It includes the factors to consider in making an Oil Spill Contingency Plan whether national in scope or localized in character. In dealing with actual oil spill that requires Tier III level of response, please refer to Part 2 of the Plan.

CHAPTER I. INTRODUCTION

The 1987 Constitution provides that "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature". It is therefore, the duty of the government to avert or minimize the impacts of the oil spill incidents in the marine environment of the country.

In an oil spill incident affecting a significant portion of the population, Government and Non-Government Agencies must work hand in hand in mitigating and minimizing its effects. Hence, in an effort to better manage all spill response activities and the resources necessary to effectively abate the damaging effects of oil spill incident, the PCG developed this National Oil Spill Contingency Plan (NOSCOP) to provide a coordinated and integrated response mechanism.

SECTION 1. LEGAL BASES

The NOSCOP takes its legal basis from national laws on environmental protection. As much as possible it shall be with international laws, agreements and/or regional cooperation entered into by the Philippines as a party.

Sec. 1.1. Philippine Laws

1. R.A. 9993 and its IRR – Philippine Coast Guard Law of 2009.[1]
2. P.D. 602 – National Oil Pollution Operations Center Decree.[2]
3. P.D. 979 – Marine Pollution Decree of 1976.[3]
4. R.A. 10654 – Amended Fisheries Code of the Philippines.
5. R.A. 9275 – Philippine Clean Water Act of 2004.[4]

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[1] R.A. 9993 (IRR), Rule 3 (m) To board and inspect all types of merchant ships and watercrafts in the performance of its functions
Rule 3 (n) to enforce laws and promulgate and administer rules and regulations for the protection of marine environment and resources from offshore sources of pollution within the maritime jurisdiction of the Philippines.
Rule 3 (o) To develop oil spill response, containment and recovery capabilities against ship-based pollution.

[2] P.D. 602, Section 2. Assistance from other Agencies- the Center (NOCOP of the PCG) may call upon any department, bureau, office, agency or instrumentality of the government for such assistance as may need in the form of personnel, facilities and other resources.
Section 3. Direct Negotiation. – The Philippine Coast Guard may negotiate directly with local companies which have oil containment and recovery facilities for the use of such equipment in combating oil pollution.
Section 4. ASEAN Point of Contact – The Center shall be the point of contact with similar national operations centers of ASEAN member countries and shall cause, when necessary, the immediate call for assistance from such countries to help contain oil pollution. The Center shall, similarly, respond to call for assistance by ASEAN member countries.

[3] P.D. 979, Section 6. Enforcement and Implementation- the Philippine Coast Guard shall have primary responsibility of enforcing the laws, rules and regulations governing **marine pollution**. However, it shall be the joint responsibility of the Philippine Coast Guard and the National Pollution Control Commission to coordinate and cooperate with each other in the enforcement of the provisions of this degree and its implementing rules and regulations, and may call upon any other government office, instrumentality or agency to extend every assistance in this respect.

[4] R.A. 9275, Sec. 22 Linkage Mechanism – The Department (DENR) and its concerned attached agencies including LLDA shall coordinate and enter into agreement with other government agencies, industrial sector and other concerned sector in the furtherance of the objectives of this

6. R.A. 9483 – Oil Pollution Compensation Act of 2007.[5]
7. R.A. 10121 – PH Disaster Reduction & Management Act of 2010.

Sec. 1.2. International Conventions

1. UNCLOS 1982
2. International Convention for the Prevention of Pollution from Ships, 1973 as modified by Protocol of 1978 (MARPOL 73/78)
3. London Dumping Convention 1972
4. International Convention on Oil Pollution Prevention Response and Cooperation (OPRC) 1990
5. Civil Liability Convention, 1992
6. International Oil Pollution Compensation Fund Convention, 1992

Sec. 1.3. Agreements and Regional Cooperation

1. ASEAN Council on Petroleum, ASCOPE
2. ASEAN MOU on Cooperation Mechanism for Joint-Oil Spill Preparedness and Response, ASEAN Regional Oil Spill Contingency Plan (ROSCOP)
3. Sulu-Sulawesi Sea Oil Spill Response Network
4. MOA between the Philippines and Thailand for Oil Spill Response
5. MOA between the Philippines and Indonesia for Oil Spill Response
6. MOA between the Philippines and Vietnam for Oil Spill Response

SECTION 2. NATIONAL SECURITY

The NOSCOP shall, as far as practicable, be in line with the National Security Agenda of the Philippines. Collective actions shall be promoted to pursue and advance the 12-point National Security Agenda summarized as follows: human and political security, health security, economic and financial security, food security, military and border security, socio-cultural security, environment and disaster security, energy security, maritime security, international security, informational and cyber security, and transportation and port security.

SECTION 3. DISASTER RISK REDUCTION AND MANAGEMENT

Pursuant to the policy of the State to adopt a DRRM approach that is holistic comprehensive, integrated and proactive in reducing the socioeconomic and environmental impacts of disasters, as outlined in RA 10121, otherwise known as the "Philippine Disaster Risk Reduction and Management", the NOSCOP shall as far as practicable be in line with the latest Contingency Planning Guidebook jointly issued by the National Disaster Risk Reduction and Management Council and National Security Council. However, due to the unique character of oil spills and the requirements of *oil spill contingency planning,* the PCG by way of its Technical Working Group shall devise

ACT- The following agencies shall perform the functions specified hereunder:(a) Philippine Coast Guard in coordination with DA (Department of Agriculture) and the Department shall enforce for the enforcement of water quality standards in marine waters, set pursuant to this Act, specifically from offshore sources.

[5] R.A. 9483, Sec. 14 Enforcement. - xxx The PCG shall conduct inspections of certificates of Ships entering the territory of the Philippines, or, in the case of Ships registered in the Philippines voyaging in the said territory. Provided, that such inspections shall not cause undue delay to the ships.

a unique National Oil Spill Contingency Plan, under the guidelines of the National Contingency Plan of the NSC and NDRRMC, as well as, regional and international standards of oil spill contingency planning.

SECTION 4. NATIONAL OPERATION CENTER FOR OIL POLLUTION

To effectively respond to and mitigate the effects of oil spills, the National Operation Center for Oil Pollution or NOCOP, by virtue of a law,[6] was mandated to serve as the focal point and coordinating unit of the PCG in cases of spills that would necessitate a multi-agency approach to an oil spill.

Under the same law it was stated “The Center shall be the point of contact with similar national operations centers of ASEAN member countries and shall cause, when necessary, the immediate call for assistance from such countries to help contain oil pollution. The Center shall, similarly, respond to call for assistance by ASEAN member countries.”

The NOCOP is under the Marine Environmental Protection Command (MEPCOM) of the PCG.

SECTION 5. AVAILABLE OSCP OR PLANS FOR REVIEW

To aid planners, managers and responders, oil spill plans and best practices may be found in the following:

1. PCG – Coast Guard District / Station OSCP
2. National Oil Spill Contingency Plan (NOSCP) 2014
3. IPIECA Oil Spill Contingency Planning Guide
4. Manila Bay Oil Spill Contingency Plan
5. DMCI Power Corporation OSCP
6. Shell Philippines Exploration BV OSCP
7. Chevron Phils. Batangas OSCP
8. Chevron Sasa Terminal OSCP
9. Chevron Phil. Office OSCP
10. Chevron San Fernando OSCP
11. Petron Corp. Rosario OSCP
12. SL Harbor Bulk Terminal Corp. OSCP

[6] PD 602

CHAPTER II. GOALS AND OBJECTIVES

SECTION 1. GOALS

The National Oil Spill Contingency Plan (NOSCOP) has the following goals:

1. To provide clear directions, guidelines, policies and procedures in case of oil spills.
2. To have a timely and coordinated response mechanism for the containment, mitigation, and recovery of oil spilled.
3. To have an instrument that shall be used as the basis for the crafting of Oil Spill Contingency Plans (OSCPs) of Coast Guard Districts and Stations, as well as, vessels, facilities and business establishments that handle and stored oil.

SECTION 2. OBJECTIVES

To meet the stated goals, the NOSCOP's objectives are:

1. To appoint a working group that shall test, evaluate, package, update, improve and consolidate all existing oil spill contingency plans to the new and improved NOSCOP.
2. To provide general information on possible sources of oil spills and assess impacts of oil spills.
3. To provide guidelines on appropriate Tier response and response strategies.
4. To plan and provide adequate resources for oil spill response.
5. To set minimum requirements for oil spill and equipment and supplies to at least meet Tier I response capabilities. To establish guidelines as to where manpower can be sourced in case of oil spill incidents.
6. To provide a communication plan.
7. To establish financial responsibilities on the costs associated with the clean-up and rehabilitation as a result of the oil spill.
8. To establish inter-agency cooperation.
9. To establish coordination, command and control.
10. To provide parameters that will determine activation, deactivation and non-activation of Tier III response or national level response on oil spills.
11. To provide basic operational guidelines
12. To provide for the continuous development and improvement of the NOSCOP

SECTION 3. SCOPE AND APPLICATION

The NOSCOP shall apply to the Philippines' maritime jurisdictions, which includes its inland and archipelagic waters, territorial sea, contiguous zone, and exclusive economic zones.

It shall apply to all vessels and facilities that handle fuel or oil whether for transport as a cargo, or fuel or oil for operation. It shall also apply to both private and government entities.

SECTION 4. THE NOSCOP AND OTHER OSCPs

The NOSCOP shall be the overall plan that shall guide the national response actions to address oil spill incidents. The OSCP of CG Districts, CG Stations, CG Sub-Stations, Facilities and OSROs shall be patterned and form part of the over-all incident action plan. All OSCP shall follow the reporting system, principle of command and control, response strategies, structure, organization, documentation, procedures, and the active involvement of stakeholders stated in this Plan.

The Ship Oil Pollution Emergency Plan (SOPEP)'s of vessels or facilities' OSCP should be vessel or facility specific. Their oil spill contingency plan should take into consideration the uniqueness of the vessel or facility itself. Under the same guidance, CG Stations and CG Districts should develop OSCP taking into consideration the uniqueness of the vessel's plying in their area, facilities present and environmental sensitivity of their jurisdiction.

SECTION 5. ENTITIES REQUIRED TO HAVE OSCPs

1. Ships or Vessels via Shipboard Oil Pollution Emergency Plan (SOPEP);
2. Power plants and power barges;
3. Shipyards;
4. Oil and Liquefied Natural Gas (LNG) refineries, terminals and depots;
5. Offshore and near shore oil exploration, exploitation and production facilities;
6. Offshore mining companies;
7. Industrial and Manufacturing plants as well as other establishments using oil; and
8. Other similar facilities using and/or storing oil.

This NOSCOP emphasizes the importance of oil spill prevention by requiring vessels to have Shipboard Oil Pollution Emergency Plan (SOPEP) and corresponding MARPOL equipment on-board, and for facilities to have the minimum MARPOL equipment in line with their Oil Spill Contingency Plan (OSCP).

It must be emphasized that facilities that are required to have OSCP must be in line with this NOSCOP, and must comply with the minimum requirements this Contingency Plan outlined as a guide.

SOPEP of Philippine registered vessels and OSCP of relevant facilities are required to be submitted to the PCG for review and approval. Audit shall be made annually to determine that a vessel or facility is fully manned, organized, and equipped to respond to any oil spill incidents. Facilities that are required to submit an OSCP, must also submit authenticated copies of their Environmental Guarantee Fund (EGF) required by the DENR. The PCG in relation with this provision shall craft a memorandum circular with fees, fines, and penalties to ensure compliance.

SECTION 6. WORKING GROUP

Pursuant to the guidelines set in the National Contingency Planning Guidebook, a Working Group shall be constituted to test, evaluate, assess, update, and improve the National Oil Spill Contingency Plan.

The working group shall be composed of Philippine Coast Guard personnel, with the participation of representatives from cluster member agencies, local government units, civil society organizations and stakeholders.

Director, NOCOP shall Chair the Working Group with the primary task of ensuring that the Working Group shall continuously test, evaluate and update the NOSCOP. A Secretariat shall also be constituted to assist the Working Group in the activity.

SECTION 7. IMT AND NATIONAL STRIKE TEAM – OIL SPILL RESPONSE

To effectively implement the National Oil Spill Contingency Plan, PCG-MEPCOM personnel and other qualified PCG personnel shall be pre-designated and issued orders to compose the Incident Management Team and National Strike Team for Oil Spill Response.

The Incident Management Team and National Strike Team – Oil Spill Response shall periodically conduct trainings, drills and exercises to develop and enhance competency and skills, gain familiarity of the plan, rehearse scenarios and troubleshoot any gaps or problems that may arise in the testing and implementation of the national level or Tier III response.

CHAPTER III. RISK ASSESSMENT

The Philippines being an archipelagic state relies heavily on sea transport to facilitate the transfer of goods and people from one island to another. As such, it is host to numerous ports where vessels docks, berth or anchor. Being recognized as the Pacific gateway of Asia, the Philippines is considered as one of the major routes of marine oil transportation and other merchant marine vessels. Thus, there are several international sea-lanes cutting across the country.

Reliant on petroleum products to provide energy to fuel its industries and transportation, there are also oil refineries, terminals and depots which are mostly located near its shorelines. In addition, the Philippines has a growing offshore oil production industry.

Located along the typhoon belt in the Pacific, the country is visited by an average of twenty (20) typhoon every year, five (5) of which are considered destructive.

Ultimately, it is important to note that the Philippines is located at the Coral Triangle, an area of tremendous importance because it is recognized as the global center of the center of marine biodiversity. All of these must be considered in assessing the risks of oil spills.

SECTION 1. SOURCES OF OIL SPILL

Sources of oil spill are Vessels (domestic and foreign); Power plants and Power barges; Shipyards; Refineries, Terminals and depots; Oil exploration and production activities; Offshore mining activities; and Industrial and manufacturing activities. However, in some cases “mystery” spills occur where the spiller is unknown.

Sec. 1.1. Vessels

Domestic, Local, or Foreign vessels, engaged in domestic and/or international trading are sources of oil spills. Though vessels have their own SOPEP to address the oil spill, the government should formulate a plan to address spills beyond the control of the vessel, which must be included in this NOSCOP. Vessels are sources of oil spill when they are involved in collision, allision, grounding and the likes.

For information on domestic and international tanker traffic and destinations refer to **Annex 1** (International Transiting Tanker Traffic) **Annex 1.1.** Area to be Avoided (Tubbataha); **Annex 2** (Classification of Domestic Routes); **Annex 3** (Tanker Routes, Terminals, and Depots); **Annex 4** (Domestic Destination of Oil Products).

Sec. 1.2. Power Plants and Power Barges

Power plants and Power barges as sources of oil spills may be had either by industrial accidents or calamities as they use bunker or diesel oil.

Sec. 1.3. Shipyards

Shipyards as source oil spills are occasioned while transferring fuel and/or oil from ship to reception facility during dry-docking, tank cleaning, and repairs.

Sec. 1.4. Refineries, Terminals and Depots

Refineries, Terminals and Depots are primary source of oil spills as they handle large volume of oil in loading and unloading from ship to shore and vice versa.

In the Philippines, there are currently two (2) refineries in the country: Bataan Refinery and Batangas Refinery. Both are engaged in crude oil refining. Terminals and oil depots, on the other hand, may be found throughout the Philippines.

Sec. 1.5. Oil Exploration and Production Activities

Oil exploration and production activities may be found along the northwest Palawan coast and in the waters of the Visayas. These sites mainly produce gas but recent explorations have indicated crude oil deposits. The risk is mainly associated with casualties for supporting vessels when transferring oil.

Sec. 1.6. Offshore Mining Activities

Offshore mining activities are mining for minerals in waters. This is different from Offshore Oil exploration as what is mined is minerals and not oil. The risk oil spills were mainly associated with casualties from supporting vessels and in the conduct of mining activity.

Sec. 1.7. Industrial and Manufacturing Activities

Though industrial and manufacturing activities are conducted in lands, they have substantial impact on waters especially if the oil spills runs to any kind, in any place on the bank of any navigable water, or on the bank of any tributary of any navigable water, where the same shall be liable to be washed into such navigable water, either by ordinary or high tides, or by storms or floods, or otherwise, whereby navigation shall or may be impeded or obstructed or increase the level of pollution of such water. [7]

SECTION 2. AIDS IN ASSESSING EFFECTS OF OIL SPILL

The volume of oil spilled in a particular area is not only essential in determining its effects, responders must also have adequate knowledge on the type of oil, oil drift simulation, and priority or sensitive areas in the area.

[7] P.D. 979, Section 4 (c) - deposit or cause, suffer or procure to be deposited material of any kind in any place on the bank of any navigable water or on the bank of any tributary of any navigable water, where the same shall be liable to be washed into such navigable water, either by ordinary or high tides, or by storms or floods, or otherwise, whereby navigation shall or may be impeded or obstructed or increase the level of pollution of such water.

Sec. 2.1. Types of Relevant Oil

The vessels and facilities enumerated in the preceding paragraph utilize a wide range of petroleum products from light products such as diesel to the heaviest bunker oil. For a detailed list of relevant oil that requires oil spill response (See **Annex 5** Types of Relevant Oil) for purposes of risk assessment.

Sec. 2.2. Probable Fate of Spilled Oil

To aid in the assessment of risks, there must be familiarity with the probable fate of oil spills. In this regard, Det Norske Veritas (DNV) has carried out oil spill drift simulations for several locations in Philippine waters.

Simulations were conducted for average conditions during SW monsoon and NE monsoon. As a general pattern, spills along the west coast may in many cases not reach the coast at all during the NE monsoon period, while in the SW monsoon period, spills will almost certainly move towards the coast. At the east coast, spills with high probability will reach the shoreline throughout the year. The oil spill drift simulations have been carried out for the scenario: 50,000 tons of Arabian medium crude spilt over a period of 7 days and are here after shown for illustration. (See **Annex 6** – DNV Oil Spill Drift Simulation)

However, during a spill situation, to more accurately predict the movement of oil, oil drift simulations should be carried out based on the actual weather forecast and type and quantity of the oil. Oil spill drift is often estimated roughly by a vector addition method (oil spill drift and spreading and slick description by visual observation) in cases when computer simulations are not available. (See **Annex 7** – Guidelines for Predicting Oil Spill Drift and Spreading); **Annex 8** – Guidelines for Slick Description by Visual Observation, Bon Agreement Oil Appearance Code).

Sec. 2.3. Particularly Sensitive Areas

Whenever total protection of all vulnerable environmental resources is unrealistic, priorities for protection should be based on the sensitivity of the natural resources in question. In line with this, the LGUs are encouraged to develop a list of priority areas for oil spill protection using NEBA (See **Annex 9** Procedures in Carrying-Out Net Environmental Benefit Analysis - NEBA). The suggested areas of particular concerns are:

1. Communities
2. Industries. – e.g. Factories, Power Plants, Harbors and Ports
3. Areas for Local businesses – e.g. fishing and aquaculture,
4. Areas Tourism and Recreation – e.g. resorts, beaches, and water activities.
5. Sensitive Ecosystems – e.g. Marine Protected Areas (See **Annex 10** for Marine Protected Areas Under NIPAS[8] Law).

[8] National Integrated Protected Areas System, RA 7586, RA 11038

SECTION 3. MAJOR OIL SPILL IN THE PHILIPPINES

The Philippines is no stranger to catastrophic oil spill. The following are the more recent occurrences of Oil Spill and their damaging impacts:

Sec. 3.1. Tier III Response Marinduque - MT Vector / MV Doña Paz

As quoted from the Supreme Courts Decision[9]:

"The facts are as follows:

On December 19, 1987, motor tanker MT Vector left Limay, Bataan, at about 8:00 p.m., enroute to Masbate, loaded with ***8,800 barrels of petroleum products*** *(approximately 1,397,088 liters)* shipped by petitioner Caltex. MT Vector is a tramping motor tanker owned and operated by Vector Shipping Corporation, engaged in the business of transporting fuel products such as gasoline, kerosene, diesel and crude oil. During that particular voyage, the MT Vector carried on board gasoline and other oil products owned by Caltex by virtue of a charter contract between them.

On December 20, 1987, at about 6:30 a.m., the passenger ship MV Doña Paz left the port of Tacloban headed for Manila with a complement of 59 crew members including the master and his officers, and passengers totaling 1,493 as indicated in the Coast Guard Clearance. The MV Doña Paz is a passenger and cargo vessel owned and operated by Sulpicio Lines, Inc. plying the route of Manila/ Tacloban/ Catbalogan/ Manila/ Catbalogan/ Tacloban/ Manila, making trips twice a week.

At about 10:30 p.m. of December 20, 1987, the two vessels collided in the open sea within the vicinity of Dumali Point between Marinduque and Oriental Mindoro. All the crewmembers of MV Doña Paz died, while the two survivors from MT Vector claimed that they were sleeping at the time of the incident.

The MV Doña Paz carried an estimated 4,000 passengers; many indeed, were not in the passenger manifest. Only 24 survived the tragedy after having been rescued from the burning waters by vessels that responded to distress calls."

It may be stated that in the case of the collision between MT Vector and MV Dona Paz, the oil/fuel spilled, that ignited, was the cause of most of the deaths.

Sec. 3.2. Tier III Response Guimaras – MT Solar I

On 11 August 2006, MT Solar 1 carrying bunker fuel oil with 998 GT owned and operated by Sunshine Maritime Development Corp, sank vicinity of Guimaras Island causing 2,162,230 liters of oil to spill into the gulf, that traveled up through the Guimaras Strait and Iloilo Strait. It was found out that the following violations were committed: change of route of the vessel, loss of reserved buoyancy due to overloading, overloading of approximately 100 tons, flooding of forwards compartments of approximately 75 tons, flooding of deck due to bad weather, Loss of residual stability and Masters incompetence.

[9] https://lawphil.net/judjuris/juri1999/sep1999/gr_131166_1999.html

The following response were made: creation of task force Guimaras (NDCC Memo No, 10), international assistance from US Coast Guard, Japan Coast Guard and the Government of Indonesia, shoreline clean-up, pressure flushing, vessel and aerial application of oil spill dispersant application, deploying of oil spill boom, utilization of indigenous materials and oil recovery operation.

The following equipment and supplies were used: 1 set Canvas Cover; 1 set VHF/MF radio telephone; 1 set Whip antenna w/ cable; 1 set 13.8 DC regulated PS; 4 set H/H VHF/MF Marine band; 1-unit Blower Pump; 1 unit Inflatable boom (260 meters) (SBMA) 5 Shovel; 5 Spading Fork; 12 Back Pack Sprayer; 1 unit Portable Pressure Sprayer; 1 Scooter; 4 Arm Sprayer, 1 unit HF ICOM IC-M710; 1 set Broad Antenna; 7 set Pressure Pump Sprayer; 1 Blower; 1 Arm Sprayer (steel); 1 Sprayer Arm (motor); 1 Sprayer Arm (Cebu); 1 unit High Pressure Pump (Cebu); 1 unit Transfer Pump (Cebu); 9 segment Spill Boom (solid); 1 unit Sprayer Motor (harrier); 1 unit Sprayer Arm (dvo); 2 unit Power Pack Skimmer; 4 set High Pressure Pump; 23 Back Sprayer (manual); 1 unit Back Sprayer (Kiorits); 1 set Mini Vacuum System; 3 unit Inflatable Boom (container); 7 bags Fence Boom; 6 segment Spill Boom (solid); 1 Fast Tank; 1 Gasoline Tank; 1 Anchor w/ Rope and 2 Sinker.

The mobilization assets utilized during the response were: SARV 001, SARV 002, SARV 003, SARV 3501, SARV 3502, SARV 3504, MCS 3003, MCS 3010, PCG BN Islander, PCG Helicopter, Boom Truck, Hi-Lander, Multi Cab, Revo, Rubber Boat and a Motorcycle.

The persons involved during the response were: ten (10) HPCG officers; ten (10) HMEPCOM officers and fifty -four (54) non-officers; nine (9) HCGDWV officers and thirty nine (39) non-Officers; two (2) CGMED officers and eight (8) non-officers; five (5) CGAG officers and four (4) non-officers; three (3) CGSOG officers and twenty (20) non-officers; five (5) SARV 001 officers and thirty-two (32) non-officers; six (6) SARV 002 officers and thirty- two (32) non-officers; five (5) SARV 003 officers and thirty – one (31) non-officers; six (6) SARV 3501 officers and seventeen (17) non-officers; three (3) SARV 3502 officers and eighteen (18) non-officers; six (6) SARV 3504 officers and twenty (20) non-officers; four (4) MCS 3003 Officers and seven (7) non-officers; and two (2) MCS 3010 officers and eight (8) non-officers. The total strength was seventy- six (76) Officers and two hundred ninety (290) non-officers.

Sec. 3.3. Tier III Response Estancia, Iloilo – Power Barge No. 103

On 9 November 2013, as Super Typhoon Yolanda hit the Municipality of Estancia, Iloilo. NAPOCOR Barge 103 was damaged due to the strong winds and currents. The Barge subsequently drifted at a rocky shoreline of Barangay Botongon, where crews conducted an inspection and noticed spillage of Bunker fuel. 386,000 liters of oil spillage were recorded as a result of the incident.

To mitigate the effects of the oil spill and prevent further damage, OSRT deployed solid floatation boom and fence type boom. MEPU-WV, OSRT supervised the local workers hired by NPC who started the recovery and collection operations of spilled bunker oil on the water surface by means of manual scooping while team also collected contaminated and oily debris.

Records of the PCG-NOCOP on the oil spill revealed the following:

OSRT conducted recovery operations by means of manual scooping and use of absorbent pads. The team collected two (2) tons of oil contaminated garbage and debris. MEPU-WV personnel supervised transferring operations of collected IFO from drums to sludge tank.

Harbor Star divers conducted survey and inspection at the bottom of the NAPOCOR Power Barge 103 and found a crack, about 36x2 inches, at port side of the Power barge 103.

Civilian hired workers recovery operations resulted in the collection of 25 drums or 5,000 liters of oily water mixtures.

On-scene Commander, MEPCOM Command Master Chief, AC, MEPU-WV and CGSS Estancia personnel, DENR- R6, NAPOCOR Power Barge 103 manager conducted inspection and survey to the affected mangrove areas and found contaminated sea grass and heavily affected mangroves.

HMEPCOM Science Technical Team conducted water quality sampling and spread rice hay and lay out of absorbent pads within the affected areas. OSRT together with representatives of Philippine Environmental and Technological System and Services conducted testing of ultra-microbes (oil eating microbes) use to clean up spilt oil on the rocky shoreline.

Kuan Yu Global Tech Inc. (KYGTI) conducted briefing to the hired civilians regarding proper PPE and safety precautions. KYGTI conducted clearing operation of rocks and gravel using bulldozer at the PPA pier.

DENR-EMB conducted air-sampling activity at vicinity PPA pier Brgy. Botongan, Estancia, Ilo Ilo.

Personnel involved during the response were twelve (12) PCG personnel, six (6) civilian, and twelve (12) Kuan Yu Global Tech Inc, PB103 and PSALM personnel. A Prime mover truck and four (4) motorcycles were utilized during the response.

The following equipment were used: thirty- one (31) segments (775) solid floatation oil spill boom, thirty (30) meters fence type oil spill boom and one hundred thirty- nine (139) segments (537) absorbent boom, four (4) bales absorbent pads, three (3) oil skimmer with complete accessories, two (2) suction pump with complete accessories, three (3) fast tank assembled, two (2) hot water pressure washer with complete accessories, two (2) electric sprayers with generator set, robin 5.0 water pumps, and six (6) high-volume low-pressure pumps.

Overall it was noted that the oil spill incident contaminated the sea grass and heavily affected the mangroves in the area.

Sec. 3.4. Tier II Response Rosario, Cavite – MT Makisig

On 08 August 2013, an oil spill incident occurred at the vicinity waters of Rosario, Cavite. The oil spill involves a white product suspected to be an Automotive Diesel Oil (ADO), which covered approximately four (4) hectares from Rosario seen up to the shorelines of Noveleta, Naic, Tanza and Ternate, all in Cavite.

It was suspected that the oil spill came from M/T Makisig.

PCG's response was to immediately dispatch three (3) Oil Spill Response Team (OSRT) personnel and one (1) Marine Environmental Protection - Science Technical Technician (MEP-STT) to proceed to the area, verify the report, conduct initial assessment and to conduct water sampling to determine the source of the spill. The Team created by PCG conducted initial investigation and boarded MT MAKISIG, then proceeded to Rosario Depot.

Samples collected from MT MAKISIG and the pipeline in the depot that was used during the discharging or transferring operation of the vessel were subjected to finger printing analysis and found out to be completely identical with the oil spilled found in the area.

PCG conducted aerial reconnaissance to inspect and assess the gravity of oil spill. The Team together with Petron Personnel and local barangay official conducted initial clean up at vicinity Amaya 5, Tanza, Cavite. Petron activated their Waterborne Industry Spill Equipment (WISE). Cleanup and dispersal operation were undertaken such as removal, stocking of debris collected and application of Non-Toxic Organic Bio Degreaser along the shoreline. MEP-STT Personnel and High Advance Philippines, the third party hired by Petron prior to clean up operation to ensure consistency, made sediment sampling and physical assessments.

The following equipment were used: two (2) segment oil spill booms, two (2) anchor Stackless, two (2) Buoy, shackles, OCMA oil content meter analyzer, Rotavap, multiparameter, refractor, two (2) Global Positioning System (GPS), and two (2) analytical balance.

The following supplies are used: twenty-one and a half (21 ½) meter rope, six (6) separatory panels, seven (7) distillery flask, forty- four (44) beaker, twelve (12) funnel, twelve (12) glass syringe injector, twelve (12) pippet with pipeton, twelve (12) graduated cylinder, two hundred (200) Test tube, and reagents- hexane 4L, S316-4L.

Personnel or manpower utilized during the response includes nine (9) PCG Officer, twenty- nine (29) PCG Non-Officer, and personnel from other agencies such as PENRO, MDRRMO, DENR-EMB, PG-Cavite Office of Public Safety, LGUs and coastal barangays around the

The following vehicles were utilized: Nine (9) Boom trucks, M-35 Truck, Revo, Hi-Lander, Tamaraw FX, and three (3) Motorcycle.

This oil spill incident caused loss of livelihood to the eight (8) affected coastal barangays of Rosario, Cavite; thirteen (13) coastal barangay of Tanza, Cavite; two (2) coastal Barangays of Noveleta, Cavite; and four (4) coastal barangays of Naic, Cavite.

More or less 300 fishermen of Rosario, Cavite was affected and was advised by the authorities to suspend their fishing activities along the affected coastal areas. The nearby coastal areas of Tanza, Cavite were already affected while the municipalities of Naic and Ternate were also threatened. On August 9 2013, MDRRMC Rosario convened and decided to place Municipality of Rosario Cavite under the state of calamity through Resolution Nr. 29-2013.

SECTION 4. HISTORICAL DATA ON OIL SPILL IN PH

Historical data is an important tool to analyze and predict the source of the next major oil spill and the necessary resources to combat it. PCG records, secured by the National Operation Center for Oil Pollution (NOCOP), from1975 to 2019 showed the following data:

	Source	Tier I	Tier II	Tier III	Total
1.	Vessels	233	43	29	305
2.	Power Barge or Power Plant	21	5	9	35
3.	Refinery, Terminal, Depot	24	13	5	42
4.	Shipyard	5	2	NIL	7
5.	Oil Exploration	1	NIL	NIL	1
6.	Offshore Mining	NIL	NIL	NIL	0
7.	Manufacturing and Industrial	44	21	2	67
8.	Others	90	6	NIL	96
	TOTAL	**418**	**90**	**45**	**553**

A study of the records, translated to percentage revealed that:

	Source	Tier I	Tier II	Tier III	Total
1.	Vessels	233	43	29	55.15%
2.	Others	90	6	0	17.36%
3.	Manufacturing and Industrial	44	21	2	12.12%
4.	Refinery, Terminal, Depot	24	13	5	7.59%
5.	Power Barge or Power Plant	21	5	9	6.33%
6.	Shipyard	5	2	0	1.27%
7.	Oil Exploration	1	0	0	0.18%
8.	Offshore Mining	0	0	0	0
	TOTAL	**75.59%**	**16.27%**	**8.14%**	**100%**

A review of the data provided above, revealed that more than ¾ of the oil spills that occurred for the last four decades are Tier 1 oil spills. Further, data shows that vessels are the number one cause of oils spills, which account for more than half of the spill that occurred.

CHAPTER IV. RESPONSE STRATEGIES

All viable response strategies must be put through a NEBA to select the most effective response that bears the least adverse effect to the environment. Said measures must also consider a "no-response" approach. No response approach, which is better termed as "monitor and evaluate" is a strategy where scientists recommend to apply when the oil spill does not require mitigation as the oil will dissipate or disintegrate naturally through weathering process.

SECTION 1. CONCEPT OF TIERED RESPONSE

To effectively address oil spill situations on various levels, a Tiered response must be adopted. Being used even internationally, this method allows efficient escalation of response efforts by utilizing supplementary resources as required. Response strategies demanded of oil spill incidents are dependent on the magnitude of the spill, the proximity to a response center, and the amount of resources needed to effectively respond to the oil spill situation.

SECTION 2. DEFINITION OF TIERS

Sec. 2.1. Tier I Response

Tier I response is that response that is made for oil spill that are generally small in magnitude and affecting only a local area. These may be dealt with by the individual operator or spiller. (IPIECA[10], 2019) It is normally associated with small local events for which response resources should be available locally and there is no seeming need to involve external resources. Examples of these are spills associated with transfer of fuel or bunker at a terminal, and smaller harbor spills.

Sec. 2.2. Tier II Response

Tier II response are made to respond to oil spills that which are most likely to extend outside the limit of the Tier I response. They are possibly larger in magnitude, in which additional resources are needed from a variety of potential sources from other stakeholders involved in the response. It is a large spill that may occur in the vicinity where the spiller has limited control of events or smaller spill at distant locations for which resources from several sources may be required. Typically, the risk here is associated with but is not limited to shipping incidents in ports/harbors or in coastal waters including pipeline or tank failures or near-shore explorations or production operations. As incident of this nature threatens public amenities, government resources may be required.

[10] International Petroleum Industry Environmental Conservation Association (IPIECA)

Sec. 2.3. Tier III Response

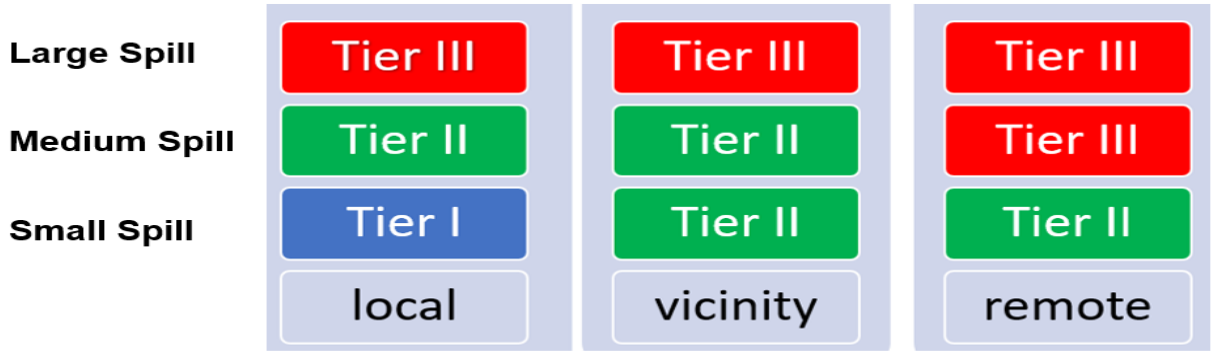
National level or Tier III response are that which is made for oil spills that which due to their scale and likelihood to cause major impacts call for further substantial resources from a range of national and international response. These are spills with the largest volume and thus have the potential to affect a large area, such as large tanker accidents or offshore blowouts. Tier III arrangements usually call for the entire oil spill response resources in a nation, including that of the Oil Spill Response Organizations (OSRO), and may also call for international assistance.

SECTION 3. ESCALATION OF TIER RESPONSE

The volume of oil spilled shall identify the initial Tier response. However, it may escalate depending upon (1) the capability of the spiller to mitigate and respond to the oil spill, and (2) the location of the spill according to the priorities set using NEBA *(refer to Sec. 4 of this chapter)* or other tools. As guide, the following must be considered.

Volume of Oil Spill	Tier	Escalation of Tiers
1 liter to 10,000 liters ($0.001m^3$ - $10m^3$)	I	(1) In case spiller does not have appropriate equipment or manpower to control, mitigate, and abate the oil spill, or (2) the spill occurred in sensitive areas identified using NEBA or other tools, then the tier classification shall escalate to Tier II, as the case may be.
10,001 liters to 1,000,000 liters ($10.001m^3$ – $1,000m^3$)	II	The tier shall escalate to Tier III in cases where (1) the vessel or facility, together with industries in the area, OSRO, and other stakeholders does not have appropriate equipment or manpower to control, mitigate, and abate the oil spill, or (2) the spill occurred in sensitive areas identified using NEBA or other tools.
More than 1,000,000 liters ($1,000m^3$)	III	Tier III level response do not escalate as it is the highest level. This is an oil spill of great proportion and shall automatically activate the application of the National Oil Spill Contingency Plan (NOSCOP).

The table below illustrates the escalation of Tier levels.



SECTION 4. KEY RESPONSE OBJECTIVES

The National Oil Spill Contingency Plan shall consider the following factors as key response objective:

1. The protection of human health and safety;
2. Minimizing the environmental impact of the oil spill;
3. Restoration of the natural environment to pre-spill conditions; and
4. Application of NEBA and other tools to consider other priorities.

(See **Annex 9** Procedures in Carrying-Out NEBA).

SECTION 5. RESPONSE STRATEGIES BY AREA

Oil spills occurs on Offshore areas, Coastal zones or territorial waters, Shorelines or near-shore, and Inland waters. For this reason, the NOSCOP should apply different kinds of response strategies taking into consideration the unique characteristics of the areas.

Sec. 5.1. Offshore Areas

Offshore areas are situated at sea some distance from the shore. In the Philippines, the waters outside territorial waters or from the contiguous zone up to the Exclusive Economic Zones are considered offshore areas. Offshore oil spill prevention and response is the study and practice of reducing the number of offshore incidents that release oil or hazardous substances into the environment and limiting the amount released during those incidents. Sample of offshore facilities includes but is not limited to oil exploration and/or oil exploitation platforms, oil rigs, Floating Production Storage and Offloading (FPSO), Mobile Offshore Drilling Unit (MODU), etc.

Oil spill prevention activities must cover the facilities mentioned above and their service and support vessels. These facilities shall have an Oil Spill Contingency Plan (OSCP) patterned according to this NOSCOP.

Oil spill response options in an offshore environment generally fall into three major categories; mechanical cleanup, chemical dispersants, and in-situ burning.

Each response options can be associated with a specific set of operational, environmental, and oil slick conditions. Pictorial representation of these conditions and related performance characteristics reveal acceptable operating "windows" for each response method. By translating these operational windows into comparative plots of spill access and control rates, one can make meaningful assessments of the relative merits of each response option. Such assessments for major offshore oil spills provide the basis for determining the most effective use of available resources needed for mechanical, chemical and burning techniques. (See **Annex 11** Guidelines for Selecting Offshore Areas Response Strategies)

Sec. 5.2. Coastal Zone

The Coastal zone is defined as the transition zone between open water and the shoreline. In the Philippines, the waters inside territorial waters are considered coastal zone areas. These areas do not normally allow the use of large recovery systems as in open water but may still be maneuverable by smaller boats. It may be noted that in the open sea there is a large area for oil slicks to disperse. In some large spills minimal ecological damage have been noted e.g., Argo Merchant and Ekofisk Bravo blowout. (See **Annex 12** Guidelines for Selecting Coastal Zone Response Strategies).

Sec. 5.3. Shoreline or Near-Shore Areas

Despite efforts to prevent oil from reaching the shoreline, some oil in many cases can still contaminate the shore. For this reason, a shoreline or near shore response strategy must be adopted. Various techniques exist for cleaning of shoreline areas that have been affected by an oil spill. Since shoreline areas often are highly sensitive, special care must be taken in selecting techniques for such areas. Experience has often showed that cleanup efforts can cause greater damage to the shorelines than the spill itself. (See **Annex 13** Guidelines for Selecting Shoreline or Near-shore Response Strategies); (See **Annex 14** Behaviour of Oil on Types of Shorelines); (See **Annex 15** Clean-Up Techniques)

Sec. 5.4. Inland Areas

Most large well-known spills have occurred in the marine environment. However, inland spills outnumber marine spills. Many of the classic spill response techniques were originally developed for use in offshore and coastal spill setting. While some basic principles of oil spill response are the same no matter where oil is spilled, techniques for in land oil spill response operations require some degree of adaptation. (See **Annex 16** Guidelines for Selecting In-land Response Strategies)

CHAPTER V. RESOURCE PLANNING

The NOSCOP to adequately respond to oil spill incidents, intends to require all facilities and entities that are possible sources of oil spill to have at least a capability to perform Tier I response on oil spill incident. For the same purpose, the PCG must have equipment and supplies that can at least provide for Tier I response on oil spill incidents.

SECTION 1. OIL SPILL EQUIPMENT AND SUPPLIES

Sec. 1.1. Philippine Coast Guard for Tier I Response

Based on risk analysis of physical properties of potential oil spills, the probability of occurrence, and their location each Coast Guard District and Stations must have the following oil spill equipment and materials to perform at least Tier 1 response on oil spill incidents:

a. Oil Spill Equipment Shed or Warehouse
b. 1000 meters of solid booms
c. 1000 meters of fence booms
d. 1000 meters of sorbent booms
e. 200 bales of sorbent pads
f. 200 bales of oil snare
g. 2 sets of oil skimmers
h. 10 drums of oil spill dispersants
i. 10 drums of degreasers
j. Prime mover or Trucks
k. Boom Truck
l. Forklift
m. Satellite phone
n. Unmanned aerial vehicle or drone for oil spill detection and surveillance; and
o. Unmanned underwater vehicle or drone for oil spill detection and surveillance

Sec. 1.2. Philippine Coast Guard for Tier II and III Response

To further enhance the Philippine's capability to mitigate oil spills requiring Tier II and Tier III response, the PCG shall stockpile fourteen (14) Tier II and seven (7) Tier III equipment and supplies, including three (3) MARPOL Vessel or Specialized Vessel for Oil Spill Response with a laboratory onboard.

The PCG shall include in its annual budget amounts to procure the Tier I, II, and III oil spill equipment and supplies, **including the three (3) MARPOL Vessels[11] or Specialized Vessel for Oil Spill Response to be prepositioned for in Luzon, Visayas, and Mindanao**. The annual budget shall also include provisions for the

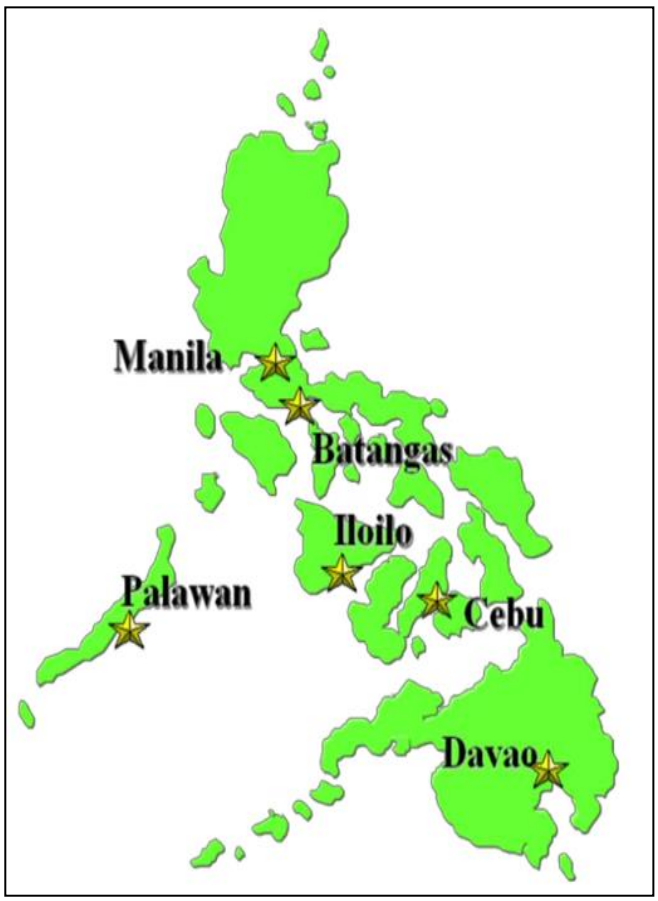
[11] Annex 36 – Market Research, Sample MARPOL Vessel

update, upkeep, and maintenance of equipment, including the replenishment of expended and expired supplies.

Sec. 1.3. PCG's Updated List of Equipment and Supplies

To update the public and stakeholders of the PCG's oil spill response capabilities, the PCG shall annually publish its list of oil spill equipment and supplies, as part of the NOSCOP.

At present PCG oil spill response equipment and supplies are only located at Coast Guard District National Capital Region – Central Luzon (CGDNCR-CL) in Manila; Coast Guard District Southern Tagalog (CGDSTL) in Batangas; Coast Guard District Palawan (CGDPAL) in Puerto Princesa; Coast Guard District Western Visayas (CGDWV) in Iloilo; Coast Guard District Central Visayas (CGDCV) in Cebu; and Coast Guard District South Eastern Mindanao (CGDSEM) in Davao.



Spill Response equipment information is organized in a central database at the PCG-NOCOP, updated annually, every last quarter of the year. (*See **Annex 19** for PCG List of Oil Spill Equipment and Supplies*).

The PCG has different types of surface vessels from small crafts to auxiliary ships, including buoy tenders and Search and Rescue vessels. It has also aerial assets that will aid oil spill response. (*See **Annex 20** for PCG List of Surface Assets*); (*See **Annex 21** for PCG List of Aerial Assets*)

Sec. 1.4. Vessels or Facilities for Tier I response

The PCG, as the need requires, may direct or order any facilities or vessels with MARPOL equipment and supplies to augment oil spill response efforts. To effectively plan augmentation possibilities, NOCOP by way of its District/Station/Sub-station Units shall monitor, survey and account for MARPOL equipment and supplies of facilities and/or vessels in their area.

At present Caltex, Petron, Shell, Isla, Total and PTT have a Memorandum of Agreement, entitled "*PIP Agreement on Mutual Aid for Response to Emergencies and*

Incidents (PIP Mutual Aid)," to share oil spill equipment and supplies in cases of oil spill. This MOA should serve as a model for other facilities to help augment each other. To ensure that sources of oil spill have the capability to deploy at least a Tier I response, vessel or facilities must have the minimum requirements set under this NOSCOP. (See **Annex 22** List of Minimum Requirement for Tier I)

Sec. 1.5. Augmentation of Oil Spill Equipment and Supplies

In addition to the spillers' oil spill equipment and supplies, the PCG's oil spill equipment and supplies, surface and aerial assets shall be available for augmentation of oil spill response efforts beyond the control of the spiller.

Under P.D. 602, the Philippines' national oil spill response may be augmented by calling on the AFP, PNP, other NGAs, LGUs, NGOs, and stakeholders for additional oils spill equipment and supplies, water surface and air assets.

The order to augment does not excuse the spiller from paying for any damage or loss the PCG or any other instrumentality of the government, private vessel, facility or stakeholder may incur in lending assistance by way of equipment and supplies, workforce, surface and aerial assets. The spiller shall always pay in accordance with the Polluter's Pay Principle.

Sec. 1.6. Tier II Plan on Equipment and Supplies

To address Tier II oil spills, the equipment and supplies of nearby PCG District, Station, and Response Center shall be made available to the Incident Commander. Civilian vessels or facilities may also be used to augment response efforts.

The District Commander as having the Over-All-Authority of the incident shall be in-charged of requesting from CPCG the authority for the transfer or transport of required oil spill equipment and supplies outside his jurisdiction.

Sec. 1.7. Tier III Plan on Equipment and Supplies

Tier III oil spill response operations shall be under the control of the CPCG or his authorized representative. This delegated authority shall make PCG oil spill equipment and supplies, all over the Philippines, available to the Unified Commander for Tier III response.

The Unified Commander shall also have the authority to direct any vessels, facilities, local and international OSROs to utilize their equipment and supplies in line with the plan being executed by the UC.

Sec. 1.8. Inspection, Maintenance, and Testing

While in storage or after being used, oil spill equipment must have a monthly inspection, maintenance program, and disposal. This equipment must be subjected to a regular inspection and maintenance according to PCG standards. Said regular inspections must include the actual deployment of offshore response equipment and tested for functionality. These requirements are included in the CGIAS's Annual General Inspection (AGI) to verify compliance. The duty to ensure that oil spill equipment and supplies are properly maintained and stored is with the Coast Guard District Commander.

Facilities on the other hand are mandated to ensure that their minimum required oil spill equipment and supplies are still within allowable levels, properly stored, and maintained and on operational status. These oil spill equipment and supplies shall be subject to the PCG's inspection and testing. The inspections are generally made semi-annually, but can exceed more than twice a year as the need arise. The PCG in relation with this provision will craft a memorandum circular with fees, fines, and penalties to ensure compliance.

Vessels are subject to inspection and testing of oil spill equipment and supplies under existing PCG memorandum circulars, rules and regulations on Marine Environmental Protection. The PCG in relation with this provision will revise its existing memorandum circular to include fees, fines, and penalties to ensure compliance.

SECTION 2. MANPOWER

Oil spill response is the responsibility of the spiller. In cases where the spiller is incapable to respond adequately, the NOSCOP shall be activated with its Tier level response. The following sections explain the manpower plan of the NOSCOP.

Sec. 2.1. Spiller's Personnel

An integral part of any operation, manpower shall be sourced primarily among the spiller's personnel. The spiller should make adequate preparations to have professional help in case of oil spill beyond its own capability. The spiller's OSCP should contain provisions with regard to minimum manpower or source of additional manpower, when required.

Only in cases where spillers are overwhelmed and/or unable to make adequate oil spill response will government agencies take over the oil spill response operations.

Sec. 2.2. Philippine Coast Guard Personnel

The PCG according to its mandate shall develop oil spill response, containment and recovery capabilities. The PCG will only take over oil spill response operations in cases where the spiller is overwhelmed, incapable of, or without knowledge to perform adequate oil spill response operation. The PCG's takeover of the oil spill response does not in any way mean that the spiller has no more responsibility. The

PCG responders shall be entitled to any claims or compensation (e.g. Hazardous Duty Pay, etc.) based on existing laws, rules and regulations. In Tier III response, the PCG shall automatically take over oil spill response operations.

Sec. 2.3. Local Manpower and Local Government Units

Local residents can be a source of additional manpower for spill response. Local Government Units are encouraged to form a pool of oil spill responders and maintain a list of all available personnel qualified and trained for different aspects of oil spill response.

In the event that additional manpower is needed, the LGU that has jurisdiction over the oil spill may provide additional labor subject to compensation by the spiller or through the Oil Spill Management Fund, which is administered by MARINA. Funds for payment of additional labor may also be source from the IOPC – International Oil Pollution Compensation Fund.

In case the LGU cannot provide additional labor on time, the Incident Commander may hire or utilize local manpower subject to the provisions of PD 602[12] and RA 9483[13] but also at the expense of the spiller.

Sec. 2.4. National Government Agencies, Departments and Bureaus

As provided for by PD 602 and the Executive Order that will be issued to help facilitate the effective implementation of this NOSCOP, the PCG may utilize the assistance of national government agencies (NGAs) to render assistance by way of manpower or equipment. The NGAs, departments, and bureaus personnel and equipment shall be under the operational and administrative control of the PCG under the ICS-based Oil Spill Response Operations that will be activated.

Sec. 2.5. CSOs, NGOs, Private Sector, ad Stakeholders

Aside from the local and national government agencies, departments, and bureaus of the government, the oil spill response efforts shall be augmented by civil society organizations (CSOs), non-government organizations (NGOs), private sector representatives, and stakeholders that has an interest in the area where the oil spill occurred.

SECTION 3. COMMUNICATIONS AND CONTROL

In Tier III response, all communications from the Clusters, Crisis Management Committee (CMC) and the Commandant, Philippine Coast Guard (CPCG) in NHPCG shall be directed to the Unified Commander (UC) down to Incident Commander (IC) and vice versa.

The UC shall be responsible for ensuring that all his subordinate units are properly informed, while his subordinate units shall have the responsibility to report developments to the UC. Lateral coordination is encouraged but should be minimized to avoid confusion.

[12] National Oil Pollution Operations Center Decree
[13] Oil Pollution Compensation Act of 2007

As such, all communications relative to operational and administrative matters must be directed to the Incident Commander.

In Tier I and II response, the same concept of flow of communication shall be followed.

Sec. 3.1. Incident Command Center / Emergency Operations Center and Communications Facilities

For Tier I, II, and III response, the Incident Command Center (ICC) shall have an Incident Control Room (ICR) that shall be located at the Operations Center of the Coast Guard District that has jurisdiction of the area of the oil spill.

The ICR shall be equipped with necessary radio (VHF-UHF, SSB) and telephone (Facsimile, Internet connection, hotline, satellite phone) communication, oil spill simulation software and hardware, Geographic Information System (GIS), and audio-visual equipment. (See **Annex 26** Communication Flow Chart).

An Advance Command Post shall be set up proximate to the site of the incident to support the command and control requirement of the Incident Management Team.

All communications by any available means shall be in accordance with existing communications protocol.

Sec. 3.2. Field Communications Equipment

During an oil spill incident, only one (1) member of the Oil Spill Response Team (OSRT) responding to the spill shall be provided with radio transceiver, satellite phone and/or cellular phone. He/She shall act as the official communications officer in the site of the oil spill.

Radio transceiver, satellite phone, cellular phone and/or Internet are the primary means of communication within the Crisis Management Team (CMT) at the ICR. Other communication devices may also be considered as a means of relaying relevant information to the CMT.

The spiller shall provide an adequate number of communication equipment for its own OSRT from the commencement of the spill to its termination.

In procuring communications equipment, intrinsically safe communications devices shall be procured to prevent accidental ignition of fuel or oil spilled.

SECTION 4. POLICY ON OSROs

During Tier III response, local and international Oil Spill Response Organizations (OSROs), as well as other international entities contracted by the spiller or the national government through the NOCOP, shall be under the direct control and supervision of the PCG-IMT.

The PCG upon promulgation of this NOSCOP, in consultation with the Bureau of Customs, Bureau of Immigration and Department of Foreign Affairs shall draft and execute a Memorandum of Agreement with the said agencies/or department to ensure the smooth and earliest possible entry of OSROs personnel and equipment in case of Tier III oil spills.

SECTION 5. POLLUTERS PAY PRINCIPLE

It is commonly accepted practice that those who produce pollution should bear the cost of managing it to prevent damage to human health or the environment. This includes prevention of pollution (precautionary principle) and remediation.

However, the PCG's authority to exact payment under this principle shall be limited to equipment and resources it has utilized and/or consumed. Other expenses both labor, equipment, and consumables, including damages to the community or the environment shall be recorded by the Compensation and Claims Unit of the Finance Section of the ICS System of the NOSCOP. The final determination of the costs for compensation and remediation shall be upon the agreement of the parties or by the courts. The PCG in relation with this provision will craft a memorandum circular with fees, fines, and penalties to ensure proper application.

CHAPTER VI. INTER-AGENCY COOPERATION FOR CLUSTERS

To effectively implement the National Oil Spill Contingency Plan, the cooperation of all departments, bureaus, offices, agencies and/or instrumentalities of the government must be sought. This is pursuant to PD 602, Sec. 2, wherein it is provided that the PCG, by its NOCOP shall have the "Assistance from other Agencies. The Center may call upon any department, bureau, office, agency or instrumentality of the government for such assistance as it may need in the form of personnel, facilities and other resources". To ensure inter-agency cooperation in cases of oil spills of significant level, the PCG shall initiate the application of an Executive Order, that empowers SOTR or CPCG to call all member-clusters and lead agencies to participate in oil spill response and rehabilitation efforts.

Under the NDRRMC as stipulated in National Disaster Response Plan (NDRP) the clusters:

1. Food and Non-Food Items
2. HEALTH (Wash, Health, Nutrition, and Psychological Services)
3. Protection
4. Camp Coordination and Management
5. Logistics
6. Emergency Telecommunications
7. Education
8. Search, Rescue, and Retrieval
9. Management of the Dead and the Missing
10. Law and Order
11. International Humanitarian Assistance

The NOSCOP, due to oil spills unique and disastrous impacts, enumerates the following additional clusters.

SECTION 1. ON MITIGATION AND RESPONSE

Given the impact of oil on shoreline resources, responders must exhaust all efforts to prevent oil from reaching the shoreline. Part of initial response procedures should be directed toward removing oil from areas that were severely affected particularly those that are highly sensitive to oil.

SECTION 2. ON RELIEF OPERATION

Notwithstanding the polluter's pay principle, the spiller must pay and provide for affected communities. Tier I - relief operations for oil spill affected communities shall be managed by the Local Government Unit (LGU) with jurisdiction. For Tier II and Tier III, relief operation for oil spill affected communities will be managed by the Department of Social Welfare and Development (DSWD).

SECTION 3. ON ANIMAL WILDLIFE RESPONSE

Birds, mammals and reptiles are animal wildlife directly affected during oil spill. To mitigate the impact, responders must conduct careful planning. As such, the DENR's Biodiversity Management Bureau[14] is designated as the responsible agency for wildlife response. (See **Annex 17** Guidelines for Oiled Wildlife Response Planning, IPIECA Report Series Volume 13)

SECTION 4. ON OIL AND OILY WASTE MANAGEMENT

In the event of a spill and the subsequent clean-up operations, Oil and Oiled debris collected becomes a waste that should be segregated, stored, treated, recycled or disposed of. The ability to immediately remove spilt oil and oil-contaminated debris is dependent on the ability of responders to transfer the recovered oil and oily debris to temporary storage sites until a permanent disposal site has been identified. However, the disposal of contaminated oil, which is considered a hazardous waste under RA 6969, must be disposed in a manner prescribed in the said law.

Therefore, to comply with the law, the DENR in consultation with the Head of the affected LGU shall designate a temporary storage facility or area, subject to indemnification by the spiller of all costs incurred by the said LGU. The spiller shall be responsible for the final disposal of all collected oily debris or contaminated oil and "good" oil. (See **Annex 18** Managing Oily Waste Storage and Disposal)

SECTION 5. ON REHABILITATION

For Tier I and Tier II, rehabilitation of affected shoreline and communities shall be undertaken only after clean-up operation has been terminated. Affected areas must continuously be monitored to assess the extent and possibility of recovery by the DENR. It is the primary responsibility of the Local Government Units (LGUs) affected to undertake rehabilitation measures.

For Tier III, affected areas must continuously be monitored to assess the extent and possibility of recovery by the DENR. Rehabilitation of affected communities shall be undertaken by the National Economic and Development Authority (NEDA).

SECTION 6. ON INTERNATIONAL AND REGIONAL COOPERATION

Pursuant to PD 602, Section 4, the PCG shall by way of the NOCOP "shall be the point of contact with similar national operation centers of ASEAN member countries and shall cause, when necessary, the immediate call for assistance from such countries to help contain oil pollution. The Center shall, similarly, respond to call for assistance by ASEAN member countries.

Some oil spills require the presence of foreign oil spill response organizations (OSRO). For this purpose, the NOSCOP shall contain provisions that the Bureau of Immigration and Deportation (BID) will ensure to facilitate working visas for foreign responders at the soonest possible. In the same manner, the Bureau of Customs (BOC)

[14] Formerly Protected Areas and Wildlife Bureau (PAWB)

shall be required to facilitate the fast clearance and release of imported MARPOL equipment brought by foreign OSROs to address the immediate need of the disaster.

SECTION 7. OTHER GOVERNMENT AGENCIES AND ORGANIZATIONS

To address disasters of enormous magnitude such as Tier III oil spill, the response requires a holistic or one-nation approach. For this reason, the cooperation of all government agencies, departments and bureaus, including private entities is needed to respond, mitigate and rehabilitate affected areas. The following agencies and or private entities shall be required to perform tasks as part of this NOSCOP:

Agencies or Organizations	Responsibility	Activities
LGU - PROVINCIAL GOVERNOR, CITY/MUNICIPAL MAYOR, BARANGAY CAPTAIN	Preparation	Conduct oil spill preparedness and response trainings in coordination with the PCG
	Tier I Response	Provide assistance to municipal mayors
	Tier II Response	Assist in providing manpower
	Tier III Response	Assist in providing manpower
	Demobilization/ Termination	Provide representative to the oil spill assessment team
NDRRMC, PDRRMC, CITY / MUNICIPAL DRRMC, BDRRMC	Preparation	Conduct trainings on ICS and Crisis Management
BFAR	Preparation	Provide list of fishing grounds and maricultural areas
	Tier I Response	Assess water quality and monitor the fish sanctuary/moratoriums in the area
	Tier II and III Response	Regional Offices to provide experts to declare fish moratoriums and to assess water quality in the area
BFP	Tier I, II and III Response	Provide firefighting and rescue assistance during oil spill incidents
DENR-EMB	Preparation	(1) Identify possible disposal sites and to provide list of registered Hazardous Wastes Storage and Treatment facilities (2) Facilitate/Issuance importation permits for response materials
	Tier I, II and III Response	Provide experts to join in the conduct of assessment and water quality monitoring
DOE	Preparation	Direct power barges to comply the environmental requirements and provide list and maps of service contractors
DOH	Preparation	Prepare Teams for Oil Spill Response scenarios
	Tier I, II and III Response	(1) Provide technical assistance and support to the local health authority through regional Health Office (2) Provide support for a timely and appropriate public health services to the responders and affected population.

DFA	Tier II and III Response	Facilitate the VISA processing and clearances for foreign experts and responders, including aircraft, vessels, and equipment
DOJ	Preparation	Provide legal advice
	Tier I, II and III Response	Provide legal services to affected stakeholders and LGUs
DOF	Tier II and III Response	Issue exemption for the importation of MARPOL equipment
DOLE	Preparation	Set wages and working conditions
	Tier I, II and III Response	Ensure that labor rights of oil spill responders are respected
MARINA	Preparation	Provide list of insurers and inventory of Philippine-registered vessels
	Tier I Response	Assist in identifying vessel, company, and owner
	Tier II and III Response	(1) Direct shipping companies to assist during oil spill (2) Assist in identifying vessel, company, and owner
NAMRIA	Preparation	Provide trainings on GIS and GPS. Provide nautical charts and geospatial data
	Tier II and III Response	Provide nautical charts, geo-spatial data, and hydrographic survey
PAF	Preparation	Conduct TI & E on PAF role during oil spill response operations and aerial surveillance
	Tier I, II and III Response	Provide assets for aerial surveillance
PAGASA	Preparation, Tier I, II, and III Response	Provide weather forecasting services
PNP	Tier I, II, and III Response	Provide security for oil spill responders and equipment; Provide water and air assets for surveillance.
Port Authority (includes PPA, Cebu Port Authority, and other agencies exercising authority over ports)	Tier I, II, and III Response	Provide berthing space and port services for vessels used for oil spill response operations.
PA, PN	Tier I, II, and III Response	Assist in providing manpower and assets for oil spill response
PIA	Tier I, II, and III Response	Conduct information drive for public awareness and updates on oil spill response operations
UP Manila	Tier I, II, and III Response	Provide experts to give health effect advise during oil spill response
UP-MSI	Preparation	Conduct research on oil spill modeling, ESI mappings, and bioremediation
	Tier I, II, and III Response	Provide team of experts to give technical advice
OSRO	Tier I, II, and III Response	Assist in providing manpower and equipment for complete oil spill cleanup
Oil Companies & Philippine Institute of Petroleum (PIP) IPPCA (Independent Philippine Petroleum Companies Association) IPPCA	Preparation	Prepare Oil Spill Contingency Plans (OSCP)
	Tier I, II, and III Response	Assist in providing manpower and equipment

Shipping Companies	Tier I, II, and III Response	Provide transportation for manpower and equipment
BOC, BI	Tier II and III Response	Assist in allowing the immediate or earliest entry of **foreign** OSRO's manpower and equipment to prevent further escalation of damage caused by oil spills.

CHAPTER VII. COORDINATION, COMMAND AND CONTROL

SECTION 1. COORDINATION (CLUSTERS)

It is important to have an organized response system in order to accomplish the NOSCOP's goals and objectives and to provide the necessary services for the affected population. In dealing with a "worst case scenario", it is expected that various government agencies and Civil Society Organizations (CSOs) and stakeholders will be operating to provide resources and services for response and recovery. Therefore, in order to be able to properly manage the influx of resources and services, it is a must to have a system in place that will dictate the best arrangements for efficient and effective coordination, command and control.

In the NOSCOP the clusters members and lead agency with corresponding roles and responsibilities are:

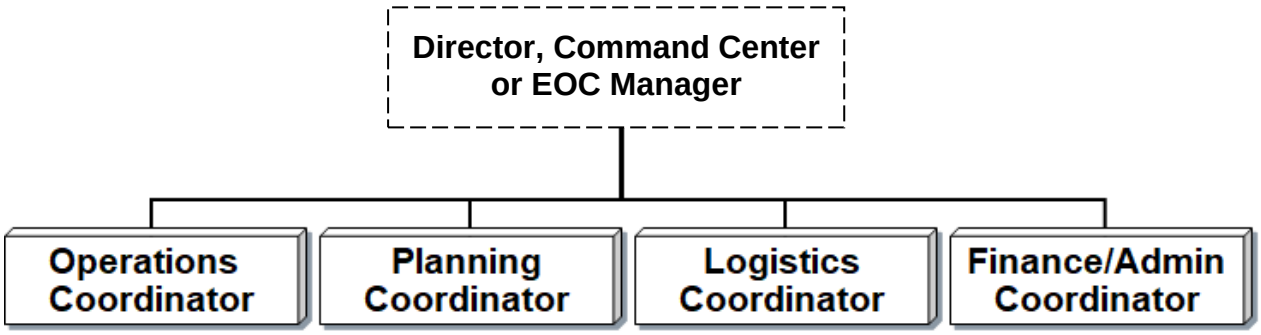
	CLUSTER	LEAD AGENCY / OFFICE	MEMBER AGENCIES OR OFFICES
1	Food and Non-Food Items	DSWD	
2	Health	DOH	LGU
3	Camp Coordination and Management	DSWD	
4	Logistics	OCD	BOC
5	Emergency Telecommunications	OCD	DICT, NTC
6	Education	DepEd	CHED
7	Search, Rescue, and Retrieval	PCG	
8	Management of the Dead and the Missing	DILG	DOH
9	Law and Order	PNP	
10	International Humanitarian Assistance	DFA	BOC, BI, DSWD
11	Protection	DSWD	
12	Oil Spill Mitigation and Response	PCG	MARINA
13	Relief Operation	DSWD	
14	Animal Wildlife Response	DENR	
15	Oil and Oily Waste Management	DENR	
16	Rehabilitation	NEDA	
17	International and Regional Cooperation	DFA	BOC, BI

SECTION 2. COMMAND AND CONTROL

Under this NOSCOP, there shall be two kinds management systems, one is the Emergency Operating Center (EOC) with its EOC Team and the other is the (2) Incident Command System of the Incident Management Team (IMT). Both have separate and distinct powers, responsibilities, and capabilities with which managers and responders must be familiar.

Sec. 2.1. PCG Command Center / Emergency Operations Center (EOC)

The PCG Command Center or Emergency Operations Center shall be responsible for the coordination of resources and needs from the Clusters to the Incident Management Team. The Center shall be headed by the ***Director, Command Center*** or EOC Manager, with its coordinators. As may be applicable, PCG Station / District Operations Center may be considered as Emergency Operations Center to be located in the Coast Guard Stations or Districts.



POSITION	ROLES AND RESPONSIBILITIES
EOC Manager	- Takes guidance from Responsible Official - Provides overall leadership in the EOC - Assigns responsibility to the EOC staff
Operations Coordinator	- Coordinates requirements in support of the emergency response
Planning Coordinator	- Collects, analyzes and displays information - Develops, maintains and disseminates situation reports - Prepares EOC Action Plan - Tracks resources
Logistics Coordinator	- Maintains EOC facilities and equipment - Provides transportation, food, and medical services for all duty personnel
Finance/ Admin Coordinator	- Manages all financial and administrative concerns of the EOC - Facilitates payment of EOC expenses

Sec. 2.2. Responsible Officer

In Tier III or national level response, the Responsible Officer (RO) shall be the Commandant, Philippine Coast Guard. Tier III response and its contingency plan shall only be activated with the approval of CPCG, upon the recommendation of Commander, MEPCOM.

Sec. 2.3. EOC Manager and Team

Under Tier III response, Director, PCG Command Center and Team is the EOC Manager and Team. However, when the need requires, the CPCG also known as the

Responsible Officer (RO) may activate a Crisis Management Team to assume the responsibility of the EOC Team.

Not all incidents will require the activation of the EOC Team and Clusters. The PCG has an active EOC Team, 24/7, with or without oil spills. Tier I and Tier II response may be resolved by simply activating the IMT for the respective tiers.

Sec. 2.4. Incident Command System (ICS)

ICS is a standardized on-scene emergency management concept specifically designed to allow each user to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by authoritative jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies both public and private, to organized field level incident management operations.

Incident Command System is a standardized approach to the command, control, and coordination of emergency response providing a common hierarchy within which the responders from multiple departments, agencies, and bureaus of the government can be effective, efficient and manageable. The PCG adopts the Incident Command System as crisis management tool to conform with R.A. 10121, or the Philippine Disaster Risk Reduction and Management Act of 2010.

It shall be the responsibility of the Coast Guard District Commander and/or Station Commander to have proper training on ICS and the application of the District or Station's Oil Spill Contingency Plan.

For the National Level Response or Tier III response, the Philippine Coast Guard by way of its Marine Environmental Protection Command through the NOCOP shall activate and continuously train an IMT and National Strike Team for the purpose. The IMT and National Strike Team shall have appropriate ICS training and Tier III or national level response for oil spills.

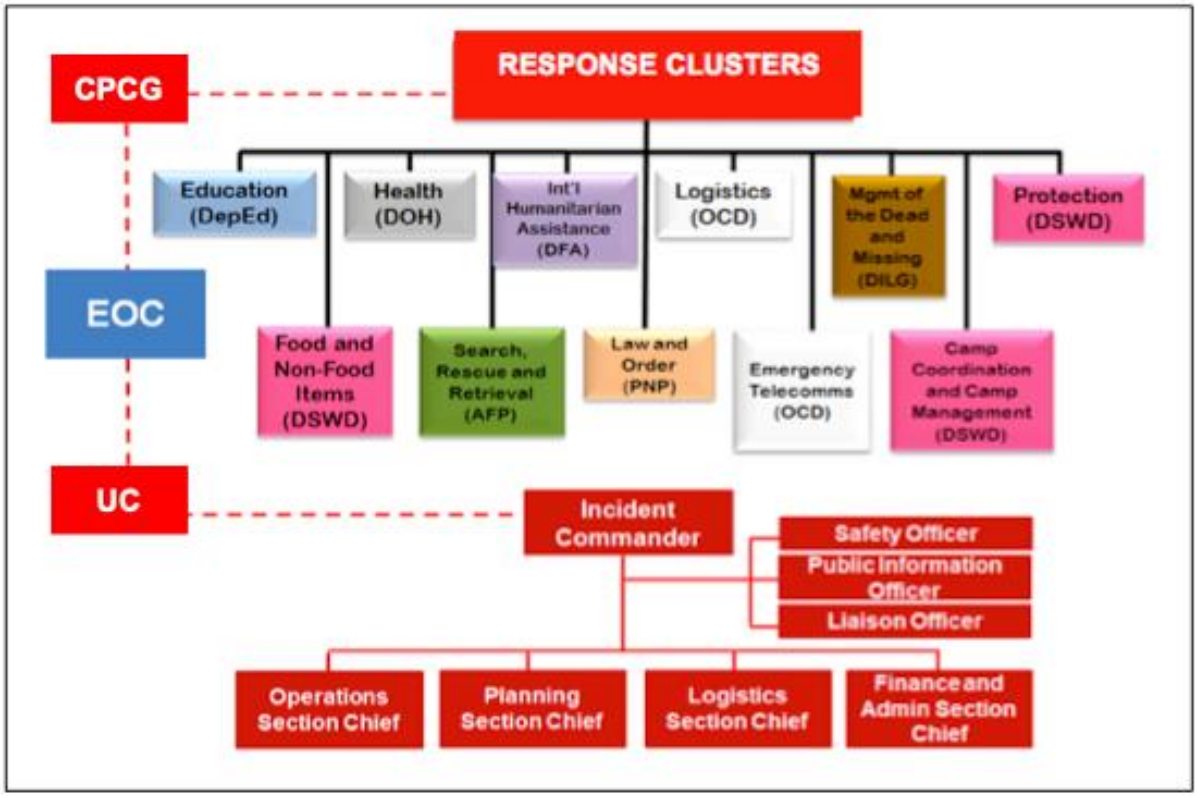
Sec. 2.5. Incident Management Team (IMT)

The Incident Management Team refers to the command and control of an ICS organization. Also referred to as Command and General Staff, the IMT, for purpose of oil spill incidents, provides on-scene management support during incidents or events that exceed a spiller's capability or capacity. The Team includes members of the Philippine Coast Guard, Local Government Unit/s, other governmental agencies, and private sector organizations.

INCIDENT MANAGEMENT TEAM		
Tier I (A) (B)	**Tier II**	**Tier III**
RESPONSIBLE OFFICER		
(A) CG Station Commander (<5,000 liters) or (B) District Commander (>5,000 to 10,000 liters)	CG District Commander	CPCG
UNIFIED COMMANDER		
Not Applicable	Not Applicable	CMEPCOM or any CPCG designated officer
DEPUTY UNIFIED COMMANDER		
Not Applicable	Not Applicable	District Commander
INCIDENT COMMANDER		
(A) Deputy Station Commander or (B) Deputy District Commander or any designated responsible Officer	Deputy District Commander or any designated responsible Officer	NOCOP Director or any designated responsible Officer
MULTIPLE INCIDENT COMMANDER		
Not Applicable	Not Applicable	Allowed
COMMAND STAFF		
Public Information Officer	Public Information Officer	Public Information Officer
Liaison Officer	Liaison Officer	Liaison Officer
Safety Officer	Safety Officer	Safety Officer
Legal Officer	Legal Officer	Legal Officer
Intelligence Officer	Intelligence Officer	Intelligence Officer
Security Officer	Security Officer	Security Officer
Experts from Academe or Industry	Experts from Academe or Industry	Experts from Academe or Industry
GENERAL STAFF		
Operations Section Chief	Operations Section Chief	Operations Section Chief
Planning Section Chief	Planning Section Chief	Planning Section Chief
Logistics Section Chief	Logistics Section Chief	Logistics Section Chief
Finance and Admin Section Chief	Finance and Admin Section Chief	Finance and Admin Section Chief

(See **Annex 23** for Tier I and II ICS Organizational Structure); (See **Annex 24** for Tier III ICS Organizational Structure); (See **Annex 25** for Duties of Key Personnel in the IMT)

SECTION 3. INTER-OPERABILITY FLOWCHART



CHAPTER VIII. ACTIVATION, DEACTIVATION, AND NON-ACTIVATION

As stated in previous chapters, in oil spill disaster response the responders shall apply a Tiered response approach. In some cases of oil spill, a no-response approach or monitor and evaluate may be had. For this reason, it is important to understand when shall the contingency plan be activated and what are the triggers to activate it.

SECTION 1. ACTIVATION

The NOSCOP may be activated by using three tools: (1) Pre-Disaster Risk Assessment (PDRA); (2) Rapid Damage Assessment and Needs Analysis (RDANA); and (3) Reports or Complaints. The NOSCOP shall be triggered depending upon the results of the assessment and report.

Sec. 1.1. PRE-DISASTER RISK ASSESSMENT

The Pre-Disaster Risk Assessment (PDRA) is a process to evaluate a hazard's level of risk given the degree of exposure and vulnerability in a specific area. The PDRA presents the possible impacts to the populace and form as a basis to determine the appropriate level of response actions from the national level government agencies down to the local government units (LGUs). It is hazard specific, area-focused, and time-bound method of assessment.

Sec. 1.2. RAPID DAMAGE ASSESSMENT AND NEEDS ANALYSIS

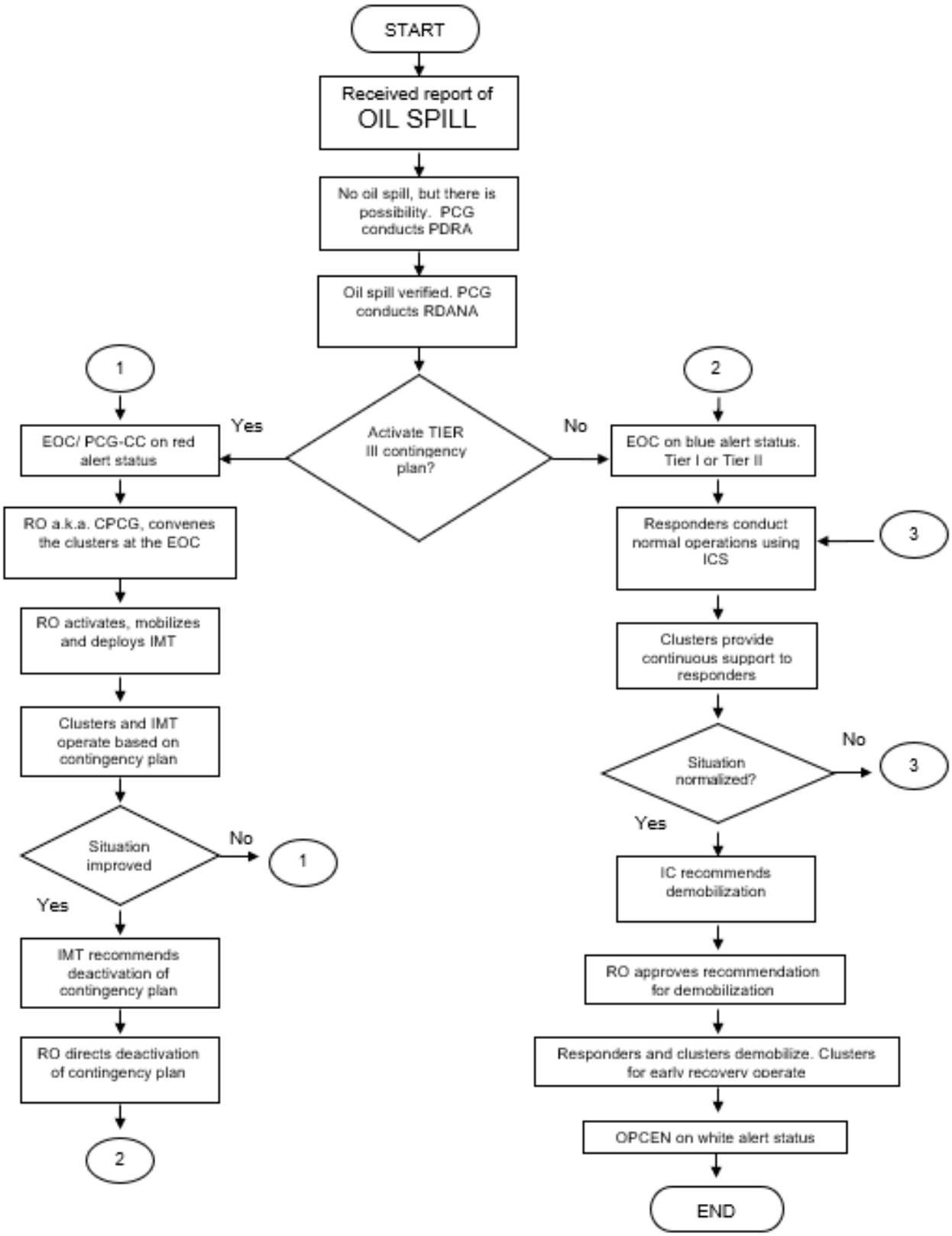
Rapid Damage Risk Assessment and Needs Analysis is a disaster response tool that is used immediately in the early emergency phase to determine the extent of impacts and assess the priority needs of the communities.

Sec. 1.3. REPORTS OR COMPLAINTS

PDRA and RDANA may be applied even without reports. However, in some cases a report or complaint shall be the trigger to conduct PDRA or RDANA. In these cases, follow the **Activation Flowchart** as listed in this NOSCOP.

Sec. 1.4. ACTIVATION FLOW CHART

Here is an example of a flow chart of contingency plan activation and de-activation for oil spill:



SECTION 2.DE-ACTIVATION

The National Level oil spill contingency plan or Tier III response shall be de-activated as soon as situation improves and the Incident Management Team recommends its deactivation.

Meanwhile, the IMT shall continue its operation until its demobilization and the risks of the disaster has ceased.

SECTION 3. NON-ACTIVATION

The national level oil spill response or Tier III response shall not be activated unless the parameters set to trigger it is met.

In the meantime, the IMT shall conduct its operation according to appropriate response, either Tier I and Tier II.

SECTION 4. FORMS

All report emanating from the field shall use the standard forms and format. These forms shall be the basis for the activation, deactivation and non-activation of the Tier III response or national level response.

The mandatory reports with forms are as follows:

FORM NO. 1: Notification of a Marine Oil Spill (Annex 27)

FORM NO. 2: Pollution Report (POLREP) (Annex 28)

FORM NO. 3: Marine Oil Spill Assessment (Annex 29)

FORM NO. 4: Pollution Incident Evaluation Form (Annex 30)

FORM NO. 5: Aerial Surveillance Observer Log (Annex 31)

FORM NO. 6: Incident Update Report (Annex 32)

FORM NO. 7: Request for Response Assistance (Annex 33)

FORM NO. 8: On-Scene Commander Report to D, NOCOP (Annex 34)

CHAPTER IX. BASIC OPERATIONAL GUIDELINES (TIER I, II, III)

This chapter describes specific actions to be carried out during the oil spill response operation regardless whether the response is Tier I, II, and III. The operations guideline is divided into four distinct phases, namely:

a. Initial / Alerting Phase;
b. Planning / Mobilization Phase;
c. Response Phase; and
d. Demobilization / Termination Phase.

The individual phases are defined in the table below.

Phase	Definition
1. Initial / Alerting	From the time the spill is reported and decision to commence oil spill response efforts.
2. Planning / Mobilization	From the time decision is made to commence oil spill response effort until the same is ready for operation (equipment and people are in place).
3. Response	The period during which oil spill response operations are executed (skimming, dispersing, etc.).
4. Demobilization / Termination	All actions from the time decision is made to demobilize and terminate the response measures.

SECTION 1. INITIAL OR ALERTING PHASE

Sec. 1.1. Reporting

Notification of any oil spill may be reported to any Coast Guard Unit using the Form No. 1: Notification of a Marine Oil Spill (Annex 30). But for purposes of this NOSCOP, the initial report may be submitted to the nearest Coast Guard District/Station/Sub-station and/or Marine Environmental Protection Unit. (See Annex 35 List of Oil Spill Relevant Contact Numbers).

The PCG unit or District receiving the report must gather as much information as possible about the reported oil spill. Basic Information required are:

1. Location of the spill;
2. Nature of the spill (oil type, etc.);
3. Approximate quantity of pollutant;
4. Source of the spill;
5. Weather, sea state, and tidal conditions in the area;
6. Initial actions taken; and
7. Identification of the reporter (name, telephone number, etc.).

Important: Initial Report of Oil Spill, even unverified, ***must be simultaneously reported*** *to the following:*

(1) Director, Coast Guard Command Center or EOC;

(2) Commander, MEPCOM or Director, NOCOP; and the

(3) Coast Guard District Commander that has jurisdiction over the area.

Use Form No. 2: Pollution Report (POLREP) as a checklist. (*Annex 28*)

Sec. 1.2. Preliminary Assessment of Reported Spill

The receiving unit of the report of oil spill shall immediately pass the information to the District Operations Center that has jurisdiction over the area of the oil spill. The District Commander shall direct the MEPU Commander to collect and verify data to include the following: (1) Oil Data; (2) Meteorological / Oceanographic Data; (3) Oil Slick Characterization; and (4) Estimating Fate of Slick.

Sec. 1.3. Determination of Tier Response

The Coast Guard District Commander that has jurisdiction over the area of the oil spill shall be responsible for the declaration of the appropriate Tier response upon the recommendation of the MEPU Commander in his area.

Tier III response may only be declared upon the recommendation of the Coast Guard District Commander that has jurisdiction over the area of the oil spill with the confirmation of C, MEPCOM or D, NOCOP and the approval of CPCG.

Sec. 1.4. Notification of Key Personnel and Authorities

Not all oil spill with a corresponding **Tier response** will require the activation of the ICS and the participation of the PCG and other government agencies. Oil spills of minimal nature shall have a Tier I response classification that ordinarily should be handled by the spiller alone. The duty to respond to the oil spill is the responsibility of the spiller. Only in cases where the spiller is unable to properly respond shall the Incident Management Team be activated.

Different Tier responses have different number of key personnel. For this reason, it is important to identify first the Tier response in order to determine the key personnel.

TIER I RESPONSE

For optimum operational capability, oil spill incidents that require Tier I response are divided into two (2) types. The first is a Coast Guard Station level, and the second is Coast Guard District level.

Tier I, Type A

i. **TIER I, TYPE A**. This covers spills of 5,000 liters ($5m^3$) and below
ii. **RESPONSIBLE OFFICER / OVER-ALL AUTHORITY / ON-SCENE COMMANDER**. The Coast Guard Station Commander that has jurisdiction over the area where the oil spill incident occurred shall have over-all authority. He shall also set up the Incident Management Team and have the primary responsibility of communicating with other relevant authorities and observe chain of command.
iii. **INCIDENT COMMANDER.** The Coast Guard Station Commander shall issue written orders designating his Deputy Station Commander or any responsible personnel as Incident Commander (IC).
iv. **MEPU COMMANDER AND PERSONNEL**. The IC shall be assisted by personnel from the Marine Environmental Protection Unit (MEPU). The MEPU Commander or Personnel shall take the lead in the response operations. MEPU Commander shall assume the position, Chief of the Operations Section of the ICS.
v. **OTHER COAST GUARD PERSONNEL**. All Coast Guard personnel within the area where the oil spill incident occurred, or those ordered shall be available and will participate in the oil spill response activities.

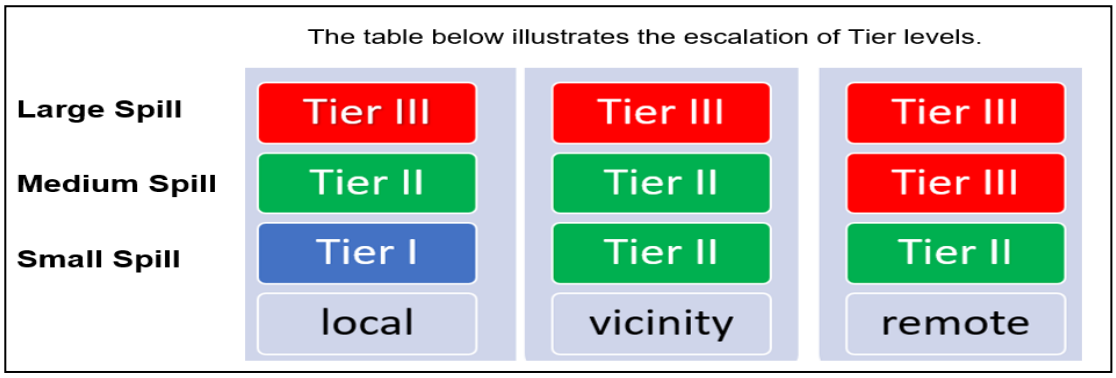
Tier I, Type B

i. **TIER I, TYPE B**. This are oil spills of more than 5,000 liter ($5m^3$) up to 10,000 liters ($10m^3$).
ii. **RESPONSIBLE OFFICER / OVER-ALL AUTHORITY / ON-SCENE COMMANDER**. For this type of Tier oil spill incident, the **Coast Guard District Commander** that has jurisdiction shall have over-all authority. He shall also set up the Incident Management Team and have the primary responsibility of communicating with other relevant authorities and observe chain of command.
iii. **INCIDENT COMMANDER**. The Coast Guard District Commander shall issue written orders designating his Deputy District Commander or any responsible personnel as Incident Commander (IC).
iv. **ESCALATION**. The CG Station Commander in charge of a Tier 1-Type A shall turn-over of the over-all authority of the oil spill incident to the CG District Commander in case the oil spill incident escalates.
v. **TURN-OVER**. CG Station Commander in charge of a Tier 1-Type A shall turn-over floating and non-floating assets, documents, and personnel through a written report to the CG District Commander.
vi. **MEPU COMMANDER AND PERSONNEL**. The IC shall be assisted by personnel from the Marine Environmental Protection Unit (MEPU). The MEPU Commander or personnel shall take the lead in the response operations. MEPU Commander shall assume the position, Chief of the Operations Section of the ICS.
vii. **OTHER COAST GUARD PERSONNEL**. All Coast Guard personnel within the area where the oil spill incident occurred, or those ordered shall be available and will participate in the oil spill response activities.

TIER II RESPONSE

During Tier II oil spills, the Coast Guard District Commander or any responsible officers duly designated by the CPCG will be accountable in ensuring that all oil spill response operations are conducted in accordance with the District OSCP.

i. **RESPONSIBLE OFFICER / OVER-ALL AUTHORITY / ON-SCENE COMMANDER**. The **Coast Guard District Commander** that has jurisdiction shall have over-all authority for Tier II incidents. He shall set up the Incident Management Team and have the primary responsibility of communicating with other relevant authorities and observe chain of command.
ii. **INCIDENT COMMANDER**. The Coast Guard District Commander shall issue written orders designating his Deputy District Commander or any responsible personnel as Incident Commander (IC).
iii. **ESCALATION**. The IC may recommend for the escalation of the oil spill incident to Tier III, upon approval of the CG District Commander, considering the parameters mentioned in Part 1, Section II, Sub-section D, priorities for protection of resources and this diagram:



iv. **MEPU COMMANDER AND PERSONNEL**. The IC shall be assisted by personnel from the Marine Environmental Protection Unit (MEPU). The MEPU Commander or Personnel shall take the lead in the response operations. MEPU Commander shall assume the position, Chief of the Operations Section of the ICS.
v. **OTHER COAST GUARD PERSONNEL**. All Coast Guard personnel within the area where the oil spill incident occurred, or those ordered shall be available and will participate in the oil spill response activities.

TIER III RESPONSE

Marine waters, as a shared global resource, must be protected at all costs. For this reason, Tier III oil spill response shall be made with greater emphasis considering its impact domestically and internationally. During Tier III response, the Tier III contingency plan shall be activated and oil spill response resources shall be augmented by vessels, facilities, local and international OSROs.

The CG District Commander shall transfer command over operations of oil spill incidents that escalate to Tier III to the CPCG.

The CPCG shall designate the Commander, MEPCOM or any responsible officer to have direct responsibility in ensuring that such oil spill response operations are conducted in accordance with the provisions of this Plan.

i. **RESPONSIBLE OFFICER / OVER-ALL AUTHORITY** – The Commandant, Philippine Coast Guard.
ii. **UNIFIED COMMANDER / ON-SCENE COMMANDER**. The Commander, Marine Environmental Protection Command (CMEPCOM), as may be designated by CPCG, shall have authority for Tier III response. He shall set up the Incident Management Team and shall hold the title of **UNIFIED COMMANDER**.
iii. **DEPUTY UNIFIED COMMANDER**. The District Commander where the oil spill incident occurred shall be designated as DEPUTY UNIFIED COMMANDER and shall have the primary responsibility of communicating with other relevant authorities in his area of responsibility. DEPUTY UNIFIED COMMANDERs, may be as many, as the Coast Guard Districts affected.
iv. **TURN-OVER**. The CG District Commander shall turn-over floating and non-floating assets, documents, and personnel through a written report to the CPCG, copy furnished CMEPCOM.
v. **INCIDENT COMMANDER**. The Director, NOCOP, or any responsible officer chosen by the UNIFIED COMMANDER shall be designated as the Incident Commander for Tier III oil spill incidents. The UNIFIED COMMANDER, shall designate multiple Incident Commanders, depending upon the scope and magnitude of the oil spill.
vi. **MEPU COMMANDER AND PERSONNEL**. The IC shall be assisted by personnel from the Marine Environmental Protection Unit (MEPU). The MEPU Commander shall form part of the operations section.
vii. **OTHER COAST GUARD PERSONNEL**. All Coast Guard personnel within the area where the oil spill incident occurred, or those ordered shall be available and will participate in the oil spill response activities.

Sec. 1.5. Staffing the Incident Management Team

Oil Spill, regardless of Tier response shall be managed by an Incident Management Team using the Incident Command System. Depending on the appropriate Tier response, the IMT shall be composed of the Unified Commander and/or Incident Commander and the following:

COMMAND STAFF	GENERAL STAFF
Operations Section Chief	Public Information Officer
Planning Section Chief	Liaison Officer
Logistics Section Chief	Safety Officer
Finance and Admin Section Chief	Legal Officer
Operations Section Chief	Intelligence Officer
	Security Officer
	Experts from Academe (if necessary)

Sec. 1.6. Identifying Resources Immediately at Risk

Estimates of oil spill movements combined with knowledge of geographical locations of environmental and socio-economic resources shall be used to identify important resources at risk. Information about shoreline resources is compiled at the PCG Marine Resources Database, administered and maintained by MEPCOM.

Sec. 1.7. Preparing Initial Press Statement

The CG District Commander or the Station Commander that has jurisdiction over the area of the oil spill shall designate a Public Information Officer (PIO) that shall be responsible for preparing the initial press statements. These should include information on the nature of the spill and actions taken by the government and the spiller to combat the spill.

The designated PIO, in coordination with the CG Public Affairs Office at the National Headquarters PCG and the Philippine Information Agency (PIA) shall notify the public in general, and the stakeholders in particular, who can be potentially affected by the spill and advise them that all precautions must be taken to minimize the damaging effects on resources.

Sec. 1.8. Investigation and Documentation

In case of oil spills, a Coast Guard Legal Officer shall be designated to serve as Legal Officer in the IMT. The Legal Officer shall create a team that will conduct inquiries “motu propio” to ascertain legal facts necessary to establish the spiller’s liabilities. The Legal Officer shall also ensure that necessary documentation is maintained so that government, non-government organizations, juridical entities or individuals who conducted the oil spill response operations may be paid or reimbursed and those that incur damages may be compensated.

SECTION 2. MOBILIZATION PHASE

This is defined as the period from the time decision is made to activate oil spill counter measures until the same is ready for operation (equipment and people in place).
Steps During Mobilization Phase:

Sec. 2.1. Assembling Full Response Action

Tier I and II Response

Upon assessing the situation and determining that there is a need to mobilize the PCG’s response resources, the Coast Guard District Commander or Station Commander that has jurisdiction over the area of the oil spill shall activate the Districts Oil Spill Contingency Plan and issue activation orders for the District’s/Stations IMT. All response personnel and equipment shall assemble at Headquarters of the CG District or Station for accounting and possible mobilization.

Tier III Response

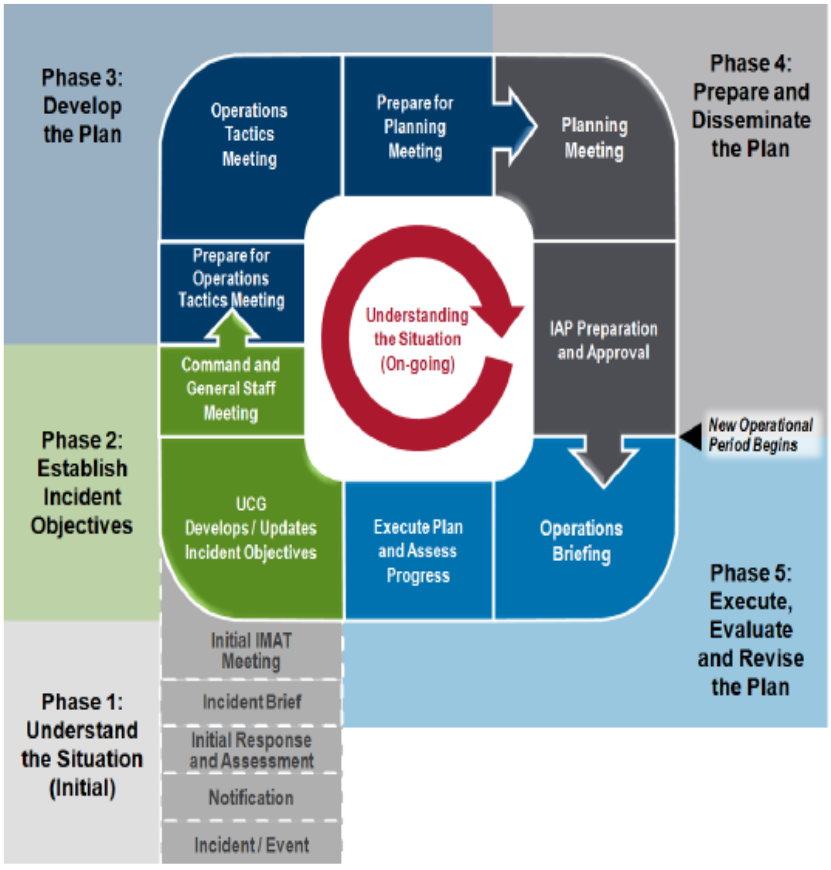
Upon assessing the situation and determining that Tier III response is necessary, the **CPCG or otherwise known as the Responsible Officer** shall activate the National Oil Spill Contingency Plan and mobilize and deploy the pre-activated and designated **IMT** and **National Strike Team members** to conduct response efforts. All response personnel and equipment of the PCG regardless of area shall be assembled at the Headquarters of each CG District for accounting and possible mobilization.

Sec. 2.2. Identifying Immediate Response Priorities

The Unified or Incident Commander shall identify the natural and man-made resources that need an immediate response and priority for protection based on NEBA and estimates of oil spill movements, combined with knowledge of the geographical distribution of environmental and socio-economic resources. Potentially affected communities shall be notified so that all precautionary measures may be taken to minimize the damaging effects of oil spill on environment and resources.

Sec. 2.3. Developing the Incident Action Plan

The Unified Commander or Incident Commander, depending on Tier response, shall order the development of an Incident Action Plan, which will outline the strategic objectives of the spill response and will be used as a guide by the response teams to prepare their Daily Action Plan. The Incident Action Plan should clearly indicate the response end points. The Incident Action Planning P (Process)[15]



[15] FEMA Incident Action Planning Guide 2012

Sec. 2.4. Mobilizing the Response Team

The Unified or Incident Commander shall develop and execute the mobilization plan of the designated response team in proceeding to the site as soon as possible after receipt of the report. The plan should also contain the expected time of arrival of the teams.

Sec. 2.5. Establishing the Incident Command Center or EOC

Regardless of Tier an Incident Command Center must be at a government building, **or any convenient facility**, near the spill site that has easy access to essential command and control facilities and equipment such as communications, data gathering and information sharing equipment, charts, ESI maps, water and electricity.

For Tier I, II, and III response, the Incident Command Center (ICC) shall have an Incident Control Room (ICR) that may be located at the Operations Center of the Coast Guard District that has jurisdiction of the area of the oil spill.

The ICR shall be equipped with necessary radio (VHF-UHF, SSB) and telephone (Facsimile, Internet connection, hotline, and satellite phone) communication, oil spill simulation software and hardware, Geographic Information System (GIS), and audio-visual equipment. (See **Annex 26** Communication Flow Chart).

Sec. 2.6. Establishing the Advance Command Post and Communication

Upon arrival at the spill site, the Incident Commander shall assess the need for establishing an Advance Command Post (ACP) close to the oil spill site. This is especially needed in the event of shoreline cleanup operation or shoreline protection. The ACP should be established in a local government facility that provides suitable conditions for the spill control team including, but is not limited to:

a. Availability of telecommunication (cell phone, satellite phone, telephone, fax, and e-mail);
b. Offices and meeting rooms;
c. Landing site for helicopter;
d. Sleeping accommodations; and
e. Access points by road and/or sea.

The Logistics Officer shall prepare plans for communication between the Oil Spill Response Team (OSRT) in the field, the ACP, the ICC/EOC, and the PCG Command Center.

The primary radio net and frequencies used at the scene of the oil spill will be continuously monitored. Other means of communication including visual call signs may be used at the scene.

Sec. 2.7. On-site / Area Assessment

If the spilled oil has already reached land, the Incident Commander shall form a team composed of Marine Science Technicians (MST) of the MEPCOM, representatives from the affected LGU and available oil spill experts from other organizations to conduct an on-site shoreline assessment to gauge the severity of impacted areas. The MST of MEPCOM shall submit the assessment report to the Planning Officer to develop the most feasible response strategy in carrying out shoreline clean-up operations.

SECTION 3. RESPONSE PHASE

This is defined as the period during which oil spill response measures will be executed (skimming, dispersing, shoreline protection, shoreline cleaning, etc.).

Sec. 3.1. Actual Oil Spill Response Operation

The Incident Commander shall ensure that the Incident Action Plan (IAP), together with the recommendations of the **Clusters** with respect to oil spill countermeasures, are carried out as far as practicable, keeping in mind that all oil spill response operations should be more beneficial than destructive to the marine environment. However, should the spill initial IAP become ineffective or not applicable, the UC/IC shall direct the Planning Section to re-evaluate the situation and formulate a new Incident Action Plan.

Sec. 3.2. Preparing the Daily Action Plan and Updates

The Planning Section Chief is responsible for preparing the Daily Action Plan based on data and information from the Daily Reports of the Operations Section Chief. As such, it is important to continuously update information about the oil spill and of future weather conditions in order to predict the future behavior of the oil and direct oil spill response efforts accordingly.

Sec. 3.3. Preparing Incident Logs and Management Reports

It shall be the responsibility of the Admin and Finance Section Chief to prepare daily Incident Logs and Management Reports subject to the approval of the UC/IC. Incident Logs shall contain a summary of when and how all equipment, supplies, materials, vehicles, vessels and other ancillary apparatus or paraphernalia had been utilized. Management reports shall reflect the activities done during the day, which shall include:

(1) Names of personnel or additional manpower conducting spill clean-up;

(2) Amount of work done per person, measured by the number of man-hours;

(3) Any untoward incidents that may have occurred; and

(4) Oil spill response equipment and materials, vehicles, vessels used and financial expenditures.

Sec. 3.4. Update and Reports

The UC/IC shall continually communicate with the NHPCG and the Clusters to appraise the situation on the ground. As such, the UC/IC shall send Incident Update Reports to CPCG through PCG Command Center / EOC, copy furnished the Cluster, daily at 1200H and 1900H using the POLREP formats.

Sec. 3.5. Involvement of Experts and Advisors

The DNOCOP or Designated Officer shall ensure the availability of necessary assistance from national and international experts to act as advisors. Said experts shall form part of the Command Staff of the IMT.

Sec. 3.6. Obtaining Additional Equipment, Supplies and Manpower

After the initial mobilization, the Logistics Section Chief and Admin Section Chief shall assess the need for additional equipment, supplies, or manpower based on the IAP and make the necessary Logistical plans for the acquisition of the same.

Sec. 3.7. Occupational Health and Safety

The Health and Safety Officer together with DOH and DOLE personnel shall ensure that all people involved in oil spill response are equipped with Personnel Protective Equipment (PPE) suitable to counteract health hazard that are present in the spill site as to minimize responders' exposure to the hazards of the spilt oil. The number of required or sets of PPE shall correspond to the number of responders required in the vessel's or facility's OSCP in case of oil spill.

Minimum Requirements of PPE include:

1. Protective suit
2. Gloves
3. Hard hat
4. Goggles
5. Disposable facemask; and
6. Safety boots

The company's Safety Officer shall be responsible for the classification and definition of different hazard zones and the identification of appropriate PPE's for each zone. The Safety Officer is given discretion or prerogative to identify appropriate PPE's based on risk assessment of a particular oil spill incident.

The DOH shall provide EMS[16] units to respond to untoward incidents that may result in injury to response personnel. The DOLE shall likewise ensure that the labor rights of hired workers/spill responders will not in any way be infringed upon.

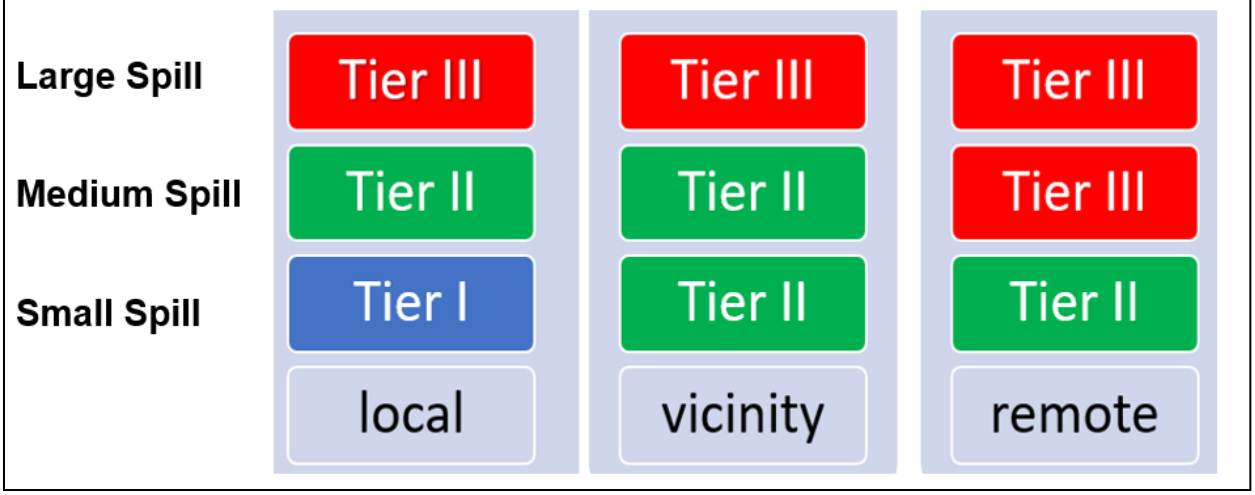
[16] Emergency Medical Services

Sec. 3.8. Escalation or Downgrading of Response

Based on most recent reports, UC/IC shall recommend to CPCG the escalation or reduction of oil spill response efforts. The UC/IC must ensure that plans are always available for the escalation or reduction of the response.

Volume of Oil Spill	Tier	Escalation of Tiers
1 liter to 10,000 liters (0.001m3 - 10m3)	I	(1) In case spiller does not have appropriate equipment or manpower to control, mitigate, and abate the oil spill, or (2) the spill occurred in sensitive areas identified using NEBA or other tools, then the tier classification shall escalate to Tier II, as the case may be.
10,001 liters to 1,000,000 liters (10.001m3 – 1,000m3)	II	The tier shall escalate to Tier III in cases where (1) the vessel or facility, together with industries in the area, OSRO, and other stakeholders does not have appropriate equipment or manpower to control, mitigate, and abate the oil spill, or (2) the spill occurred in sensitive areas identified using NEBA or other tools.
More than 1,000,000 liters (1,000m3)	III	Tier III level response does not escalate as it is the highest level. This is an oil spill of great proportion and shall automatically activate the application of the National Oil Spill Contingency Plan (NOSCOP).

The table below illustrates the escalation of Tier levels.



Sec. 3.9. Preparing Operations Accounting and Financial Reports

The Finance Section Chief shall continuously monitor and estimate the costs associated with the response options to be implemented. Said officer shall keep the UC/IC, and the spiller; about the **running cost or amounts** associated with the oil spill response.

Cost recovery measures or accounting shall follow the Civil Liability Convention (CLC) or **International Oil Pollution Convention (IOPC) guidelines and claims manual for tankers**. For other sources of oil spills, the Polluters Pay principle shall apply or the provision of **RA 9483 or Oil Compensation Act**

Sec. 3.10. Preparing Information for the Public and Press

The designated Public Information Officer shall prepare all necessary press statements. Statements must include clear facts about the spill based on reports as approved by the UC/IC for release. The said officer shall also prepare press conferences or meetings with the public that the IMT considers necessary.

Sec. 3.11. Briefing of Local and National Government Officials

The UC/IC shall ensure that local and national government officials are properly informed about the incident. These includes actions already done and those that are yet to be executed. This is carried out by conducting daily briefing on the status of the incident every 1600H.

The UC/IC must also send reports to EOC or PCG Command Center for dissemination to Heads of concerned NGAs.

All releases of information and statements must be in accordance with current communication operational instructions and document security measures.

SECTION 4. DEMOBILIZATION OR TERMINATION PHASE

Demobilization or Termination of Operations Phase is the final phase in oil spill response. All response efforts will be terminated upon the recommendation of UC/IC to the Responsible Officer. The UC/IC's decision to terminate operations must be made based on oil spill response endpoints achieved according to findings, analysis, and evaluation made upon consultation with the DENR and other technical and/or scientific experts.

The RO or CPCG shall then refer the matter to the Clusters for concurrence. Upon concurrence of all cluster members and lead agencies, the RO or CPCG shall then authorize the termination of the response operations.

Sec. 4.1. Wildlife Response Demobilization

The wildlife response demobilization will take into account all casualties resulting from an oil spill incident. It is common for an animal to remain in rehabilitation even after majority of animals have been released already. De-escalation of wildlife

response in the matter of distribution or re-housing of residual animals from the primary response facility may be undertaken when a balance of cost in sustaining its operation dictates that the same will be more economical.

Sec. 4.2. Monitoring of Unrecovered Oil

The UC/IC with the assistance of DENR and in cooperation with the local environmental authorities shall identify any need for additional beach clean-up in the future for areas with unrecovered oil and prepare plans on how the polluted areas can be monitored. In addition, plans must be made for any necessary means to protect wildlife and people from the remaining contamination.

Sec. 4.3. Demobilizing, Cleaning, Maintaining, and/or Replacing Equipment

The Logistics Section Chief shall prepare plans for the demobilization and return of equipment to the designated storage areas. Plans shall also be made for cleaning, maintaining and assessing the technical state of equipment. Reports of the status of equipment shall also be made.

Moreover, the termination of response shall involve the following:

1. The recovery, cleaning and maintenance of all equipment used during the cleanup;
2. The demobilization of all personnel involved in the response; and
3. The collation and completion of all documentations associated with the spill response including expenditure reports.

After the demobilization of equipment and facilities, the same will be restored to pre-spill capability. Additional resources will be needed to be retained to complete the rehabilitation of equipment and facilities.

Sec. 4.4. Debriefing

A debriefing of UC/IC Command and General Staff or IMT shall be made. RO or CPCG shall appoint a **third-party facilitator** to conduct the debriefing.

The debriefing shall be held following the termination of the response operations. This will serve as a review of the appropriateness of the resource preparations and contingency plans. The debriefing will also highlight areas where the response and planning could be improved.

The Finance and Admin Section shall be responsible for arranging the time and venue of the debriefing. They shall inform the persons required to attend the debriefing process. Those persons are expected to attend the debriefing.

Costs associated with attending the debriefing or the completion of reports shall be considered to be part of the overall incident response. This phase includes all actions after decisions were made to downsize or terminate the operation.

Before response personnel depart from their stations, they should attend a debriefing meeting with their respective Section Chief. The Section Chief will then attend debriefings with their IC.

As part of the termination process, all Sections shall compile a detailed event log. These logs should be submitted to the Finance and Admin Section for consolidation, recording and safekeeping. The Finance and Admin Section is responsible for ensuring that the event history is compiled, costs are recovered, enforcement procedures are undertaken (if warranted), and for arranging the running of the post-incident debriefings.

Sec. 4.5. Preparing the Formal Final Oil Spill Report

The PCG through the Coast Guard Legal Service shall be responsible in preparing the Formal Final Oil Spill Report, which can be used as evidence in filing for oil spill damage claims.

If any entity, individual, organization or local government unit shall file their claim, the PCG shall assist pursuant to Civil Liability Convention (CLC) or **International Oil Pollution Convention (IOPC) guidelines and claims manual for tankers**. For other sources of oil spills, the Polluters Pay principle shall apply or the provision of **RA 9483 or Oil Compensation Act**

Sec. 4.6. Formal Final Oil Spill Report

The Formal Final Oil Spill Report shall include the following component reports:

a. Incident Action Plan

The Incident Action Plan for every operational period.

b. Maps

The Final Oil Spill Report shall also include all Incident Maps, Facility Maps, Transportation Maps, or any incident display that has been produce for the oil spill response.

c. Press Release and Public Information Records

All press release and public information records, including documentation from public meetings must be attached in the Final report.

d. Summary Incident Report (after spill report)

The Operations Section Chief shall prepare this report. This summarizes the oil spill response counter measures and the outcomes as a result of these counter measures, describing in words the oil spill incident in its day-to-day situation and progression, the response actions, and the experiences gained.

e. Environmental Damage Report

The Planning Section Chief shall prepare this report. This report describes the areas and expected environmental resources to be affected by the oil spill, estimated fatalities, expected recovery time, etc.

f. Detailed Financial Report

Each Incident Command of the IMT shall prepare a report summarizing costs associated with their area of responsibility, including manpower, rentals, purchases, equipment deterioration, etc.

g. Summary Financial Report

The Finance Section Chief shall prepare a report of all expenses associated with the spill response based on accounting maintained during the operation period and the inputs from the IMT.

h. Claims Report

The Finance Section Chief shall summarize all claims of the PCG including external parties that was submitted for recording.

i. Consolidated Report

DNOCOP shall prepare a consolidated report including information from all the above reports.

Sec. 4.7. Reviewing Plans and Procedures from Lessons Learned

After the demobilization is completed, debriefing should be arranged providing advice on how the NOSCOP may be improved.

CHAPTER X. CLAIMS AND COMPENSATION

Aside from claims for payment for equipment and supplies used in the containment and clean-up of oil spills, individuals or groups who have suffered quantifiable economic loss brought by the spill can apply for compensation through existing international compensation regimes in which the country has acceded to. The 1992 Civil Liability Convention and the 1992 FUND Convention, as well as **RA 9483 or Oil Compensation Act**, provides guidelines for the application, assessment and payment for claims arising from the damaging effects of oil.

SECTION 1. USE OF RESOURCES

As discussed in previous sections it is the spiller's responsibility to conduct oil spill response. In the event that the spill exceeds the capability of the spiller, the response efforts shall be augmented by government or other entities. The spiller must compensate the equipment, supplies and manpower that were used.

Sec. 1.1. Equipment and Supplies
Sec. 1.2. Manpower
Sec. 1.3. Others

SECTION 2.DAMAGES AND REHABILITATION

Claim for damages and costs of rehabilitations are the primary responsibility of the spiller. Individuals or entities affected, whether private or public must be reimbursed of damages and must be provided adequate funds for rehabilitation.

Sec. 2.1. Individuals
Sec. 2.2. Community
Sec. 2.3. Environment
Sec. 2.4. Other Entities

SECTION 3. PCG'S ROLE ON CLAIMS AND COMPENSATION

The PCG via the IMT it constituted shall only be responsible for the compensation of equipment and supplies under its control. The claims for reimbursement by government or private entities for the use of their equipment and supplies must be proven by the individual entities concerned. **For this reason, it is important that those who contribute to the response effort should check-in their equipment and supplies and be recorded before use.**

Damages and claims for rehabilitation of individuals and entities is the responsibility of the claimant. The PCG by way of the IMT will only assist in the documentation and assessment of damages and in the rehabilitation.

Compensation for both resources used and/or consumed and the damages and request for rehabilitation must be proven by the claimant to the spiller or the fund specially set-aside for the purpose. In case of disputes, the Courts shall be the final arbiter for any claims.

CHAPTER XI. CONTINUOUS DEVELOPMENT

The contingency planning guide insists that a contingency plan should be treated as a living document. For this reason, the contingency plan must undergo continuous development to determine its relevance and applicability, improve the skills of managers and responders, identify gaps in planning, and to provide solutions.

SECTION 1. TRAININGS

All personnel with key functions shall be given appropriate training in view of being prepared to carry out their dedicated tasks. It shall be the responsibility of CMEPCOM to ensure that all personnel dedicated for oil spill response receive the following training:

Sec. 1.1. IMO LEVEL I TRAINING FOR FIRST RESPONDERS

IMO Level I Training for First Responders in oil spills is a First level training designed for technicians or responders who directly participate on oil spill response. Through this course, the participants gain in-depth knowledge on how to conduct risk assessment, identify appropriate types of response, identify priorities for protection, and handle the media.

Sec. 1.2. IMO LEVEL II TRAINING FOR ON-SCENE COMMANDERS

IMO Level II Training for On-Scene Commanders or Second level training designed for supervisors or managers who lead the oil spill response. Through this course, the participants identify safe and efficient oil spill response, appropriate response equipment, select clean-up strategies, determine environmental issues on oil spill response, and handle the media.

Sec. 1.3. IMO LEVEL III ON SPILL MANAGEMENT

IMO Level III Training on Oil Spill Management or Third level training is designed for senior managers, administrators, and officials who are involved in planning for or managing the response to oil spill. Through this course, participants gain understanding on oil spill management, political and media pressures, and safety issues of personnel on responding to oil spills, before and after operational requirements.

SECTION 2. DRILLS AND EXERCISES

The NOSCOP shall be tested through a Table Top Exercise Annually (Second Quarter) with Cluster members. The Table Top exercise shall include the practice and use of the Planning “P” process to come up with the Incident Action Plan (IAP).

Drills and Exercises shall be conducted annually (Third Quarter) amongst PCG Units and Stakeholders, with Cluster members, Regional counterparts in the ASEAN, and International Maritime Organization - Global Initiative for Southeast Asia (IMO-GISEA) experts.

Fund for the PCG's trainings, drills, and exercises of its personnel shall be incorporated in MEPCOMs annual plan and budget.

Funds for the capacity enhancement and capability development of the PCG oil spill responders, as well as the trainings, drills and exercises for Tier III oil spill contingency plan or national level response shall be sourced from the Oil Spill Management Fund under RA 9483 managed by MARINA.

Oil Spill Response and Training Centers accredited by the PCG shall be required to participate in the annual exercise of the Contingency Plan as a condition for their accreditation. The PCG in relation with this provision will craft a memorandum circular with fees, fines, and penalties to ensure proper application.

SECTION 3. ACCREDITATION OF TRAININGS AND CERTIFICATES

In-house trainings, drills, and exercises performed by a stakeholder, LGU, or District shall be submitted to MEPCOM/NOCOP/MEPTI for evaluation and recognition if consistent with existing National Oil Spill Contingency Plan and other circulars by the PCG.

Trainings gained from abroad shall be recognized provided that a certificate is submitted to the PCG following requirements that will be set by a Memorandum Circular or SOP promulgated by the PCG.

It shall be the policy of the PCG to share new techniques, ideas, and innovation in Oil Spill Contingency Planning to other shareholders to effectively combat oil spills as a common concern to all.

SECTION 4. UPDATING AND IMPROVEMENT

The observations made in the drills and exercises, as well as evaluation of the efficacy of the existing contingency plan, and updates in internationally accepted best practices in oil spill management and response operations shall be the basis of the annual updates and improvement in the National Oil Spill Contingency Plan.

PART 2 TIER III
CONTINGENCY PLAN

"Maintain, Update and Execute the Contingency Plan: The Contingency Plan does not end within the four corners of the planning room or kept in drawers and bookshelves."

National Contingency Planning Guidebook, 2018

Note: Part 2 is the actual plan to be implemented in case of oil spill requiring Tier III response. The Tier III contingency plan was prepared with the intention or understanding that the responders can implement the Plan. It is hoped that responders read the whole of NOSCOP, **and conduct exercises**, before the occurrence of an oil spill.

CHAPTER I. PRE-OPERATIONAL CONSIDERATIONS

SECTION 1. TIER III - NATIONAL LEVEL RESPONSE

Tier III response is otherwise known as the National level response on oil spill. **Tier III** response is that which is made for oil spills that which, due to their scale and likelihood to cause major impacts calls for further substantial resources from a range of national and international response.

Tier III response address spills with the largest volume and thus have the potential to affect either a large and/or marine sensitive areas. Tier III arrangements usually call for the entire oil spill response resources of the nation, including that of the Oil Spill Response Organizations (OSRO), and may also call for international assistance.

Sec. 1.1. Authority

This Tier III Response contingency plan was developed by the Philippine Coast Guard by virtue of its mandate under Sec 3(n) of RA 9993[17] and P.D. 979.[18]

Pursuant to both mandates, the PCG takes on the role as the lead agency for Tier III response operations.

Sec. 1.2. National Operation Center for Oil Pollution (NOCOP)

As mandated by PD 602, the National Operation Center for Oil Pollution (NOCOP), under the PCG-MEPCOM (Marine Environmental Protection Command) shall serve as the focal point and coordinating unit of the PCG in cases of spills that would necessitate a multi-agency approach to an oil spill and international cooperation.

[17] The PCG shall "*develop oil spill response, containment and recovery capabilities against ship-based pollution*."

[18] ***Section 6. Enforcement and Implementation*** states that "**The Philippine Coast Guard shall have primary responsibility of enforcing the laws, rules and regulations governing marine pollutio**n. However, it shall be the joint responsibility of the Philippine Coast Guard and the National Pollution Control Commission to coordinate and cooperate with each other in the enforcement of the provisions of this degree and its implementing rules and regulations, **and may call upon any other government office, instrumentality or agency to extend every assistance in this respect.**

SECTION 2. RESOURCES PLAN – TIER III RESPONSE

In addition to the spillers' resources, the PCG's resources shall be available for augmentation of oil spill response efforts beyond the control of the spiller to prevent damage to the environment.

Sec. 2.1. Tier III Oil Spill Equipment and Supplies

Tier III oil spill response operations shall be under the control of the CPCG or his authorized representative. This delegated authority shall make the PCG's oil spill equipment and supplies, all over the Philippines, made available to the Unified Commander.

The Unified Commander shall also have the authority to direct any vessels, facilities, local and international OSROs, to utilize their equipment and supplies in line with the plan being executed by the UC.

Under P.D. 602, the Philippines' national oil spill response may be augmented by calling on the AFP, PNP, other NGAs, LGUs, NGOs, and stakeholders for additional oil spill equipment and supplies, water surface and air assets.

The order to augment does not excuse the spiller from paying for any damage or loss the PCG or any other instrumentality of the government, private vessel, facility or stakeholder may incur in lending assistance by way of equipment and supplies, workforce, surface and aerial assets. The spiller shall always pay in accordance with the Polluter's Pay Principle.

Sec. 2.2. Tier III Manpower

In case of Tier III oil spills, the PCG shall take over response operations. PCG personnel, in addition to other NGAs, bureaus and department personnel may be tapped for response efforts. NGOs, civil society organizations and stakeholders, including but not limited to local government units and residents in the area of the oil spill may also augment the response efforts.

Sec. 2.3. OSROs in Tier III response

During Tier III response, local and international Oil Spill Response Organizations (OSROs), as well as other international entities contracted by the spiller or the national government through the NOCOP, shall be under the direct control and supervision of the PCG-IMT.

SECTION 3. TIER III COORDINATION (CLUSTERS)

In dealing with a "worst case scenario", it is expected that various government agencies and Civil Society Organizations (CSOs) and stakeholders will be operating to provide resources and services for response and recovery. Therefore, in order to be able to properly manage the influx of resources and services, it is a must to have a system in place that will dictate the best arrangements for efficient and effective coordination, command and control.

In Tier III response the clusters members and lead agency with corresponding roles and responsibilities are:

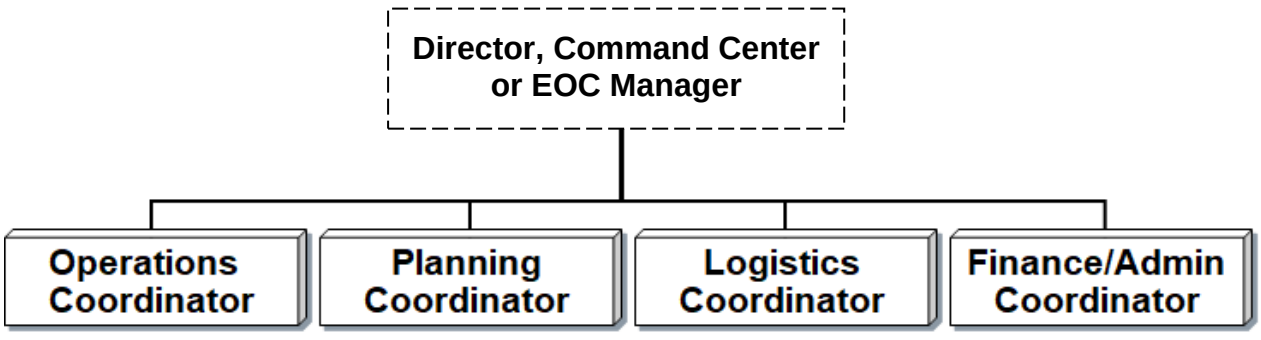
	CLUSTER	LEAD AGENCY / OFFICE	MEMBER AGENCIES OR OFFICES
1	Food and Non-Food Items	DSWD	
2	Health	DOH	LGU
3	Camp Coordination and Management	DSWD	
4	Logistics	OCD	BOC
5	Emergency Telecommunications	OCD	DICT, NTC
6	Education	DepEd	CHED
7	Search, Rescue, and Retrieval	PCG	
8	Management of the Dead and the Missing	DILG	DOH
9	Law and Order	PNP	
10	International Humanitarian Assistance	DFA	BOC, BI, DSWD
11	Protection	DSWD	
12	Oil Spill Mitigation and Response	PCG	
13	Relief Operation	DSWD	
14	Animal Wildlife Response	DENR	
15	Oil and Oily Waste Management	DENR	
16	Rehabilitation	NEDA	
17	International and Regional Cooperation	DFA	BOC, BI

SECTION 4. TIER III COMMAND AND CONTROL

In Tier III response, there shall be two kinds management systems, one is the Emergency Operating Center (EOC) with its EOC Team and the other is the (2) Incident Command System of the Incident Management Team (IMT). Both have separate and distinct powers, responsibilities, and capabilities that must be familiar to the managers and responders.

Sec. 4.1. PCG Command Center / Emergency Operations Center (EOC)

The PCG Command Center or Emergency Operations Center shall be responsible for the coordination of resources and needs from the Clusters to the Incident Management Team. The Center shall be headed by the ***Director, Command Center*** or EOC Manager, with its coordinators. As may be applicable, PCG Station / District Operations Center may be considered as Emergency Operations Center to be located in the Coast Guard Stations or Districts.



POSITION	ROLES AND RESPONSIBILITIES
EOC Manager	- Takes guidance from Responsible Official - Provides overall leadership in the EOC - Assigns responsibility to the EOC staff
Operations Coordinator	- Coordinates requirements in support of the emergency response
Planning Coordinator	- Collects, analyzes and displays information - Develops, maintains and disseminates situation reports - Prepares EOC Action Plan - Tracks resources
Logistics Coordinator	- Maintains EOC facilities and equipment - Provides transportation, food, and medical services for all duty personnel
Finance/ Admin Coordinator	- Manages all financial and administrative concerns of the EOC - Facilitates payment of EOC expenses

Sec. 4.2. Tier III Responsible Officer

In Tier III or national level response, the Responsible Officer (RO) shall be the Commandant, Philippine Coast Guard. Tier III response and its contingency plan shall only be activated with the approval of CPCG, upon the recommendation of Commander, MEPCOM.

Sec. 4.3. Tier III EOC Manager and Team

Under Tier III response, Director, PCG Command Center and Team are the EOC Manager and Team. However, when the need requires, the CPCG also known as the Responsible Officer (RO) may activate a Crisis Management Team to assume the responsibility of the EOC Team.

Sec. 4.4. Incident Command System (ICS)

When national level response or Tier III response is activated, the Philippine Coast Guard by way of its Marine Environmental Protection Command through the NOCOP shall deploy the pre-designated IMT and National Strike Team for the purpose.

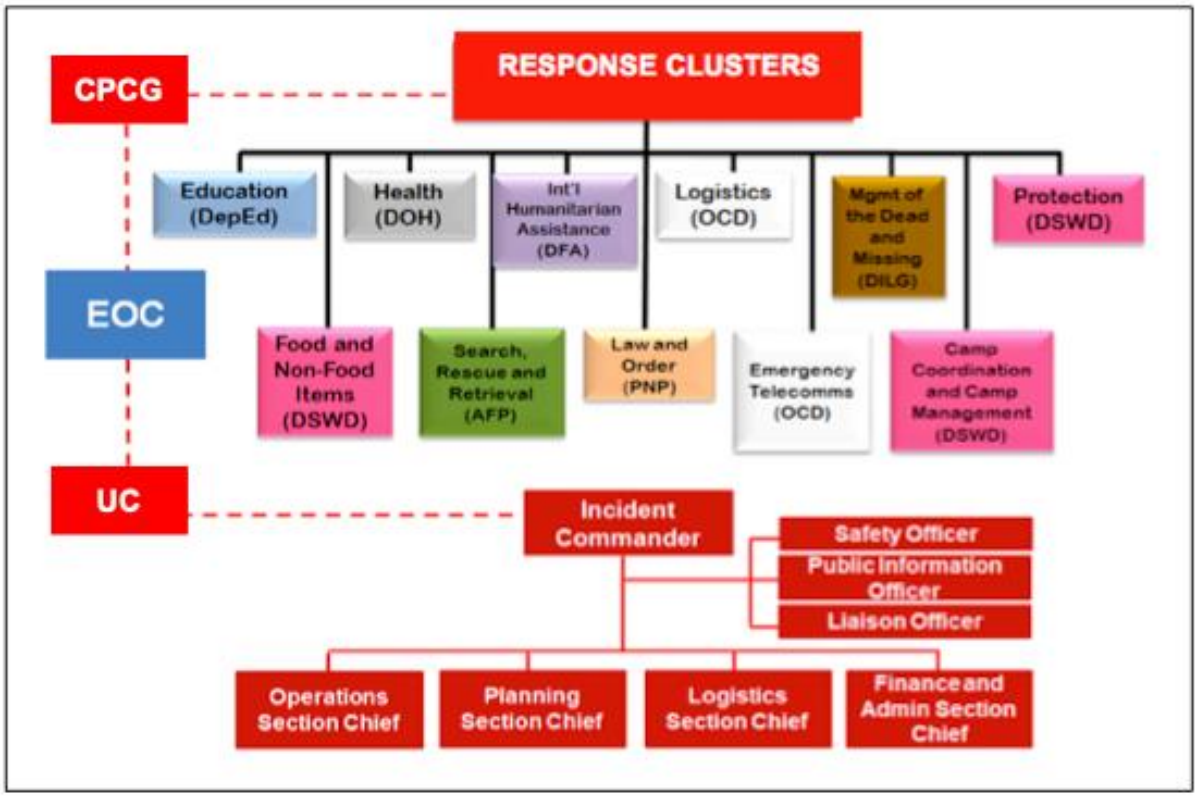
Sec. 4.5. Tier III Incident Management Team (IMT)

The Incident Management Team refers to the command and control of an ICS organization. Also referred to as Command and General Staff, the IMT, for purpose of oil spill incidents, provides on-scene management support during incidents or events that exceed a spiller’s capability or capacity. The Team includes members of the Philippine Coast Guard, Local Government Unit/s, other governmental agencies, and private sector organizations.

TIER III INCIDENT MANAGEMENT TEAM
RESPONSIBLE OFFICER
CPCG
UNIFIED COMMANDER
CMEPCOM or any CPCG designated officer
DEPUTY UNIFIED COMMANDER
District Commander
INCIDENT COMMANDER
NOCOP Director or any designated responsible Officer
MULTIPLE INCIDENT COMMANDER
Allowed
COMMAND STAFF
Public Information Officer
Liaison Officer
Safety Officer
Legal Officer
Intelligence Officer
Security Officer
Experts from Academe or Industry
GENERAL STAFF
Operations Section Chief
Planning Section Chief
Logistics Section Chief
Finance and Admin Section Chief

(See **Annex 23** for Tier I and II ICS Organizational Structure); (See **Annex 24** for Tier III ICS Organizational Structure); (See **Annex 25** for Duties of Key Personnel in the IMT)

SECTION 5. TIER III INTER-OPERABILITY FLOWCHART



SECTION 6. ACTIVATION, DEACTIVATION, AND NON-ACTIVATION

As stated in the first Part of this NOSCOP, oil spill disaster response the responders shall apply must use a Tiered response approach. In some cases of oil spill, a no-response approach or monitor and evaluate may be had. For this reason, it is important to understand when shall the Tier III contingency plan be activated and what are the triggers to activate it.

SECTION 7. ACTIVATION

The NOSCOP may be activated by using three tools: (1) Pre-Disaster Risk Assessment (PDRA); (2) Rapid Damage Assessment and Needs Analysis (RDANA); and (3) Reports or Complaints. The NOSCOP shall be triggered depending upon the results of the assessment and report.

Sec. 7.1. PRE-DISASTER RISK ASSESSMENT

The Pre-Disaster Risk Assessment (PDRA) is a process to evaluate a hazard's level of risk given the degree of exposure and vulnerability in a specific area. The PDRA presents the possible impacts to the populace and form as a basis to determine

the appropriate level of response actions from the national level government agencies down to the local government units (LGUs). It is hazard specific, area-focused, and time-bound method of assessment.

Sec. 7.2. RAPID DAMAGE ASSESSMENT AND NEEDS ANALYSIS

Rapid Damage Risk Assessment and Needs Analysis is a disaster response tool that is used immediately in the early emergency phase to determine the extent of impacts and assess the priority needs of the communities.

Sec. 7.3. REPORTS OR COMPLAINTS

PDRA and RDANA may be applied even without reports. However, in some cases a report or complaint shall be the trigger to conduct PDRA or RDANA. In these cases, follow the **Activation Flowchart** as listed in this NOSCOP.

SECTION 8. TIER III DE-ACTIVATION

The National Level oil spill contingency plan or Tier III response shall be de-activated as soon as situation improves and the Incident Management Team recommends its deactivation.

Meanwhile, the IMT shall continue its operation until its demobilization and the risks of the disaster has ceased.

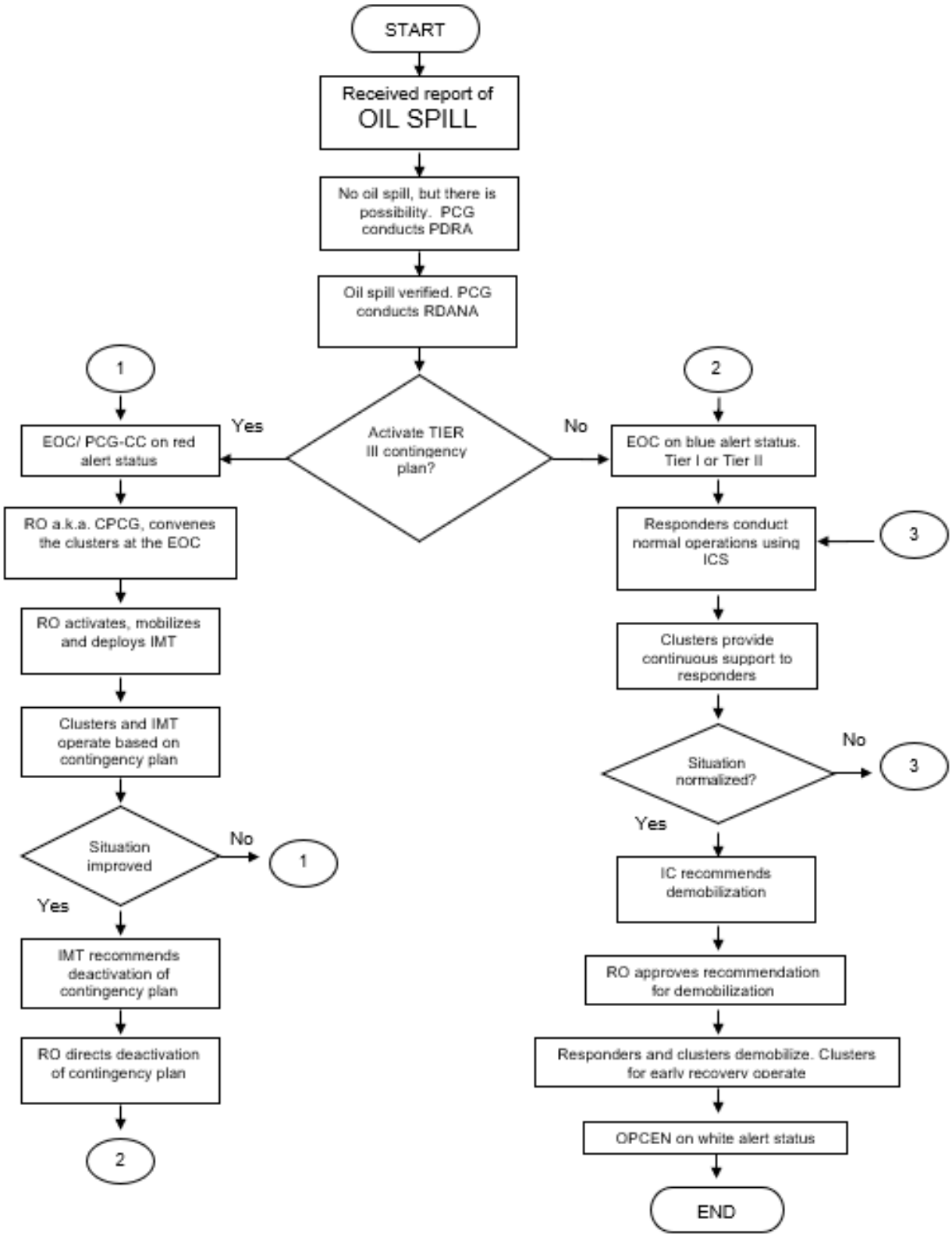
SECTION 9. NON-ACTIVATION

The national level oil spill response or Tier III response shall not be activated unless the parameters set to trigger it is met.

In the meantime, the IMT shall conduct its operation according to appropriate response, either Tier I and Tier II.

SECTION 10. ACTIVATION FLOW CHART

Here is an example of a flow chart of contingency plan activation and de-activation for oil spills:



SECTION 11.FORMS

All report emanating from the field shall use the standard forms and format. These forms shall be the basis for the activation, deactivation and non-activation of the Tier III response or national level response.

The mandatory reports with forms are as follows:

FORM NO. 1: Notification of a Marine Oil Spill (Annex 27)

FORM NO. 2: Pollution Report (POLREP) (Annex 28)

FORM NO. 3: Marine Oil Spill Assessment (Annex 29)

FORM NO. 4: Pollution Incident Evaluation Form (Annex 30)

FORM NO. 5: Aerial Surveillance Observer Log (Annex 31)

FORM NO. 6: Incident Update Report (Annex 32)

FORM NO. 7: Request for Response Assistance (Annex 33)

FORM NO. 8: On-Scene Commander Report to D, NOCOP (Annex 34)

CHAPTER II. TIER III OPERATIONS

This chapter describes specific actions to be carried out during Tier III response. The operations guideline is divided into four distinct phases, namely:

a. Initial / Alerting Phase;
b. Planning / Mobilization Phase;
c. Response Phase; and
d. Demobilization / Termination Phase.

The individual phases are defined in the table below.

Phase	Definition
1. Initial / Alerting Phase	From the time the spill is reported until the decision to commence Tier III or National level oil spill response efforts.
2. Planning / Mobilization Phase	From the time decision is made to commence Tier III oil spill response effort until the same is ready for operation (equipment and people are in place).
3. Response Phase	The period during which oil spill response operations are executed (skimming, dispersing, etc.).
4. Demobilization or Termination Phase	All actions from the time decision is made to demobilize and terminate the response measures.

SECTION 1. INITIAL OR ALERTING PHASE

Sec. 1.1. Reporting

In Tier III response, it is assumed that reporting has already been made and the responders and managers are reviewing the Tier III Contingency plan.

Sec. 1.2. Preliminary Assessment of Reported Spill

Same as Section 1.1. it is assumed the preliminary assessment of the oil spill has been made.

Sec. 1.3. Determination of Tier Response

The Coast Guard District Commander that has jurisdiction over the area of the oil spill shall be responsible for the declaration of the appropriate Tier response upon the recommendation of the MEPU Commander in his area.

PLANNER'S NOTE: REVIEW TO ENSURE THAT ACTIVATION OF TIER III RESPONSE IS NECESSARY.

Tier III response may only be declared upon the recommendation of the Coast Guard District Commander that has jurisdiction over the area of the oil spill with the confirmation of C, MEPCOM or D, NOCOP and the approval of CPCG.

Sec. 1.4. Notification of Key Personnel and Authorities

TIER III RESPONSE

Marine waters, as a shared global resource, must be protected at all costs. For this reason, Tier III oil spill response shall be made with greater emphasis considering its impact domestically and internationally. During Tier III response, the Tier III contingency plan shall be activated and oil spill response resources shall be augmented by vessels, facilities, local and international OSROs.

The CG District Commander shall transfer command over operations of oil spill incidents that escalate to Tier III to the CPCG.

The CPCG shall designate the Commander, MEPCOM or any responsible officer to have direct responsibility in ensuring that such oil spill response operations are conducted in accordance with the provisions of this Plan.

1. **RESPONSIBLE OFFICER / OVER-ALL AUTHORITY**. The Commandant, Philippine Coast Guard.

2. **UNIFIED COMMANDER OR ON-SCENE COMMANDER**. The Commander, Marine Environmental Protection Command (CMEPCOM) or any responsible officer, as may be designated by CPCG, shall have authority for Tier III response. He shall set up the Incident Management Team and shall hold the title of **UNIFIED COMMANDER**.

3. **DEPUTY UNIFIED COMMANDER**. The District Commander where the oil spill incident occurred shall be designated as DEPUTY UNIFIED COMMANDER and shall have the primary responsibility of communicating with other relevant authorities in his area of responsibility. DEPUTY UNIFIED COMMANDERs, may be as many, as the Coast Guard Districts affected.

4. **INCIDENT COMMANDER**. The Director, NOCOP, or any responsible officer chosen by the UNIFIED COMMANDER shall be designated as the Incident Commander for Tier III oil spill incidents. The UNIFIED COMMANDER, shall

designate multiple Incident Commanders, depending upon the scope and magnitude of the oil spill.

5. **TURN-OVER**. The CG District Commander shall turn-over floating and non-floating assets, documents, and personnel through a written report to the CPCG, copy furnished CMEPCOM.

6. **MEPU COMMANDER AND PERSONNEL**. The IC shall be assisted by personnel from the Marine Environmental Protection Unit (MEPU). The MEPU Commander shall form part of the operations section.

7. **OTHER COAST GUARD PERSONNEL**. All Coast Guard personnel within the area where the oil spill incident occurred, or those ordered shall be available and will participate in the oil spill response activities.

Sec. 1.5. Staffing the Incident Management Team

Oil Spill regardless of Tier response shall be managed by an Incident Management Team using the Incident Command System. The IMT shall be composed of the Unified Commander and his Incident Commander(s) and the following:

COMMAND STAFF	GENERAL STAFF
Operations Section Chief	Public Information Officer
Planning Section Chief	Liaison Officer
Logistics Section Chief	Safety Officer
Finance and Admin Section Chief	Legal Officer
Operations Section Chief	Intelligence Officer
	Security Officer
	Experts from Academe (if necessary)

Note: It is assumed that the Operations Section Chief of the IMT for Tier III response by the Senior Officer Present Aboard (SOPA) during the response operation in the Coast Guard District where the oil spill occurred.

Sec. 1.6. Identifying Resources Immediately at Risk

Estimates of oil spill movements combined with knowledge of geographical locations of environmental and socio-economic resources shall be used to identify important resources at risk. Information about shoreline resources is compiled at the PCG Marine Resources Database, administered and maintained by MEPCOM.

Sec. 1.7. Preparing Initial Press Statement

The UC shall designate a Public Information Officer (PIO) that shall be responsible for preparing the initial press statements. These should include information on the nature of the spill and actions taken by the government and the spiller to combat the spill.

The designated PIO, in coordination with the CG Public Affairs Office at the National Headquarters PCG and the Philippine Information Agency (PIA) shall notify the public in general, and the stakeholders in particular, who can be potentially affected by the spill and advise them that all precautions must be taken to minimize the damaging effects on resources.

Sec. 1.8. Investigation and Documentation

In case of oil spills, a Coast Guard Legal Officer(s) shall be designated to serve as Legal Officer in the IMT. The Legal Officer shall create a team that will conduct inquiries "motu propio" to ascertain legal facts necessary to establish the spiller's liabilities. The Legal Officer shall also ensure that necessary documentation is maintained so that government, non-government organizations, juridical entities or individuals who conducted the oil spill response operations may be paid or reimbursed and those that incur damages may be compensated.

SECTION 2. MOBILIZATION PHASE

This is defined as the period from the time decision is made to activate Tier III oil spill counter measures until the same is ready for operation (equipment and people in place). **Steps During Mobilization Phase:**

Sec. 2.1. Assembling Full Response Action

Tier III Response

In Tier III response, the **CPCG or otherwise known as the Responsible Officer** shall activate the Tier III Contingency Plan, mobilize and deploy the pre-activated and designated **IMT** and **National Strike Team members** to conduct response efforts. All response personnel and equipment of the PCG regardless of area shall be assembled at the Headquarters of each CG District for accounting and mobilization.

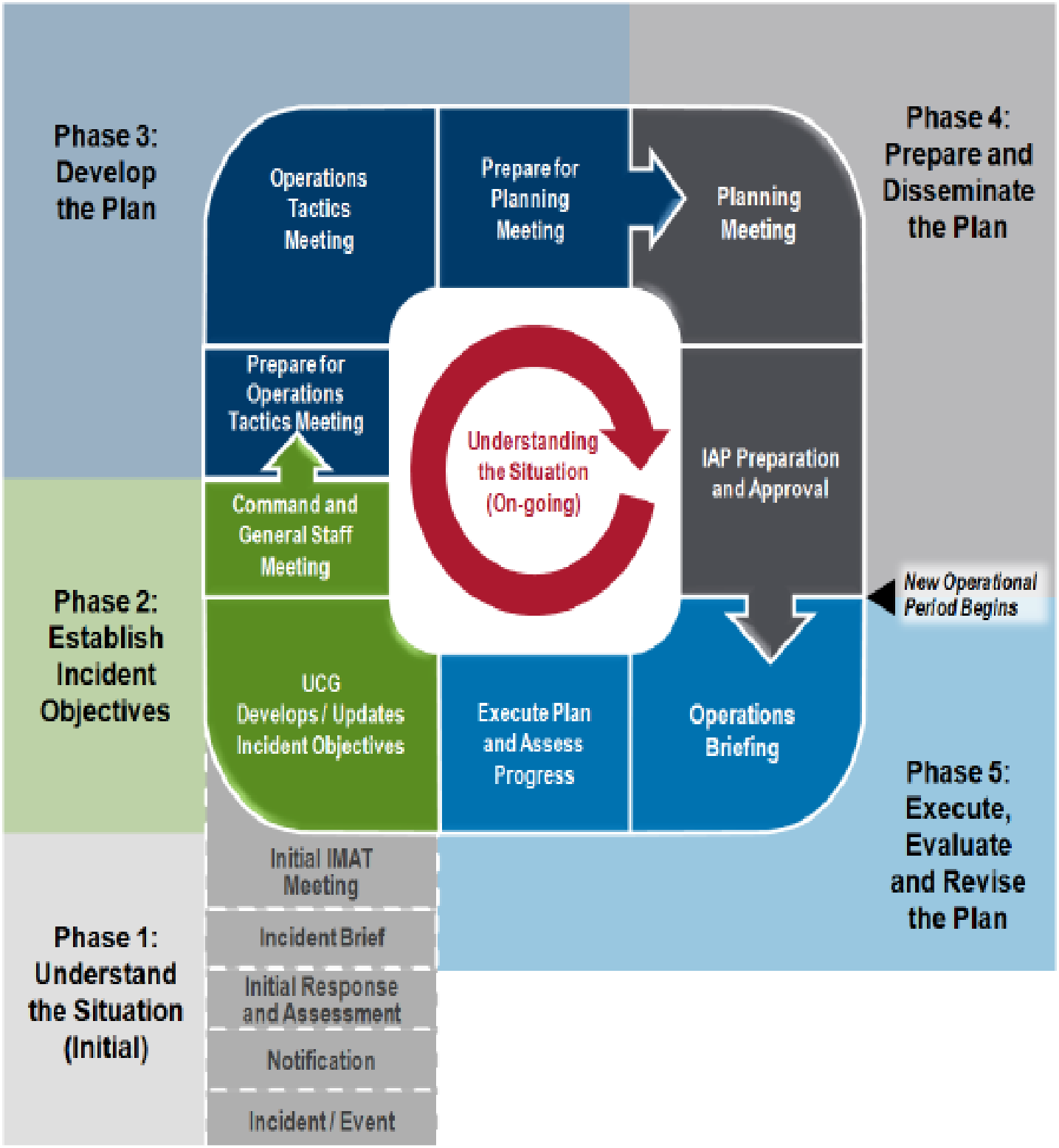
Sec. 2.2. Identifying Immediate Response Priorities

The UC/IC shall identify the natural and man-made resources that need an immediate response and priority for protection based on NEBA and estimates of oil spill movements, combined with knowledge of the geographical distribution of environmental and socio-economic resources. Potentially affected communities shall be notified so that all precautionary measures may be taken to minimize the damaging effects of oil spill on environment and resources.

Sec. 2.3. Developing the Incident Action Plan

The UC/IC, shall order the development of an Incident Action Plan, which will outline the strategic objectives of the spill response and will be used as a guide by the response teams to prepare their Daily Action Plan. The Incident Action Plan should clearly indicate the response end points, guided by the Incident Action Planning P process.

The Incident Action Planning P (Process)[19]



[19] FEMA Incident Action Planning Guide 2012

Sec. 2.4. Mobilizing the Response Team

The UC/IC shall develop and execute the mobilization plan of the designated response team in proceeding to the site as soon as possible after receipt of the report. The plan should also contain the expected time of arrival of the teams.

Sec. 2.5. Establishing the Incident Command Center or EOC

In Tier III response an Incident Command Center must be at a government building, **or any convenient facility**, near the spill site that has easy access to essential command and control facilities and equipment such as communications, data gathering and information sharing equipment, charts, ESI maps, water and electricity.

For Tier III response, the Incident Command Center (ICC) shall have an Incident Control Room (ICR) that may be located at the Operations Center of the Coast Guard District that has jurisdiction of the area of the oil spill.

The ICR shall be equipped with necessary radio (VHF-UHF, SSB) and telephone (Facsimile, Internet connection, hotline, and satellite phone) communication, oil spill simulation software and hardware, Geographic Information System (GIS), and audio-visual equipment. (See **Annex 26** Communication Flow Chart).

Sec. 2.6. Establishing the Advance Command Post and Communication

Upon arrival at the spill site, the UC/IC shall assess the need for establishing an Advance Command Post (ACP) close to the oil spill site. This is especially needed in the event of shoreline cleanup operation or shoreline protection. The ACP should be established in a local government facility that provides suitable conditions for the spill control team including, but is not limited to:

a. Availability of telecommunication (cell phone, satellite phone, telephone, fax, and e-mail);
b. Offices and meeting rooms;
c. Landing site for helicopter;
d. Sleeping accommodations; and
e. Access points by road and/or sea.

The Logistics Officer shall prepare plans for communication between the Oil Spill Response Team (OSRT) in the field, the ACP, the ICC/EOC, and the PCG Command Center.

The primary radio net and frequencies used at the scene of the oil spill will be continuously monitored. Other means of communication including visual call signs may be used at the scene.

Sec. 2.7. On-site / Area Assessment

If the spilt oil has already reached land, the UC/IC shall form a team composed of Marine Science Technicians (MST) and MEP Specialized Squadron of the MEPCOM, representatives from the affected LGU and available oil spill experts from other organizations to conduct an on-site shoreline assessment to gauge the severity of impacted areas. The MST of MEPCOM shall submit the assessment report to the Planning Officer to develop the most feasible response strategy in carrying out shoreline clean-up operations.

SECTION 3. RESPONSE PHASE

This is defined as the period during which oil spill response measures will be executed (skimming, dispersing, shoreline protection, shoreline cleaning, etc.).

Sec. 3.1. Actual Oil Spill Response Operation

The UC/IC shall ensure that the Incident Action Plan (IAP), together with the recommendations of the **Clusters** with respect to oil spill countermeasures, are carried out as far as practicable, keeping in mind that all oil spill response operations should be more beneficial than destructive to the marine environment.

The initial plan to contain the oil spill shall be based on the OSCP or the Emergency Response Plan (ERP) of the facility or the SOPEP of a vessel. The UC/IC shall direct the Planning Section to re-evaluate the situation and formulate a new Incident Action Plan.

Sec. 3.2. Preparing the IAP and Daily Updates

The Planning Section Chief is responsible for preparing the IAP and daily updates based on data and information from the Daily Reports of the Operations Section Chief. As such, it is important to continuously update information about the oil spill and of future weather conditions in order to predict the future behavior of the oil and direct oil spill response efforts accordingly. In preparing the IAP, the UC/IC shall make use of the planning P process, and ensure that all sections utilize every appropriate ICS forms.

Sec. 3.3. Preparing Incident Logs and Management Reports

It shall be the responsibility of the Admin and Finance Section Chief to prepare daily Incident Logs and Management Reports subject to the approval of the UC/IC. Incident Logs shall contain a summary of when and how all equipment, supplies, materials, vehicles, vessels and other ancillary apparatus or paraphernalia had been utilized. Management reports shall reflect the activities done during the day, which shall include:

(1) Names of personnel or additional manpower conducting spill clean-up;

(2) Amount of work done per person, measured by the number of man-hours;

(3) Any untoward incidents that may have occurred; and

(4) Oil spill response equipment and materials, vehicles, vessels used and financial expenditures.

Sec. 3.4. Update and Reports

The UC/IC shall continually communicate with the NHPCG and the Clusters to appraise the situation on the ground. As such, the UC/IC shall send Incident Update Reports to CPCG through PCG Command Center / EOC, copy furnished the Cluster, daily at 1100H and 1700H using the POLREP formats.

Sec. 3.5. Involvement of Experts and Advisors

The DNOCOP or Designated Officer shall ensure the availability of necessary assistance from national and international experts to act as advisors. Said experts shall form part of the Command Staff of the IMT.

Sec. 3.6. Obtaining Additional Equipment, Supplies and Manpower

After the initial mobilization, the Logistics Section Chief and Admin Section Chief shall assess the need for additional equipment, supplies, or manpower based on the IAP and make the necessary Logistical plans for the acquisition of the same.

Sec. 3.7. Occupational Health and Safety

The Health and Safety Officer together with DOH and DOLE personnel shall ensure that all people involved in oil spill response are equipped with Personnel Protective Equipment (PPE) suitable to counteract health hazard that are present in the spill site as to minimize responders' exposure to the hazards of the spilt oil.

Minimum requirement of PPE include:

1. Hard hat;
2. Goggles gloves;
3. Disposable facemask;
4. Gloves;
5. Protective suit; and
6. Safety boots

The DOH shall provide EMS[20] Units to respond to untoward incidents that may result in injury to response personnel.

[20] Emergency Medical Services

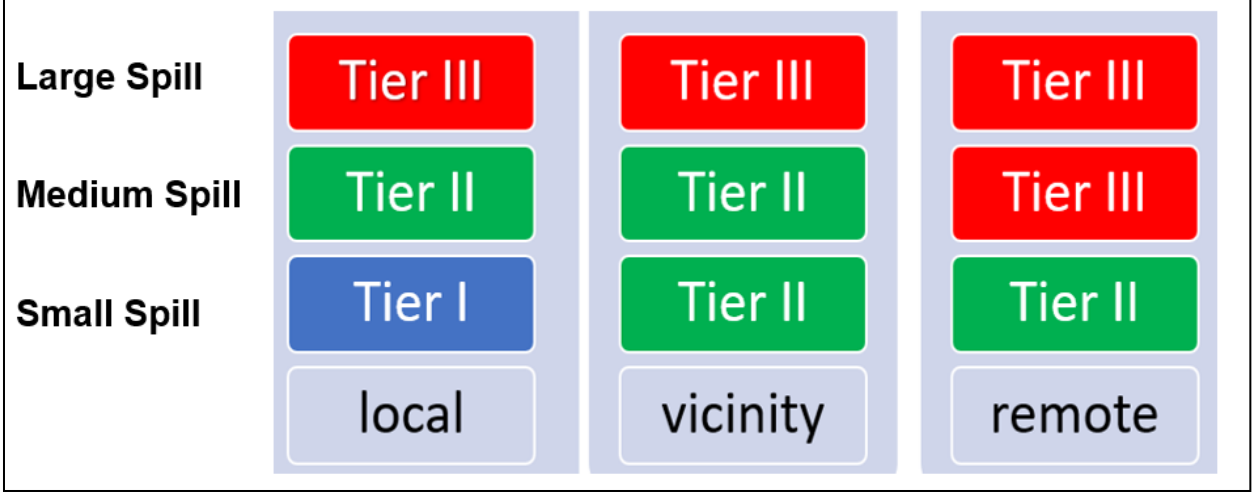
The DOLE shall likewise ensure that the labor rights of hired workers/spill responders will not in any way be infringed upon.

Sec. 3.8. Escalation or Downgrading of Response

Based on most recent reports, UC/IC shall recommend to CPCG the escalation or reduction of oil spill response efforts. The UC/IC must ensure that plans are always available for the escalation or reduction of the response.

Volume of Oil Spill	Tier	Escalation of Tiers
1 liter to 10,000 liters (0.001m3 - 10m3)	I	(1) In case spiller does not have appropriate equipment or manpower to control, mitigate, and abate the oil spill, or (2) the spill occurred in sensitive areas identified using NEBA or other tools, then the tier classification shall escalate to Tier II, as the case may be.
10,001 liters to 1,000,000 liters (10.001m3 – 1,000m3)	II	The tier shall escalate to Tier III in cases where (1) the vessel or facility, together with industries in the area, OSRO, and other stakeholders does not have appropriate equipment or manpower to control, mitigate, and abate the oil spill, or (2) the spill occurred in sensitive areas identified using NEBA or other tools.
More than 1,000,000 liters (1,000m3)	III	Tier III response does not escalate, as it is the highest level. This is an oil spill of great proportion and shall automatically activate the application of the National Oil Spill Contingency Plan (NOSCOP).

The table below illustrates the escalation of Tier levels.



Sec. 3.9. Preparing Operations Accounting and Financial Reports

The Finance Section Chief shall continuously monitor and estimate the costs associated with the response options to be implemented. Said officer shall keep the UC/IC, and the spiller; about the **running cost or amounts** associated with the oil spill response.

Cost recovery measures or accounting shall follow the Civil Liability Convention (CLC) or **International Oil Pollution Convention (IOPC) guidelines and claims manual for tankers**. For other sources of oil spills, the Polluters Pay principle shall apply or the provision of **RA 9483 or Oil Compensation Act**

Sec. 3.10. Preparing Information for the Public and Press

The designated Public Information Officer shall prepare all necessary press statements. Statements must include clear facts about the spill based on reports as approved by the UC/IC for release. The said officer shall also prepare press conferences or meetings with the public that the IMT considers necessary.

Sec. 3.11. Briefing of Local and National Government Officials

The UC/IC shall ensure that local and national government officials are properly informed about the incident. These include actions already done and those that are yet to be executed. These activities are carried out by conducting daily briefing on the status of the incident every 1300H.

The UC/IC must also send reports to EOC or PCG Command Center for dissemination to Heads of concerned NGAs.

All releases of information and statements must be in accordance with current communication operational instructions and document security measures.

SECTION 4. DEMOBILIZATION OR TERMINATION PHASE

Demobilization or Termination of Operations Phase is the final phase in oil spill response. All response efforts will be terminated upon the recommendation of UC/IC to the Responsible Officer. The UC/IC's decision to terminate operations must be made based on oil spill response endpoints achieved according to findings, analysis, and evaluation made upon consultation with the DENR and other technical and/or scientific experts.

The RO or CPCG shall then refer the matter to the Clusters for concurrence. Upon concurrence of all cluster members and lead agencies, the RO or CPCG shall then authorize the termination of the response operations.

Sec. 4.1. Wildlife Response Demobilization

The wildlife response demobilization will take into account all casualties resulting from an oil spill incident. It is common for an animal to remain in rehabilitation

even after majority of animals have been released already. De-escalation of wildlife response in the matter of distribution or re-housing of residual animals from the primary response facility may be undertaken when a balance of cost in sustaining its operation dictates that the same will be more economical.

Sec. 4.2. Monitoring of Unrecovered Oil

The UC/IC with the assistance of DENR and in cooperation with the local environmental authorities shall identify any need for additional beach clean-up in the future for areas with unrecovered oil and prepare plans on how the polluted areas can be monitored. In addition, plans must be made for any necessary means to protect wildlife and people from the remaining contamination.

Sec. 4.3. Demobilizing, Cleaning, Maintaining, and/or Replacing Equipment

The Logistics Section Chief shall prepare plans for the demobilization and return of equipment to the designated storage areas. Plans shall also be made for cleaning, maintaining and assessing the technical state of equipment. Reports of the status of equipment shall also be made.

Moreover, the termination of response shall involve the following:

1. The recovery, cleaning and maintenance of all equipment used during the cleanup;
2. The demobilization of all personnel involved in the response; and
3. The collation and completion of all documentations associated with the spill response including expenditure reports.

After the demobilization of equipment and facilities, the same will be restored to pre-spill capability. Additional resources may be needed to be retained, to complete the rehabilitation of equipment and facilities.

Sec. 4.4. Debriefing

A debriefing of UC/IC Command and General Staff or IMT shall be made. RO or CPCG shall appoint a **third-party facilitator** to conduct the debriefing.

The debriefing shall be held following the termination of the response operations. This will serve as a review of the appropriateness of the resource preparations and contingency plans. The debriefing will also highlight areas where the response and planning could be improved.

The Finance and Admin Section shall be responsible for arranging the time and venue of the debriefing. They shall inform the persons who is required to be debriefed. Those persons are expected to attend the debriefing.

Costs associated with attending the debriefing or the completion of reports shall be considered to be part of the overall incident response. This phase includes all actions after decisions were made to downsize or terminate the operation.

Before response personnel depart from their stations, they should attend a debriefing meeting with their respective Section Chief. The Section Chief will then attend debriefings with their IC.

As part of the termination process, all Sections shall compile a detailed event log. These logs should be submitted to the Finance and Admin Section for consolidation, recording and safekeeping. The Finance and Admin Section is responsible for ensuring that the event history is compiled, costs are recovered, enforcement procedures are undertaken (if warranted), and for arranging the running of the post-incident debriefings.

Sec. 4.5. Preparing the Formal Final Oil Spill Report

The PCG through the Coast Guard Legal Service and NOCOP shall be responsible in preparing the Formal Final Oil Spill Report, which can be used as evidence in filing for oil spill damage claims.

If any entity, individual, organization or local government unit shall file their claim, the PCG shall assist pursuant to Civil Liability Convention (CLC) or **International Oil Pollution Convention (IOPC) guidelines and claims manual for tankers**. For other sources of oil spills, the Polluters Pay principle shall apply or the provision of **RA 9483 or Oil Compensation Act**

Sec. 4.6. Formal Final Oil Spill Report

The Formal Final Oil Spill Report shall include the following component reports:

a. Incident Action Plan

The Incident Action Plan for every operational period.

b. Maps

The Final Oil Spill Report shall also include all Incident Maps, Facility Maps, Transportation Maps, or any incident display that has been produce for the oil spill response.

c. Press Release and Public Information Records

All press release and public information records, including documentation from public meetings must be attached in the Final report.

d. Summary Incident Report (after spill report)

The Operations Section Chief shall prepare this report. This summarizes the oil spill response counter measures and the outcomes as a result of these counter measures, describing in words the oil spill incident in its day-to-day situation and progression, the response actions, and the experiences gained.

e. Environmental Damage Report

The Planning Section Chief shall prepare this report. This report describes the areas and expected environmental resources to be affected by the oil spill, estimated fatalities, expected recovery time, etc.

f. Detailed Financial Report

Each Incident Command of the IMT shall prepare a report summarizing costs associated with their area of responsibility, including manpower, rentals, purchases, equipment deterioration, etc.

g. Summary Financial Report

The Finance Section Chief shall prepare a report of all expenses associated with the spill response based on accounting maintained during the operation period and the inputs from the IMT.

h. Claims Report

The Finance Section Chief shall summarize all claims of the PCG including external parties that was submitted for recording.

i. Consolidated Report

DNOCOP shall prepare a consolidated report including information from all the above reports.

Sec. 4.7. Reviewing Plans and Procedures from Lessons Learned

After the demobilization is completed, debriefing should be arranged providing advice on how the NOSCOP may be improved.

CHAPTER III. POST-OPERATIONAL ACTIVITIES

SECTION 1. WATER QUALITY MONITORING

Upon the termination of response operations or demobilization, the PCG, together with DENR, BFAR, and LGU representatives shall conduct water quality monitoring to ascertain the status of the water quality in the affected areas.

SECTION 2. REHABILITATION

Rehabilitation shall be directed by NEDA with consultancy with the LGUs of the affected communities.

CHAPTER IV. TRAININGS, DRILLS, AND EXERCISES

SECTION 1. TRAININGS AND SEMINARS

Managers and responders for Tier III response operations are required to attend trainings and seminars to be equipped with the proper knowledge and skills necessary to perform accordingly.

SECTION 2. DRILLS AND EXERCISES

The Tier III or national level response shall be tested through a Table Top Exercise Annually (Second Quarter) with Cluster members. The Table Top exercise shall include the practice and use of the Planning "P" process to come up with the Incident Action Plan (IAP).

Drills and Exercises shall be conducted annually (Third Quarter) amongst PCG Units and Stakeholders, with Cluster members, Regional counterparts in the ASEAN, and International Maritime Organization - Global Initiative for Southeast Asia (IMO-GISEA) experts.

Fund for the PCG's trainings, drills, and exercises of its personnel shall be incorporated in MEPCOMs annual plan and budget.

Funds for the capacity enhancement and capability development of the PCG oil spill responders, as well as the trainings, drills and exercises for Tier III oil spill contingency plan or national level response shall be sourced from the Oil Spill Management Fund under RA 9483 managed by MARINA.

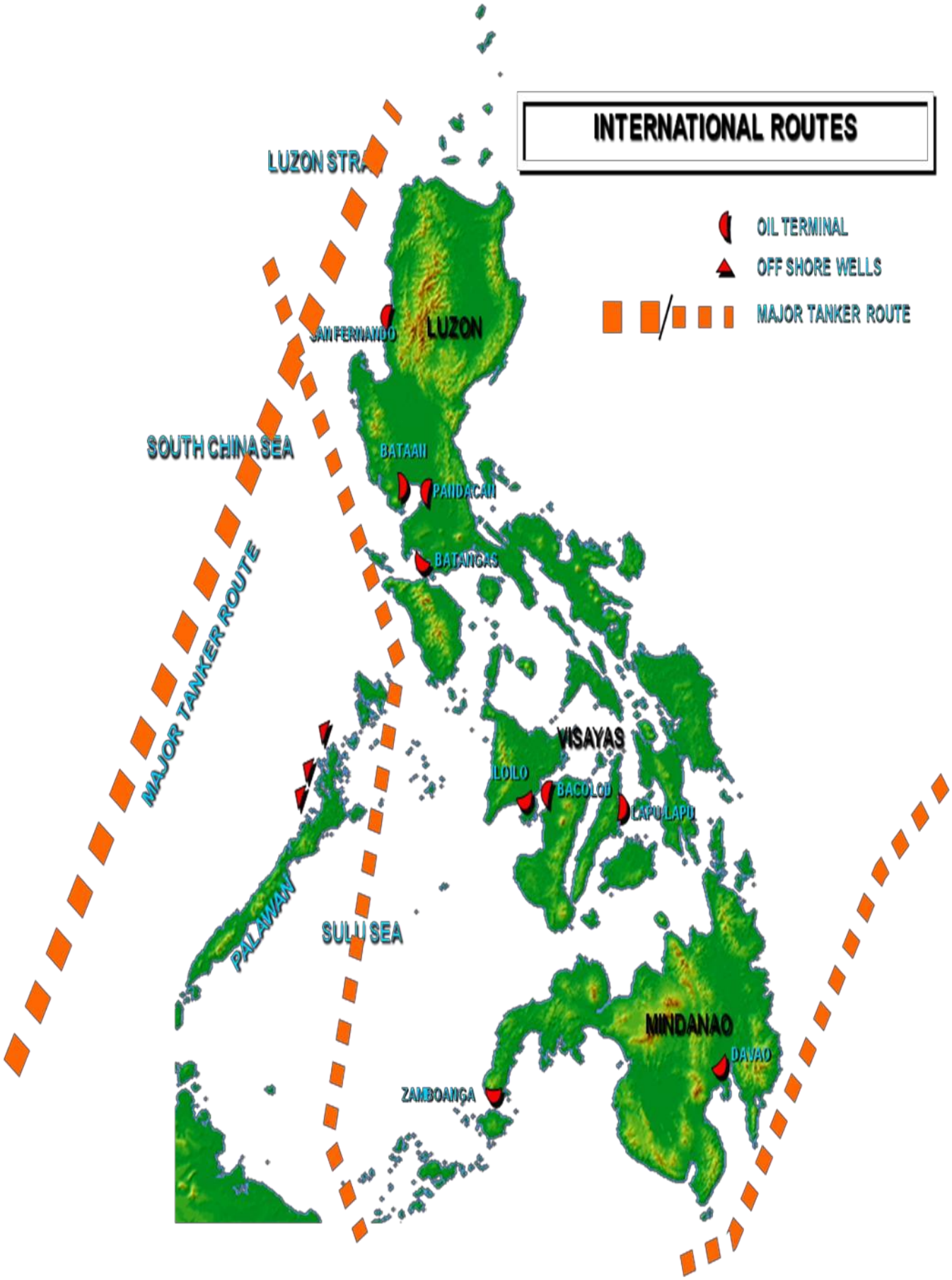
SECTION 3. UPDATING AND IMPROVEMENT

The observations made in the drills and exercises, as well as evaluation of the efficacy of the existing contingency plan, and updates in internationally accepted best practices in oil spill management and response operations shall be the basis of the annual updates and improvement in the Tier III Contingency Plan.

PART 3
ANNEXES*

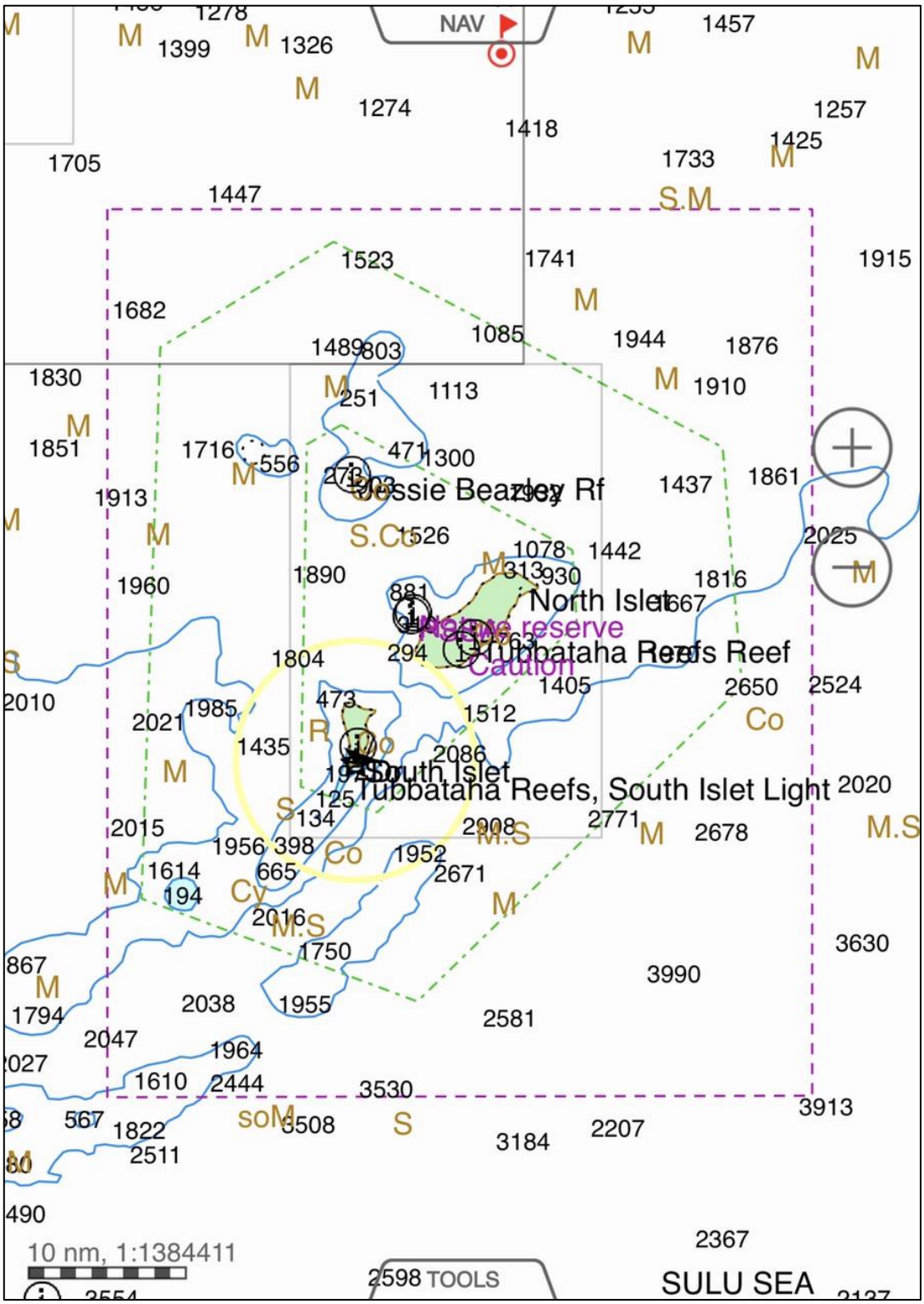
*Annexes may be updated from time to time. Revision of the Annexes shall be made by the issuance of updates to the NOSCOP.

ANNEX 1. INTERNATIONAL TRANSITING TANKER TRAFFIC

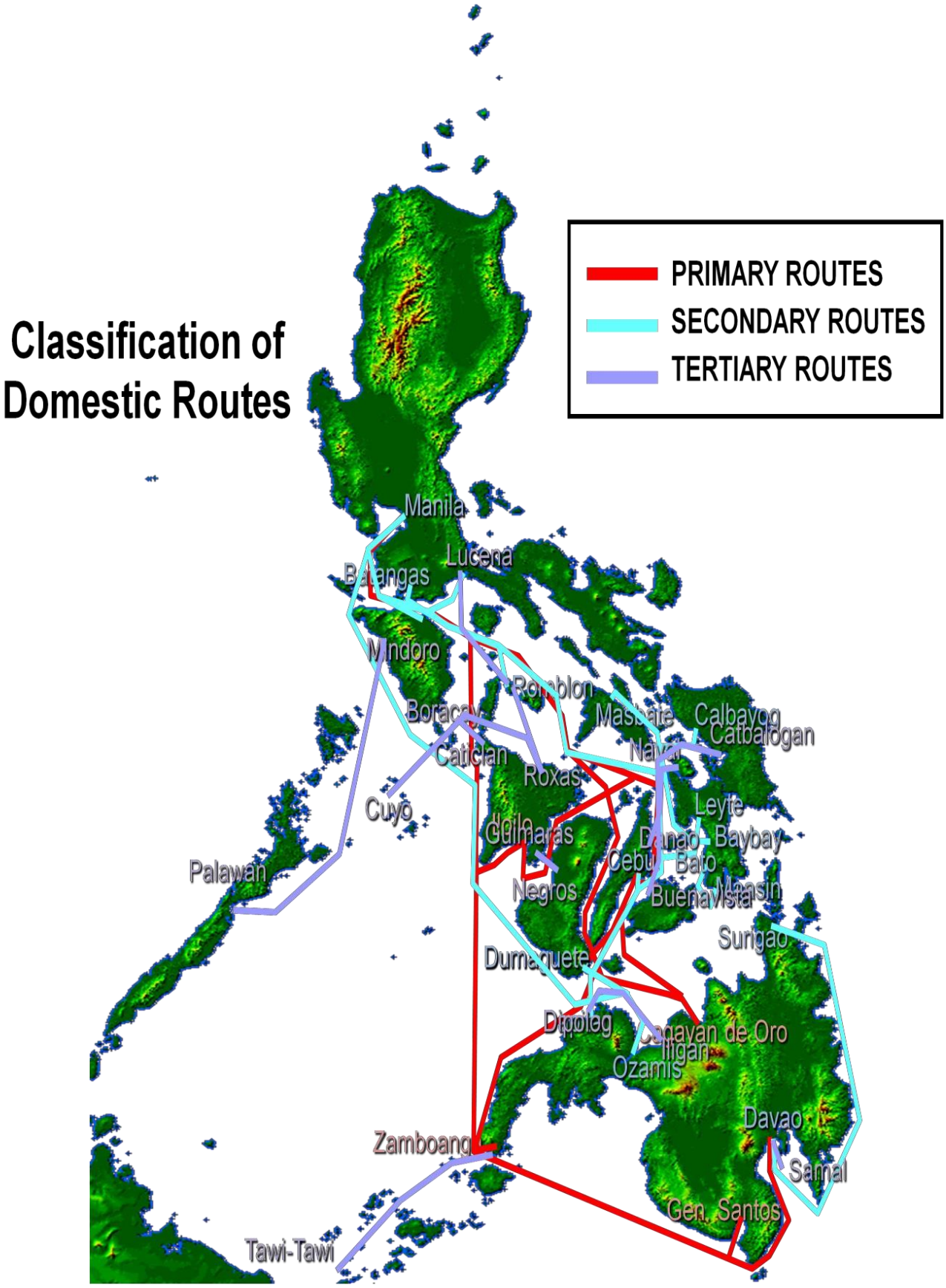


1. Area-to-be-Avoided - Tubbataha

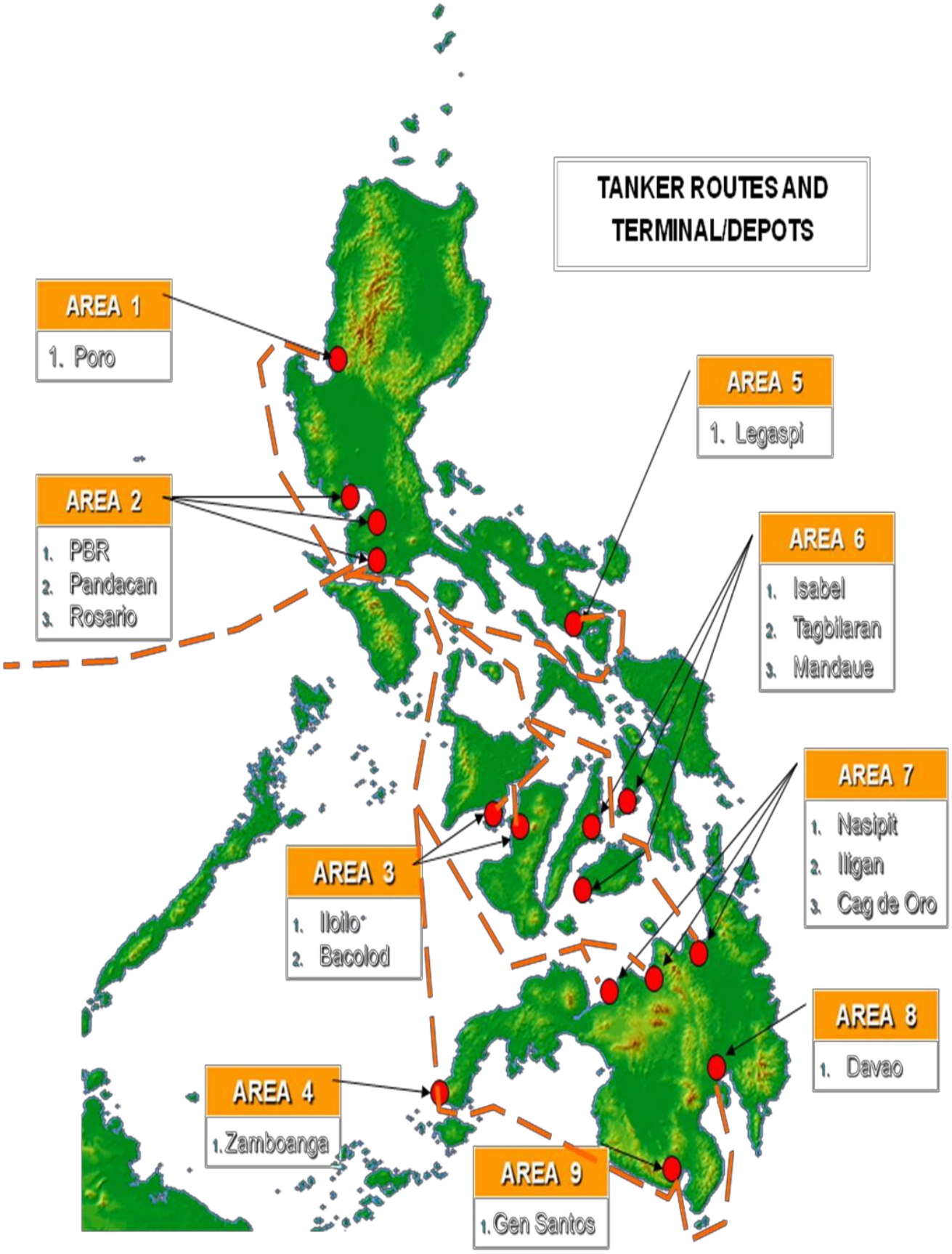
Additional information to Annex 1. All types of ships with 150 gross tonnage and higher are warned to sail outside the 4,470 square kilometer area-to-be-avoided (ATBA) in the Tubbataha Reefs Natural Park (TRNP), an IMO-declared *Particularly Sensitive Sea Area* (PSSA), to avoid the risk of accidental groundings.



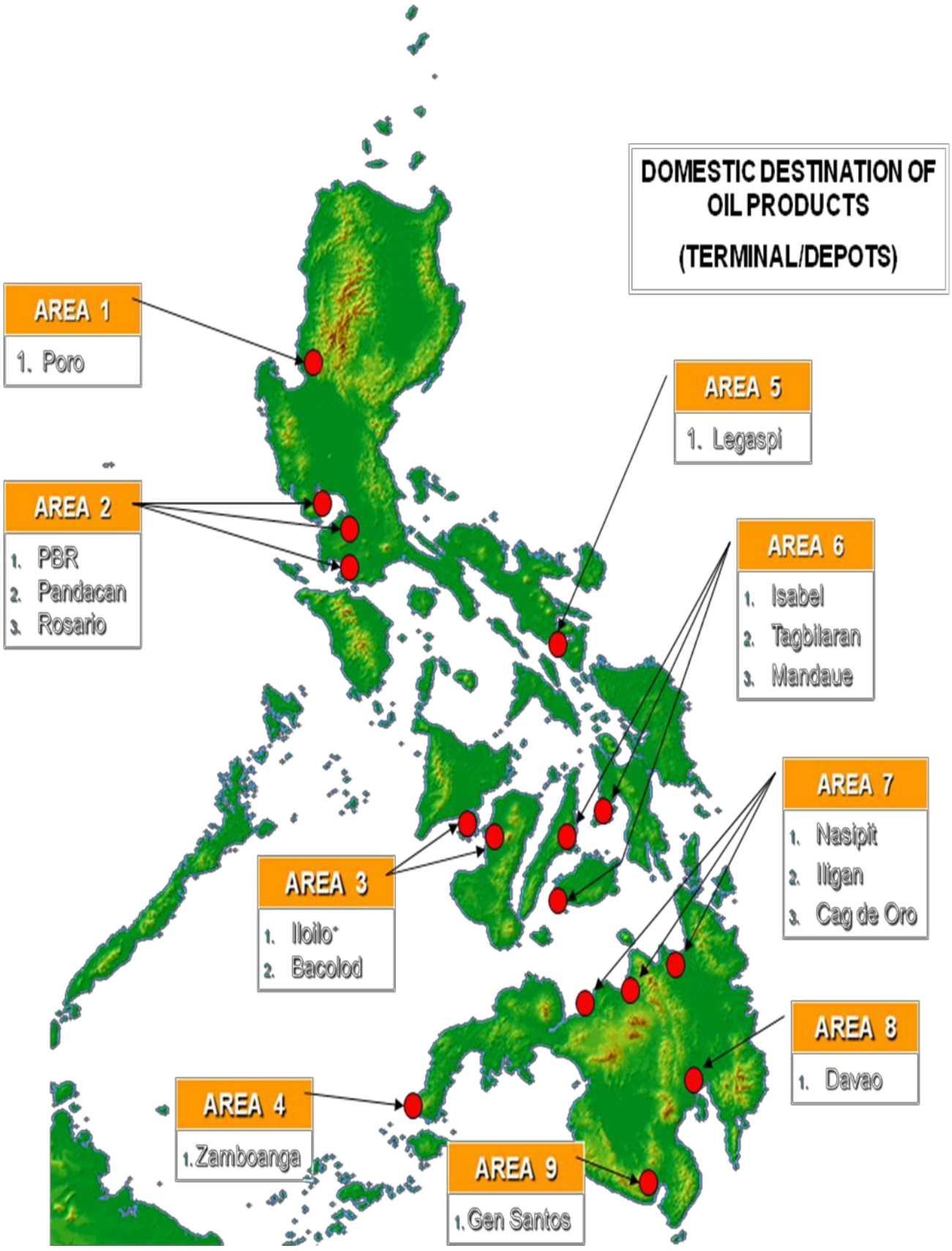
ANNEX 2. CLASSIFICATION OF DOMESTIC ROUTES



ANNEX 3. TANKER ROUTES, TERMINAL, AND DEPOTS



ANNEX 4. DOMESTIC DESTINATION OF OIL PRODUCTS



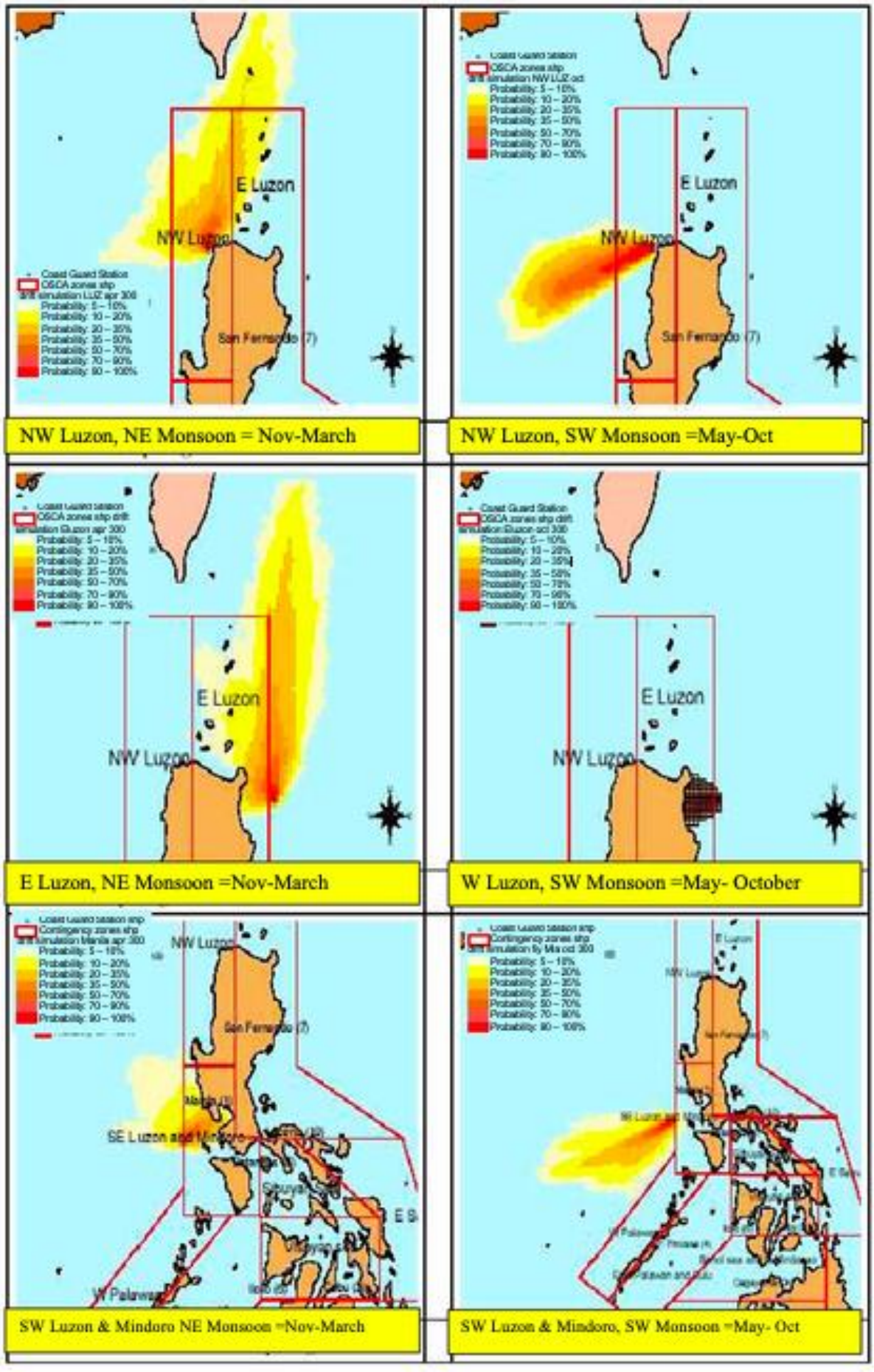
ANNEX 5. TYPES OF RELEVANT OILS

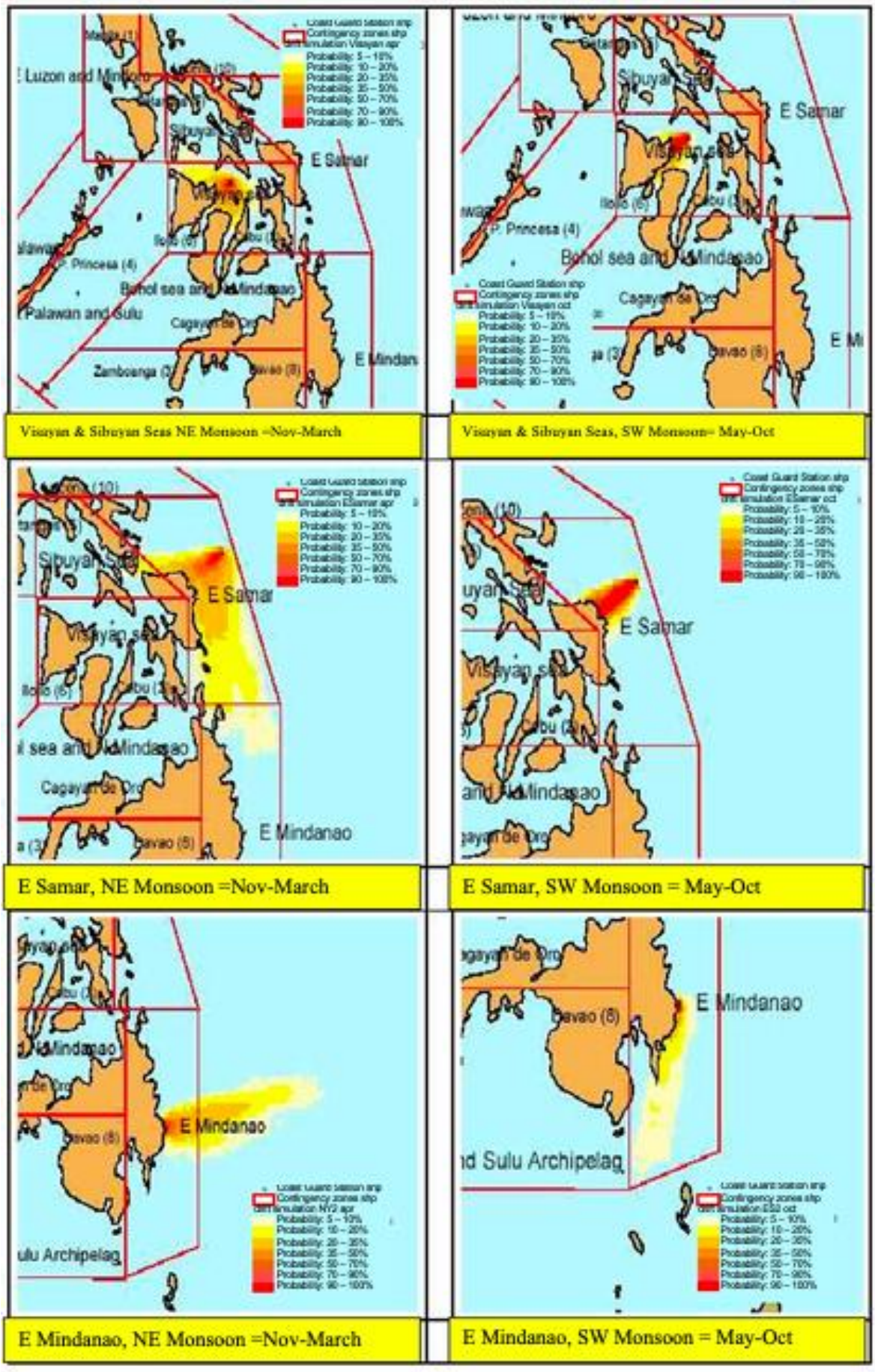
The table below shows key properties for oil types that may be spilled in Philippine waters. Properties for other oils may be found in the database of Environment Canada (http://www.etcentre.org/) or at the central oil properties database at PCG.

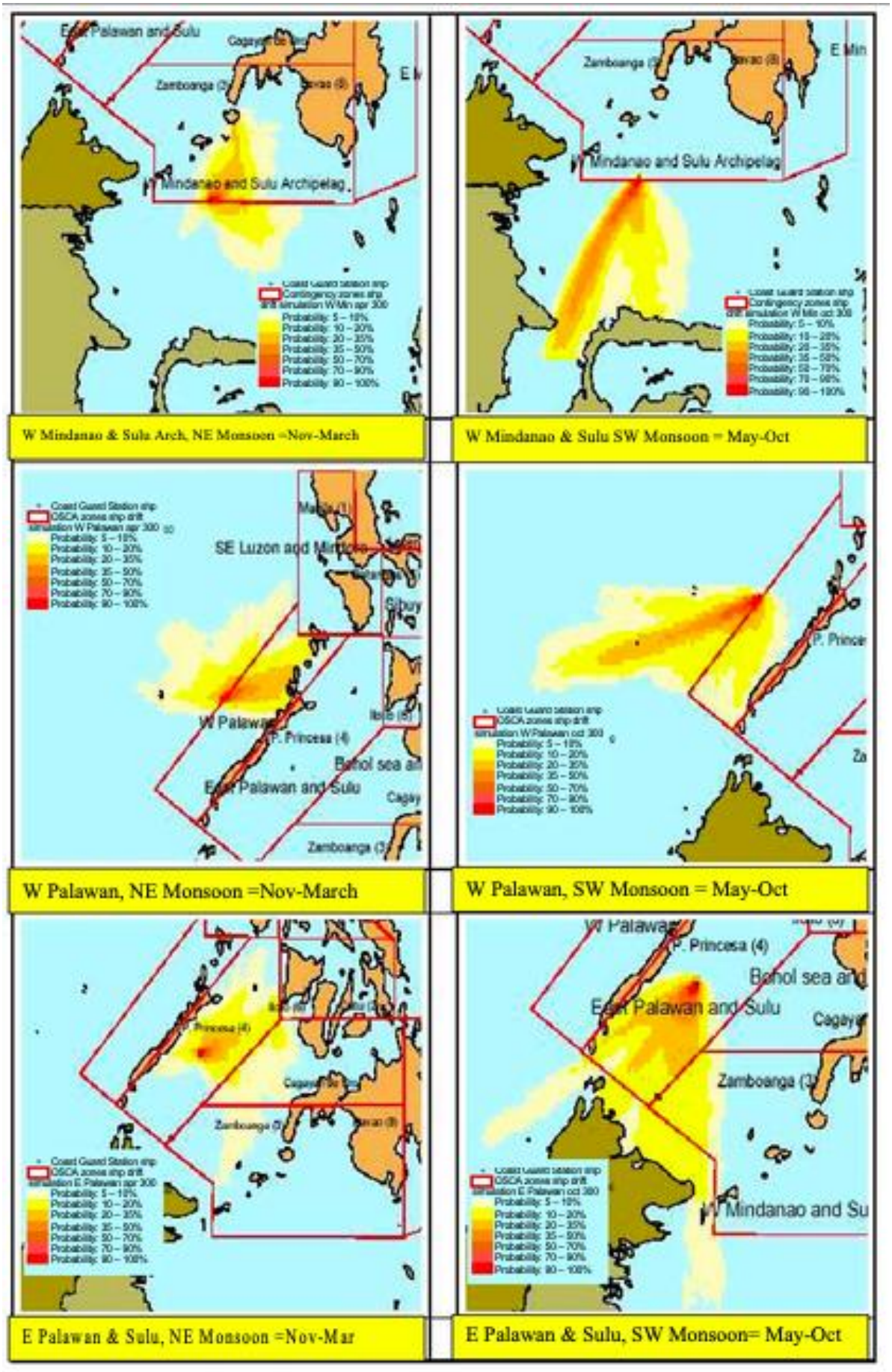
OIL SPECIFICATION

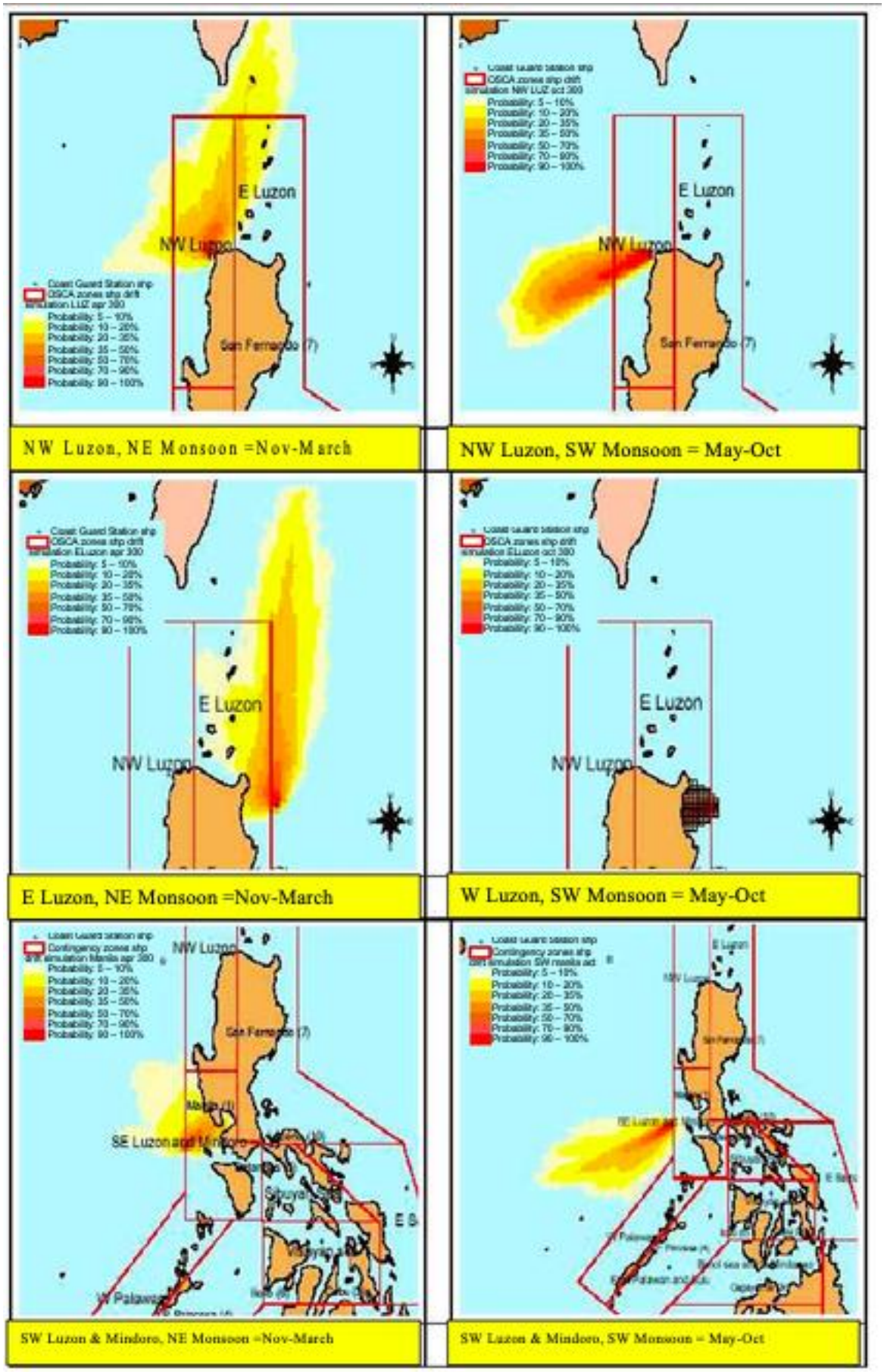
Oil Type	Density	Viscosity at 20°C	Pour Point (°C)	Emulsification Tendency
Arabian Light Crude	0.85	10	-36	High
Arabian Medium Crude	0.87	25	-15	High
Arabian Heavy Crude	0.89	65	-36	High
Diesel	0.81-0.84	2-4	< -20	Light
Fuel Oil No 4	0.9-0.92	20-30	< 0	High
Fuel Oil No 5	0.92-0.94	100-250	< 0	High
Fuel Oil No 6 (Bunker C)	0.99	20-40.000	-10 to 10	Medium
Lubricating Oil	0.88	248	-40--30	High

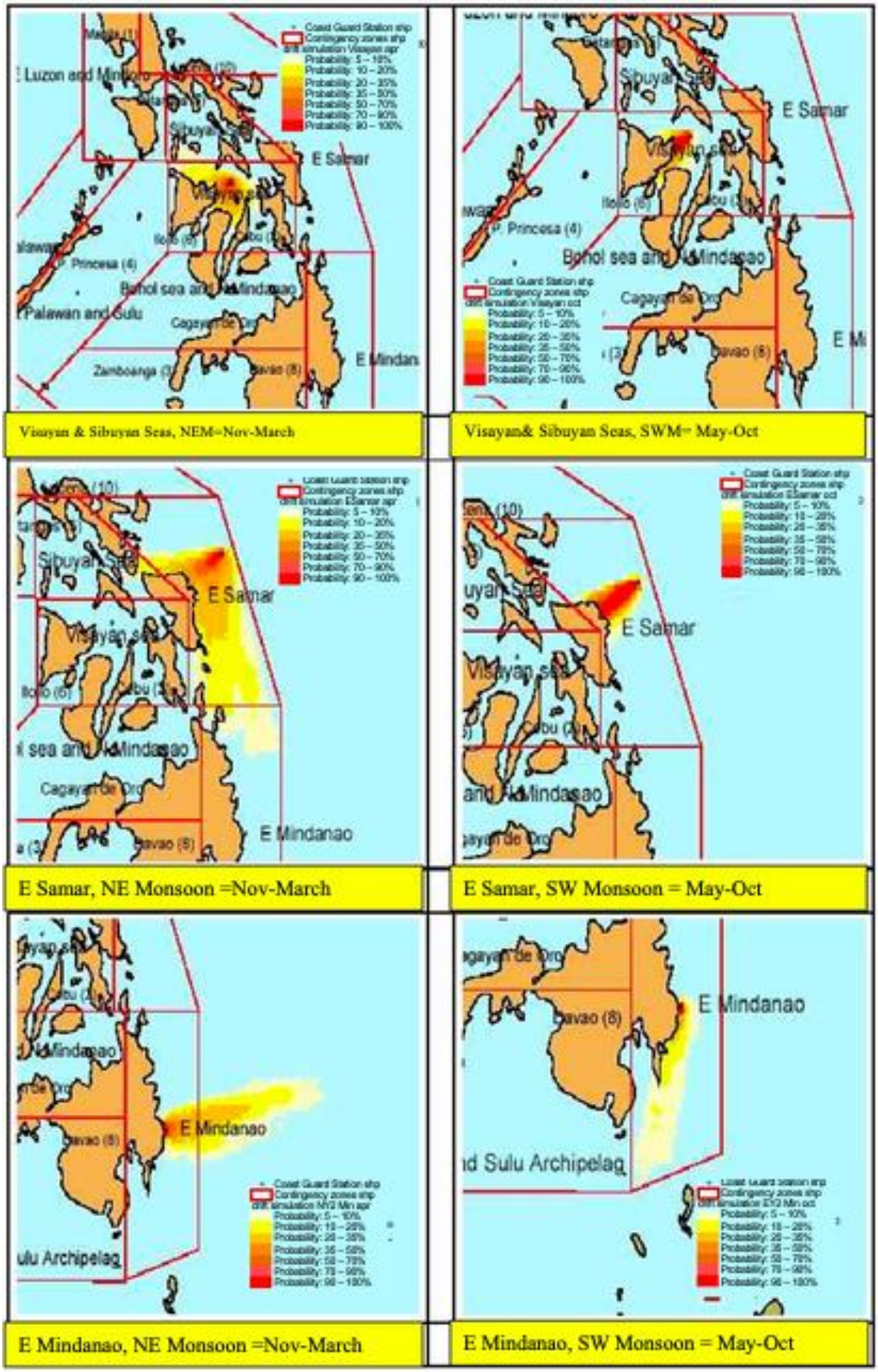
ANNEX 6. DET NORSKE VERITAS (DNV) OIL SPILL DRIFT SIMULATION

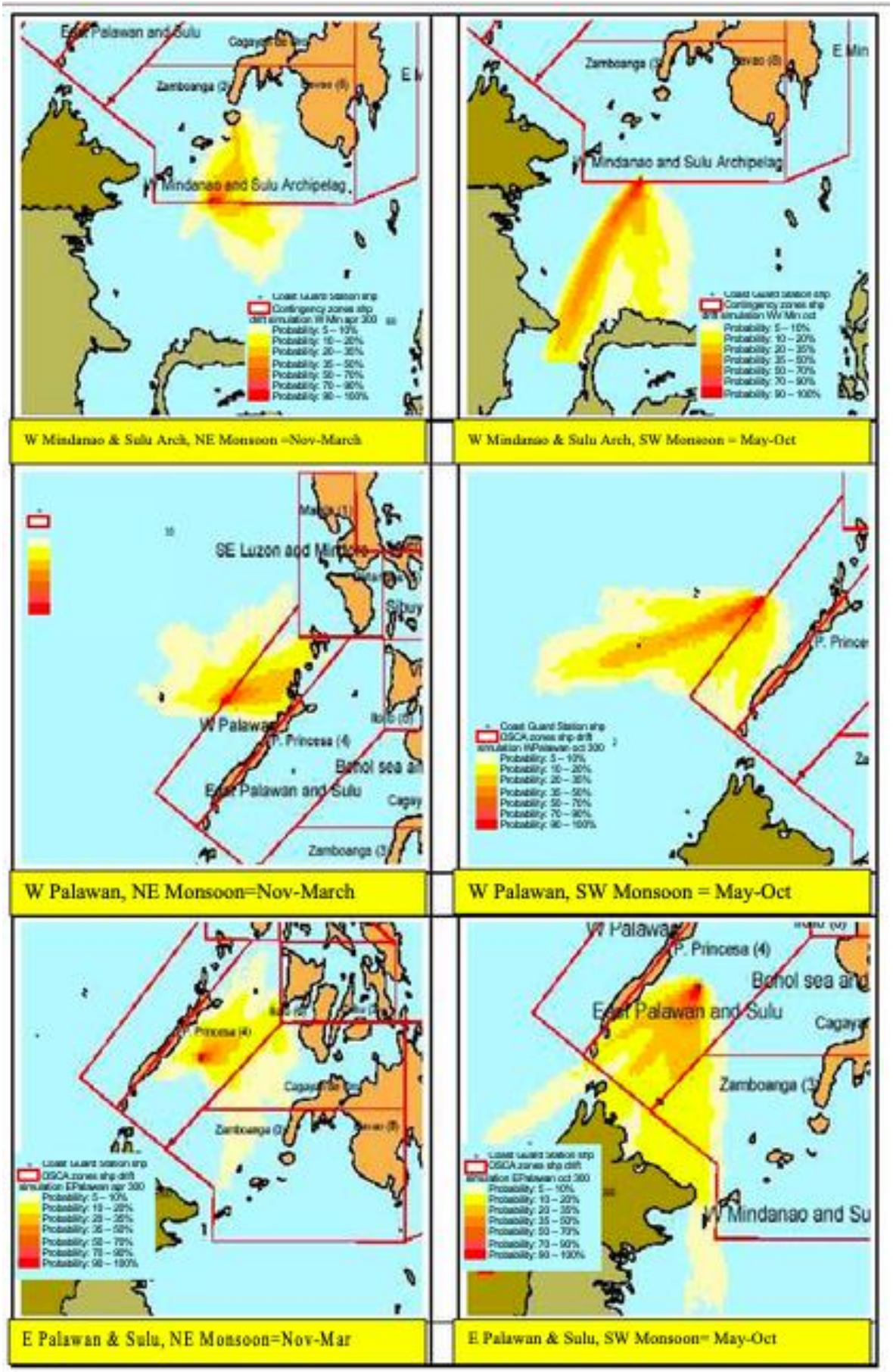



E Samar
Palawan and Sulu
E Mindanao
Visayan & Sibuyan Seas NE Monsoon =Nov-March
Visayan & Sibuyan Seas, SW Monsoon= May-Oct
E Samar, NE Monsoon =Nov-March
E Samar, SW Monsoon = May-Oct
E Mindanao, NE Monsoon =Nov-March
E Mindanao, SW Monsoon = May-Oct


W Mindanao & Sulu Arch, NE Monsoon =Nov-March
W Mindanao & Sulu SW Monsoon = May-Oct
W Palawan, NE Monsoon =Nov-March
W Palawan, SW Monsoon = May-Oct
E Palawan & Sulu, NE Monsoon =Nov-Mar
E Palawan & Sulu, SW Monsoon= May-Oct


E Luzon
NW Luzon
San Fernando (7)
NW Luzon, NE Monsoon =Nov-March
NW Luzon, SW Monsoon = May-Oct
E Luzon, NE Monsoon =Nov-March
W Luzon, SW Monsoon = May-Oct
SE Luzon and Mindoro
SW Luzon & Mindoro, NE Monsoon =Nov-March
SW Luzon & Mindoro, SW Monsoon = May-Oct


Luzon and Mindoro
E Samar
Princesa (4)
Palawan and Sulu
Bohol sea and Mindanao
Cagayan de Oro
Zamboanga (3)
Davao (8)
E Mindanao
Coast Guard Station shp
Contingency zones shp
Probability: 5 – 10%
Probability: 10 – 20%
Probability: 20 – 35%
Probability: 35 – 50%
Probability: 50 – 70%
Probability: 70 – 90%
Probability: 90 – 100%
Visayan & Sibuyan Seas, NEM=Nov-March
Visayan& Sibuyan Seas, SWM= May-Oct
E Samar, NE Monsoon =Nov-March
E Samar, SW Monsoon = May-Oct
E Mindanao, NE Monsoon =Nov-March
E Mindanao, SW Monsoon = May-Oct


Zamboanga
Mindanao and Sulu Archipelag
Probability: 5 – 10%
Probability: 10 – 20%
Probability: 20 – 35%
Probability: 35 – 50%
Probability: 50 – 70%
Probability: 70 – 90%
Probability: 90 – 100%
W Mindanao & Sulu Arch, NE Monsoon =Nov-March
Zamboanga
Mindanao and Sulu Archipelag
W Mindanao & Sulu Arch, SW Monsoon = May-Oct
SE Luzon and
W Palawa
P. Princesa (4)
Bohol sea a
East Palawan and Sulu
Zamboanga
W Palawan, NE Monsoon=Nov-March
P. Prince
W Palawan, SW Monsoon = May-Oct
P. Princesa (4)
Zamboanga
E Palawan & Sulu, NE Monsoon=Nov-Mar
W Palawa
P. Princesa (4)
Bohol sea and
East Palawan and Sulu
Cagaya
Zamboanga
W Mindanao and Su
E Palawan & Sulu, SW Monsoon= May-Oct

ANNEX 7. GUIDELINES FOR PREDICTING OIL SPILL DRIFT AND SPREADING

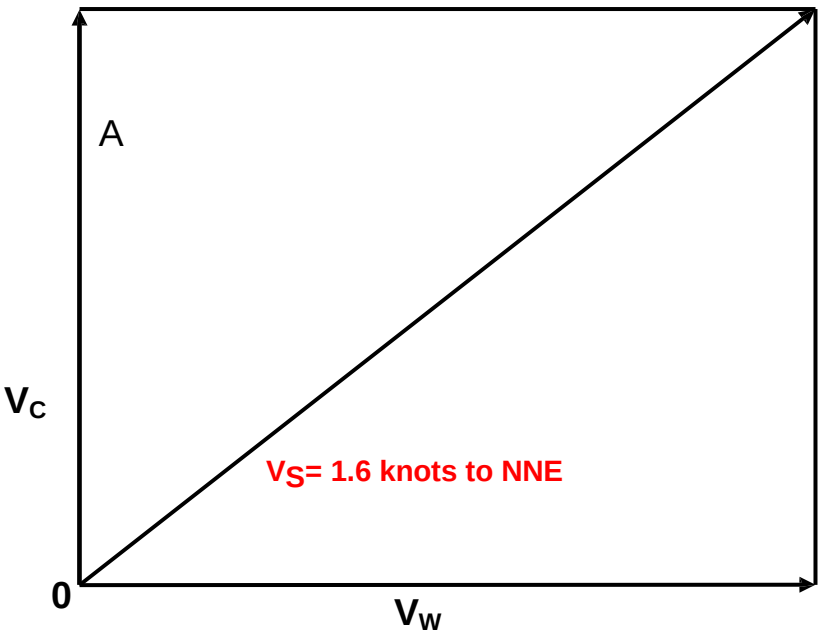
The direction and velocity of oil slick movement may be estimated by the use of the following simple vector calculation:

Where: Wind Vector (V_W) = Wind Speed (knots) x 0,035
Current Vector (V_V) = Water Current speed (knots)
Slick Vector (V_S) = Slick Speed (knots)
0 = Point of Discharge

Example: Wind = 15knots
Current = 1.5knotsfromsouth
V_W = 15x0.035= 0.535
V_C = 1.5

Calculation:
1. Plot location of spill at point 0.
2. Layout V_W and V_C from known headings, using the same length scale for both vectors.
3. Draw a line (A-C) parallel to V_W starting at the tip of V_C and a line (B-C) parallel to V_C Starting at the tip of V_W.
4. Draw a line from 0 to C. This is the slick Vector Vs.
5. The length of Vs determines speed in knots and the direction is evident.

C



B

ANNEX 8. GUIDELINES FOR SLICK DESCRIPTION BY VISUAL OBSERVATION

The appearance of the spill should be reported according to the following definitions:

Guidelines for Slick Description by Visual Observations

Based On Bonn Agreement Oil Appearance Code

SHEEN	Visible as a silvery sheen on surface of the water. Should not be confused with shines due to natural phenomena
RAINBOW	Bright bands of color visible on the surface of the water – no brown or black patches.
SLICK	Definite brown and/or black patches
LITERARY	Should only be used to describe shadings of the colors of the slick.
PATCHES/ PATCHY	Circular or elliptical in shade with definite boundaries. If size is significant, approximate dimension should be given (i.e., do not describe as –large or –small etc.)

Examples:

1. Sheen - 4km long by 1km wide with scattered stringers of rainbows throughout

2. Light brown - slick 1.5km long 50m wide with patches of black

Monitoring of an oil spill adjacent to the Drilling Unit should be undertaken from the support vessel. However, once the oil spill moves from the immediate vicinity of the Drilling Unit, monitoring can only be achieved using a trained observer in a helicopter or fixed wing aircraft. Best conditions for aerial observation exist at first light and in late afternoon.

For more information, please refer to the following link:
https://publiclab.org/notes/warren/11-21-2015/oil-sample-concentration-session-at-barnraising last visited on July 16, 2019 – NOSCOP TWG

ANNEX 9. PROCEDURES IN CARRYING OUT NET ENVIRONMENTAL BENEFITS ANALYSIS (NEBA)

1. Collect information about physical characteristics, ecology, human use of the environment, and other resources of interest in the area;
2. Review previous spill experiences and experimental results which are relevant in the area and the response methods that were considered;
3. In the bases of the aforementioned, predict the likely environmental outcomes of using the suggested response method;
4. Predict similarly the likely environmental outcomes if the area is left for a natural cleanup; and
5. Compare the advantages and disadvantages of the response option with those of a natural cleanup;
6. Oil should be contained and recovered mechanically if possible;
7. Oil should generally be collected as close to the source as possible;
8. Focus should be on preventing oil from reaching the shoreline;
9. If mechanical recovery is not effective or possible, chemical dispersants should be considered based on a NEBA;
10. Upon protecting shoreline resources, the level of priority should be based on its environmental sensitivity;
11. All oil spill response efforts should be based on a NEBA;
12. The natural breakdown processes should be utilized to the greatest extent possible; and
13. Consider the “No response” option in conducting a NEBA.

ANNEX 10. MARINE PROTECTED AREAS UNDER NIPAS LAW

NO	PROVINCE	MUNICIPALITY/ CITY	MPA NAME	MANAGEMENT	YEAR	LONGITUDE	LATITUDE
1	Aklan	Malay	Boracay Island TZMR	National	1978	121.9166667	11.96666667
2	Albay	Manito	Pigbucan to Paron Point	National	1981	Undetermined	Undetermined
3	Albay	Rapu-Rapu	Batan Island Mangrove Swamp Forest Reserve/Fish Sanctuary	National	1981	123.9916667	13.292
4	Batanes	multiple	Batanes Protected Landscape and Seascape	National	1992	121.9622918	20.51960709
5	Batangas	Mabini	Balahibong Manok TZMR	National	1978	Undetermined	Undetermined
6	Batangas	Mabini	Ligpo Island TZMR	National	1978	120.9833333	13.816667
7	Batangas	Mabini	Sombrero Island TZMR	National	1978	120.366667	13.516667
8	Batangas	Nasugbu	Fortune Island Tourist Zone & Marine Reserve	National	1978	120.5	14.05
9	Batangas	Tingloy	Gaban Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
10	Batangas	Tingloy	Maricaban Island TZMR	National	1978	120.916667	13.7
11	Bohol	Calape	Pangggangan Island Mangrove Swamp Forest Reserve/CEP	National	1981	123.86667	9.883333
12	Bohol	Candijay	Pangpang & Panas Mangrove Forest Reserve	National	1981	Undetermined	Undetermined
13	Bohol	Candijay	Calangaman Wilderness Area	National	Undetermined	Undetermined	Undetermined
14	Bohol	Candijay	Catiil Is. & Tabong Dio Is. Mun. Fish Sanctuaries	National	Undetermined	Undetermined	Undetermined
15	Bohol	Clarin	Tabaon Wilderness Area	National	Undetermined	Undetermined	Undetermined
16	Bohol	Getafe	Banacon Island Wilderness Area	National	1981	Undetermined	Undetermined
17	Bohol	Getafe	Jandayan Island Mangrove Swamp Forest Reserve	National	1981	124.166667	10.18333
18	Bohol	Inabanga	Ambugan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined

19	Bohol	Inabanga	Inabanga Municipal Coral Reef Park	National	1981	Undetermined	Undetermined
20	Bohol	Inabanga	Mangrove Areas East of Inabanga River to Pampang	National	1981	124.06667	9.98333
21	Bohol	Inabanga	Panga Wilderness Area	National	1981	124.4	10.08333
22	Bohol	Loay	Mangrove areas from the West of Loboc River to the Mun. of Loay	National	1981	123.9358333	9.677777778
23	Bohol	Loon	Cabilao Island Mangrove Swamp Forest Reserve & TZMR	National	1978	123.8	9.85
24	Bohol	Loon	Sandingan Island Mangrove Swamp Forest Reserve	National	1981	123.8	9.85
25	Bohol	Mabini	Lumislis Wilderness Area/Fish Sanctuary	National	1981	Undetermined	Undetermined
26	Bohol	Mabini	Timtiman Wilderness Area	National	Undetermined	123.78923	9.73254
27	Bohol	Multiple	Panglao Island Mangrove Swamp Forest Reserve/ TZMR	National	1978	123.67792	9.51407
28	Bohol	Multiple	Island of Catiil, Colangaman, Lomislis, Tangangdio, Timtiman and the Islet of Pamasuan	National	1981	123.8333333	9.583333333
29	Bohol	Multiple	Alburquerque-Loay-Loboc Protected Landscape and Seascape	National	2000	123.9358	9.6778
30	Bohol	Pres. C.P. Garcia	Banoon Islet Mangrove Swamp Forest Reserve	National	1981	124.5045194	10.15906111
31	Bohol	Pres. C.P. Garcia	Basiao Point to Casag Point at Lapinig	National	1981	124.55344	10.05961
32	Bohol	Pres. C.P. Garcia	Lapinig Chico Islet Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
33	Bohol	Talibon	Mahanay Island Mangrove Swamp Forest Reserve	National	1981	124.25091	10.20188
34	Bohol	Talibon	Tambu Island Wilderness Area	National	1981	124.26756	10.15216
35	Bohol	Talibon	Talibon Group of Island Protected Landscape	National	1998	124.6166667	10.16666667
36	Bohol	Talibon	Banbanon Wilderness Area	National	Undetermined	124.3166667	10.05
37	Bohol	Talibon	Bansalan Wilderness Area	National	Undetermined	124.3443	10.17736667
38	Bohol	Trinidad	Mangrove Areas East of Soom River to Pampang	National	1981	123.97658	10.0141

39	Bohol	Tubigon	Budlanan Island Wilderness Area	National	1981	124	9.95
40	Bohol	Tubigon	Cabgan Wilderness Area	National	Undetermined	123.98333	9.9667
41	Bohol	Tubigon	Constantino Wilderness Area	National	Undetermined	Undetermined	Undetermined
42	Bohol	Tubigon	Haya-an Islet Wilderness Area	National	Undetermined	123.9067	9.9555
43	Bohol	Tubigon	Inanuran Islet Wilderness Area	National	Undetermined	Undetermined	Undetermined
44	Bohol	Ubay	Mangrove Areas from Bo. Biabas to Bo. Ondol including Bo. Condray and Juagdag except the Island of Timtiman w/c is a	National	1981	Undetermined	Undetermined
45	Bohol	Undetermined	Bambanon Island	National	1981	Undetermined	Undetermined
46	Bohol	Undetermined	Banaon Island	National	1981	Undetermined	Undetermined
47	Bohol	Undetermined	Basaan Island	National	1981	123.85	9.916666667
48	Bohol	Undetermined	Bugatusan Wilderness Area	National	1981	Undetermined	Undetermined
49	Bohol	Undetermined	Islet of Batas Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
50	Bohol	Undetermined	Mangrove Areas from Agio Point up to the municipality of Cambuyao	National	1981	124.6833333	10.2
51	Bohol	Undetermined	Saac Island Wilderness Area	National	1981	Undetermined	Undetermined
52	Bohol	Undetermined	Basihan Island Wilderness Area	National	Undetermined	Undetermined	Undetermined
53	Bohol	Undetermined	Silo Island Wilderness Area	National	Undetermined	124.2269	9.603
54	Cagayan	Claveria	Fuga Island Tourist Zone Marine Reserve	National	1978	Undetermined	Undetermined
55	Cagayan	Sta Ana	Palaui Island Protected Landscape and Seascape	National	1994	Undetermined	Undetermined
56	Camarines Norte	Capalonga	Mangrove Areas from Del Pilar River to Palita Island, Bo. Salvacion & Dalahican	National	1981	Undetermined	Undetermined
57	Camarines Norte	Mercedes	Quinapaguin Fish Sanctuary	National	Undetermined	123.2376667	13.28596667
58	Camarines Sur	Caramoan	Basot Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined

59	Camarines Sur	Caramoan	Haponan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
60	Camarines Sur	Caramoan	Lucsuhin Island Mangrove Swamp Forest Reserve	National	1981	123.0988889	13.83333333
61	Camarines Sur	Caramoan	Mangrove in Bo. Gibgos and Taboan	National	1981	Undetermined	Undetermined
62	Camarines Sur	Caramoan	Quinabugan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
63	Camarines Sur	Garchitorena	Malabungot Protected Landscape and Seascape/Lamit Island Mangrove Swamp and Forest Reserve	National	1981	Undetermined	Undetermined
64	Camarines Sur	Garchitorena	Quinalasag Island Mangrove Swamp Forest Reserve/ CEP	National	1981	Undetermined	Undetermined
65	Camarines Sur	Sagnay	Mangrove Along the Banks of Sagnay River	National	1981	Undetermined	Undetermined
66	Camarines Sur	Sagnay	Atulayan Island Fish Sanctuary	National	1993	123.5222222	13.59666667
67	Camarines Sur	Siruma	Quinabucasan Point to San Vicente Bay	National	1981	Undetermined	Undetermined
68	Camarines Sur	Siruma	Sapenitan Siruma Fish Sanctuary	National	Undetermined	Undetermined	Undetermined
69	Camarines Sur	Undetermined	Caragay Pass to Gimbal Pt. In Caragay Island	National	1981	Undetermined	Undetermined
70	Camarines Sur	Undetermined	Lahay Island Mangrove Swamp Forest Reserve	National	1981	123.3527778	13.85
71	Camarines Sur	Undetermined	Mangrove Areas of Port Tambang including banks of Tambang River and Olas River	National	1981	123.25	14
72	Camarines Sur	Undetermined	Mangrove along the banks of Delchi River, Buang Creek and Parusan River in Inuran and Sapitan Bay	National	1981	123.4825	13.90694444
73	Camarines Sur	Undetermined	Mangrove along the banks of Looc River	National	1981	123.7138889	13.86666667
74	Camarines Sur	Undetermined	Mangrove along the banks of Salog River	National	1981	Undetermined	Undetermined

75	Camarines Sur	Undetermined	Portion of Caragay Island Mangrove Swamp Forest Reserve	National	1981	123.24	13.745
76	Camarines Sur	Undetermined	Tanglar Point to Bicol River	National	1981	124.6393684	9.155063155
77	Camarines Sur	Undetermined	Cabcab San Andres Fish Sanctuary	National	Undetermined	123.4655556	13.95777778
78	Camiguin	Multiple	Camiguin Island Tourist Zone and Marine Reserve	National	1978	122.652	11.571
79	Cebu	Bantayan	Bantayan Island Wilderness Area	National	1981	124.1708	10.1667
80	Cebu	Cordova	Buyong Beach (Maribago, Mactan) TZMR	National	1978	Undetermined	Undetermined
81	Cebu	Cordova	Caubyan Island and Vicinity Tourist Zone and Marine Reserve	National	1978	123.98756	10.20783
82	Cebu	Cordova	Olonga Island Tourist Zone and Marine Reserve/National Marine Park/CEP	National	1978	Undetermined	Undetermined
83	Cebu	Cordova	Pangan-an Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
84	Cebu	Cordova	Sulpa Island Tourist Zone and Marine Reserve	National	1978	123.5212	9.7507
85	Cebu	Cordova	Gilutongan Island Marine Sanctuary & TZMR	National	1999	123.9833333	10.2
86	Cebu	Lapu-Lapu	Tinggo	National	1978	Undetermined	Undetermined
87	Cebu	Moalboal	Pescador Island Marine Sanctuary	National	1996	123.3666667	9.936111111
88	Cebu	Multiple	Poro Island Mangrove Swamp Forest Reserve	National	1981	123.4687	9.5848
89	Cebu	Oslob	Sumilon Island Fish Sanctuary	National	1974	123.3833333	9.416666667
90	Cebu	Pilar	Ponson Island Mangrove Swamp Forest Reserve	National	1981	123.21667	10.08333
91	Cebu	San Francisco	Pacijan Mangrove Swamp Forest Reserve	National	1981	124.3495833	0.614027778
92	Cebu	Sogod	Sogod Tourist Zone and Marine Reserve	National	1978	124.0325	10.9272

93	Compostelay Valley	Mabini	Mabini Protected Landscape and Seascape	National	2000	125.4010215	6.785788
94	Compostelay Valley	Mabini	Pindasan Island Wilderness Area	National	Undetermined	Undetermined	Undetermined
95	Davao Del Norte	Samal	Ligid Island Tourist Zone and Marine Reserve	National	1978	125.8333333	7.083333333
96	Davao Del Norte	Samal	Samal Island Mangrove Swamp Forest Reserve; eastern side is TZMR	National	1978	125.5	6.7
97	Davao Del Norte	Samal	Talicud Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
98	Davao Del Norte	Undetermined	Maliputo Island Tourist Zone and Marine Reserve	National	1978	126.2333333	6.883333333
99	Davao Del Norte	Undetermined	Pandasan Island	National	1981	Undetermined	Undetermined
100	Davao Oriental	Baganga	Mangrove Areas from Tanuip Point in Banao to Kinablangan Island	National	1981	Undetermined	Undetermined
101	Davao Oriental	Caraga	Mangrove Areas from Baculin Point to Lacud Point	National	1981	Undetermined	Undetermined
102	Davao Oriental	Governor Generoso	Sigaboy Island	National	Undetermined	Undetermined	Undetermined
103	Eastern Samar	Guiuan	Guiuan PLS/TZMR	National	1978	125.67083	11.053333
104	Guimaras	Nueva Valencia	Taklong Island National Marine Reserve (TINMAR)	National	1990	122.5766	10.36839
105	Iloilo	Concepcion	Pan de Azucar Seascape	National	Undetermined	123.161	11.459
106	Iloilo	San Joaquin	San Joaquin Seascape	National	Undetermined	Undetermined	Undetermined
107	Isabela	Multiple	Northern Sierra Madre National Park	National	1997	Undetermined	Undetermined
108	Isabela	San Mariano	Monte-Alto Timber Resource Corp Parcel 1 & 2	National	1987	120.3333333	16
109	La Union	Agoo	Agoo-Damortis Protected Landscape and Seascape	National	1992	120.294474	16.587018
110	Lanao Del Norte	Bacolod	Mangrove areas from Liangan River to Lipatan River of th mun. of Lapayan	National	1981	Undetermined	Undetermined
111	Lanao Del Norte	Multiple	Iligan Bay	National	1975	124.67906	10.94138

112	Leyte	Nbabatngon	Calawangan Is., Babatngon Fish Sanctuary and Fishery Reserve	National	1991	Undetermined	Undetermined
113	Leyte	Baybay	Mangrove areas from Bo. Tuban and Bo. Manpagui in Santa Cruz	National	1981	124.75833	10.58333
114	Leyte	Calubian	Gigantangan Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
115	Leyte	Capoocan	Culasian Fish Sanctuary	National	1991	Undetermined	Undetermined
116	Leyte	Isabel	Mangrove Areas along the coastlines of Dupon Bay from Sacay Point up to the mouth of Dupon Bay	National	1981	Undetermined	Undetermined
117	Leyte	Multiple	Cuatro Islas Protected Landscape and Seascape	National	2000	124.61955	10.98513
118	Leyte	Tacloban	Badung -badung Island Marubat (Western) Fish Sanctuary	National	Undetermined	Undetermined	Undetermined
119	Leyte	Undetermined	Apali Point to Calunangan Point	National	1981	Undetermined	Undetermined
120	Leyte	Undetermined	Puerto Bello to Lao	National	1981	Undetermined	Undetermined
121	Marinduque	Sta Cruz	Fore shoreline of Bo. Cabuyagan to the Eastern side of Dating Bayan River in Calancan Bay	National	1981	122	13.53333333
122	Marinduque	Sta Cruz	Fore shoreline of Bo. Dapdap and Alabo up to the mouth of Tagum River	National	1981	122.0666667	13.58333333
123	Marinduque	Sta Cruz	Sta Cruz Island Mangrove Swamp Forest Reserve	National	1981	122.1116667	13.38666667
124	Marinduque	Torrijos	Malinao Creek up to Salomague Point	National	1981	122.1666667	13.38333333
125	Marinduque	Torrijos	Salomague Island Mangrove Swamp Forest Reserve	National	1981	122.1527778	13.37277778
126	Masbate	Aroroy	Bagupantao Point to Amutag Point	National	1981	123.3530556	12.51833333
127	Masbate	Aroroy	Bayuar Cove to Tinago Cove	National	1981	Undetermined	Undetermined
128	Masbate	Aroroy	Island of Majaba & Napayuan	National	1981	123.6333333	11.95
129	Masbate	Cawayan	Island of Guinauayan, Naro, Chico & Pobre	National	1981	Undetermined	Undetermined
130	Masbate	Claveria	Burias Island Mangrove Swamp Forest Reserve	National	1981	124.0694444	13.07361111

131	Masbate	Claveria	Cueva Point up to Kimartines Point (Burias Is.)	National	1981	123.1480556	12.89555556
132	Masbate	Claveria	Kabugao Point up to Kabalong Andang Point (Burias Is)	National	1981	123.1411111	12.90638889
133	Masbate	Claveria	Malaquing River up to Mabung River (Burias Is)	National	1981	Undetermined	Undetermined
134	Masbate	Mandaon	Banks of Balono and Pasil River, Toos Cove, Daraga, Diutag and Lomocab	National	1981	Undetermined	Undetermined
135	Masbate	Mandaon	Carogo Island Mangrove Swamp Forest Reserve	National	1981	123.2161111	12.23138889
136	Masbate	Mandaon	Mangroves in Toos Cove in Mandaon	National	1981	123.6969444	123.7205556
137	Masbate	San Jacinto	Mangroves along the Banks of Sta Rosa River in San Jacinto	National	1981	123.0456333	13.22181667
138	Masbate	Undetermined	Basin Island Mangrove Swamp Forest Reserve	National	1981	123.3333333	12.4725
139	Masbate	Undetermined	Bo. Magdangay to Malobago, Port Barrera	National	1981	Undetermined	Undetermined
140	Masbate	Undetermined	Dampalit Island Wilderness Area	National	1981	123.3641667	12.4775
141	Masbate	Undetermined	Guinobatan River up to Bariis	National	1981	123.3080556	12.4725
142	Masbate	Undetermined	Magdanay Point u to Taguictic Point	National	1981	Undetermined	Undetermined
143	Masbate	Undetermined	Mangrove areas along the banks of Daraga River	National	1981	124.2252778	11.955
144	Masbate	Undetermined	Mangrove areas from Diutag River to Lomocab River	National	1981	123.5288889	12.44138889
145	Masbate	Undetermined	Mangrove along the Pasil River, Magdalena	National	1981	123.6666667	12.63138889
146	Masbate	Undetermined	Mangrove between BO. Tomas and Bagasico	National	1981	123.3	12.35694444
147	Masbate	Undetermined	Panciscan Point in Bitos Bay up to Bano Sanlay	National	1981	123.7577778	12.40833333
148	Masbate	Undetermined	Panicijan River in Butan Bay	National	1981	Undetermined	Undetermined
149	Masbate	Undetermined	Portion of Butan Bay Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined

150	Masbate	Undetermined	Sta. Rosa River to Tingso Cove Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
151	Masbate	Undetermined	Sta. Rosa River to Tingso Cove Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
152	Misamis Occidental	Baliangao	Baliangao Protected Landscape and Seascape	National	1992	120.6333333	8.516666667
153	Misamis Occidental	Baliangao	Katumanan Mini Sanctuary	National	1999	Undetermined	Undetermined
154	Misamis Occidental	Ozamiz City	Bo. Bagumbang to Malautan River	National	1981	123.856761	8.366812
155	Misamis Occidental	Tangub City	Dimalooc Cove Fish Sanctuary	National	Undetermined	Undetermined	Undetermined
156	Misamis Occidental	Cagayan de Oro City	Al-Sulnuan Point TZMR	National	1978	Undetermined	Undetermined
157	Misamis Occidental	Initao	Initao Protected Landscape and Seascape/CEP	National	1994	124.7333333	8.683333333
158	Misamis Occidental	Multiple	Murcielagos Island PLS	National	2000	124.5727778	8.5325
159	Negros Occidental	Sagay	Sagay Marine Reserve	National	1985	123.422	10.44214
160	Negros Occidental	Dauin	Apo Island Marine Reserve	National	1982	123.2712	9.07304
161	Negros Occidental	Multiple	Tañon Stait Protected Landscape and Seascape	National	1998	123.369	9.8456
162	Negros Occidental	Multiple	Bais Bay and Talabong Is. Coastal Wetlands	National	Undetermined	123.23586	9.43086
163	Northern Samar	Multiple	Biri-Larosa PLS (Biri, Lavesarez, Rosario & San Jose	National	2000	125.126	12.578
164	Occidental Mindoro	Magsaysay	Bo. Labangan to Calalayuan Point, Iiin Island	National	1981	120.5833333	13.22555556
165	Occidental Mindoro	Mamburao	Mangrove areas along the banks of Mamburao River	National	1981	120.3961111	12.74638889
166	Occidental Mindoro	Sablayan	Apo Reef Island TZMR	National	1978	120.7586111	12.74388889

167	Occidental Mindoro	Sablayan	Sablayan Point up to the mouth of Bagong Sabang River	National	1981	120.7097222	13.07055556
168	Occidental Mindoro	Sta Cruz	Mangrove areas in the banks of Batel Creek, Sta. Cruz	National	1981	121.1175	13.45722222
169	Occidental Mindoro	Bongabong	Mangroves at the western side of Sukol River	National	1981	Undetermined	Undetermined
170	Occidental Mindoro	Bulalacao	Aslom Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
171	Occidental Mindoro	Bulalacao	Balatasan Cove Tourist Zone &Marine Reserve	National	1978	121.1	12
172	Occidental Mindoro	Bulalacao	Bating Peninsula Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
173	Occidental Mindoro	Bulalacao	Buyayao Island TZMR	National	1978	121.45	12.33333333
174	Occidental Mindoro	Bulalacao	Libago Island Tourit Zone & Marine Reserve	National	1978	Undetermined	Undetermined
175	Occidental Mindoro	Bulalacao	Maasim Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
176	Occidental Mindoro	Bulalacao	Opao Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
177	Occidental Mindoro	Bulalacao	Pambaron Island Tourist Zone & Marine Reserve	National	1978	121.5	12.41666667
178	Occidental Mindoro	Bulalacao	Pocanel Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
179	Occidental Mindoro	Bulalacao	Sibalat Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
180	Occidental Mindoro	Bulalacao	Suguicay Island Tourist Zone & Marine Reserve	National	1978	Undetermined	Undetermined
181	Occidental Mindoro	Bulalacao	Mangroves at the western side of Casiliga River Island of Soguicay	National	1978	Undetermined	Undetermined
182	Occidental Mindoro	Bulalacao	Sukol River to Soquicy Island MSFR	National	1978	Undetermined	Undetermined
183	Oriental Mindoro	Naujan	Buluagan River to Lagarum River	National	1981	121.4225194	13.2356

184	Oriental Mindoro	Puerto Galera	Puerto Galera TZMR, Biosphere Reserve	National	1973	Undetermined	Undetermined
185	Oriental Mindoro	Puerto Galera	Balatero Cove TZMR	National	1978	Undetermined	Undetermined
186	Oriental Mindoro	Puerto Galera	Medio Island TZMR	National	1978	120.9880176	13.49362505
187	Palawan	Balabac	Balabac Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
188	Palawan	Busuanga	Busuanga Island Tourist Zone and Marine Reserve	National	Undetermined	Undetermined	Undetermined
189	Palawan	Cagayancillo	Cagayan Islands	National	Undetermined	120.811	9.2731
190	Palawan	Cagayancillo	Tubbataha Reef National Marine Park	National	Undetermined	Undetermined	Undetermined
191	Palawan	Coron	Coron Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
192	Palawan	El Nido	Bacuit Bay Island TZMR	National	1978	119.3382864	11.16303878
193	Palawan	Linapacan	Canaron Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
194	Palawan	Multiple	El Nido-Taytay Managed Resource and Protected Area	National	1991	118.75	9.75
195	Palawan	Multiple	Entire Province of Palawan	National	1992	118.4166667	9.8361111
196	Palawan	Puerto Princesa City	Puerto Princesa Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
197	Palawan	Puerto Princesa City	St. Paul Subterrabean River	National	Undetermined	118.7833333	10.0833333
198	Palawan	San Vicente	Malampaya Sound Protected Landscape and Seascape	National	1978	118.9425472	10.33334722
199	Palawan	Taytay	Malampaya Sound Protected Landscape and Seascape	National	1978	Undetermined	Undetermined
200	Palawan	Undertermined	Solitario Island Tourist Zone and Marine Reserve	National	1978	120.025	16.21666667
201	Pangasinan	Alaminos	Hundred Islands National Park	National	1940	120.0583333	16.833333
202	Pangasinan	Alaminos	Telbang PLS/Marine Protected Area	National	1993	120.0106667	16.34927778
203	Pangasinan	Lingayen	ECA	National	1992	Undetermined	Undetermined

204	Quezon	Alabat	Alabat Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
205	Quezon	Burdeos	Cabalao Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
206	Quezon	Burdeos	Icol Island Mangrove Swamp Forest Reserve	National	1981	122.0333333	14.8666667
207	Quezon	Burdeos	Palasan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
208	Quezon	Burdeos	San Rafael Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
209	Quezon	Calauag	Pinagsakayan Fish Sanctuary	National	1991	122.1952778	13.63
210	Quezon	Calauag	Calauag Bay	National	Undetermined	Undetermined	Undetermined
211	Quezon	Catanauan	Bacong River up to Sandoval Point (Tayabas Bay, Quezon)	National	1981	122.166667	13.3333
212	Quezon	Catanauan	Canatuan Fish Sanctuary	National	Undetermined	Undet	Undetermined
213	Quezon	Jomalig	Jomalig Island Mangrove Swamp Forest Reserve	National	1991	Undetermined	Undetermined
214	Quezon	Mauban	Cabalete Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
215	Quezon	Mulanay	Palay Point up to Mulanay River, Bondoc Peninsula	National	1981	121.712222	13.9694444
216	Quezon	Multiple	Palsabangan River up to Mazintuto River (Tayabas Bay, Quezon)	National	1981	Undetermined	Undetermined
217	Quezon	Patnanungan	Kalongkooan Island Mangrove Swamp Forest Reserve	National	1981	122.15	14.933333
218	Quezon	Patnanungan	Kalotkot Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
219	Quezon	Patnanungan	Patnanongan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
220	Quezon	Perez	Perez Fish Sactuary	National	1991	Undetermined	Undetermined
221	Quezon	Perez	Gerardo Point Fish Sanctuary	National	Undetermined	121.933333	14.25
222	Quezon	Polillo	Polillo Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined

223	Quezon	San Andres	Alibijaban Island Fish Sanctuary	National	1981	122.7201389	13.31511111
224	Quezon	San Andres	San Andres to Arena Point, Bondoc Peninsula	National	1981	122.5	13.24027778
225	Quezon	San Francisco	Bondoc River in Aurora up to Panamutangan Point, Bondoc Peninsula (Tayabas Bay, Quezon)	National	1981	Undetermined	Undetermined
226	Quezon	Unisan	Unisan Fish Sanctuary	National	Undetermined	Undetermined	Undetermined
227	Romblon	Multiple	Sibuyan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
228	Samar	Tagapul-an	Brgy. Manlangit Libod/Dilis culture	National	1995	Undetermined	Undetermined
229	Samar	Tagapul-an	Brgy. Nipa Libod/Dilis culture	National	1995	Undetermined	Undetermined
230	Samar	Tagapul-an	Bryg. Pantalan Libod/Dilis culture	National	1995	Undetermined	Undetermined
231	Sarangani	Kiamba	Sarangani Bay Protected Seascape	National	Undetermined	124.6025	5.985333333
232	Sarangani	Multiple	Saragani ay Protected Landscape and Seascape	National	1996	Undetermined	Undetermined
233	Siquijor	Multiple	Siquijor Island Tourist Zone and Marine Reserve	National	1978	Undetermined	Undetermined
234	Sorsogon	Barcelona	Panuntingan Point in Gubat up to Tagdon River in Barcelona	National	1981	12350'57 to 12354'08	
235	Sorsogon	Donsol	Mangrove along the Banks of Donsol River	National	1981	123.9244444	12.84305556
236	Sorsogon	Juban	Malazimbo Point to theMun. Of Juban in Sorsogon Bay	National	1981	Undetermined	Undetermined
237	Sorsogon	Magallanes	Malumawan Fish Sanctuary	National	Undetermined	Undetermined	Undetermined
238	Sorsogon	Prieto Diaz	Papucha Point in Sugot up to Bo. Quidolog, Prieto Diaz boundaries divided into 2 quadrants: a) Sta. Lucia to Buenavista; b) Buenavista to Dingay Point	National	1981	Undetermined	Undetermined
239	Sorsogon	Sorsogon City	Getumbro Point up to the Mun. of Sorsogon	National	1981	Undetermined	Undetermined
240	Sorsogon	Undertermined	From Putaiao to Mantay Swamp Forest Reserve	National	1981	123.6758333	12.91666667

241	Sorsogon	Undertermined	Putiao River to Malbog River	National	1981	123.6758333	12.91666667
242	Sorsogon	Undertermined	Sinagatan Bay to Mantay Point in Ginablan	National	1981	Undetermined	Undetermined
243	Southern Leyte	San Ricardo	San Antonio Fish Sanctuary	National	Undetermined	Undetermined	Undetermined
244	Surigao del Norte	Basilisa	Cabilan Island Wilderness Area	National	1981	Undetermined	Undetermined
245	Surigao del Norte	Basilisa	Capaquian Island Widerness Area	National	1981	Undetermined	Undetermined
246	Surigao del Norte	Cagdianao	Hanigad Island Marine Swamp Forest Reserve	National	1981	125.5833333	9.8833333
247	Surigao del Norte	Dapa	Abanay Island Wilderness Area	National	1981	Undetermined	Undetermined
248	Surigao del Norte	Dapa	Bancuyo Island Wilderness Area	National	1981	Undetermined	Undetermined
249	Surigao del Norte	Dapa	Bucas Grande Island Marine Swamp Forest Reserve	National	1981	125.9166667	9.6333333
250	Surigao del Norte	Dapa	Middle Bucas Grande Island Mangrove Swamp Forest Reserve	National	1981	125.9833333	9.7166667
251	Surigao del Norte	Del Carmen	Laonan Island	National	1981	Undetermined	Undetermined
252	Surigao del Norte	Del Carmen	Tona Island Wilderness Area	National	1981	125.9166667	9.8666667
253	Surigao del Norte	Multiple	Dinagat Island Mangrove Swamp Forest Reserve	National	1981	125.6166667	10
254	Surigao del Norte	Multiple	Siargao Island Mangrove Swamp Forest Reserve/WA	National	1981	126	9.83333333
255	Surigao del Norte	Multiple	Siargao Protected Landscape and Seascape	National	1996	125.8333333	9.5
256	Surigao del Norte	San Benito	Dahican Island Wilderness Area	National	1981	125.9666667	9.9666667
257	Surigao del Norte	San Benito	Poneas Island Wilderness Area	National	1981	125.8666667	9.91666667
258	Surigao del Norte	San Benito	Sugbuhan Island Wilderness Area	National	1981	126.0833333	10.13333333

259	Surigao del Norte	Surigao City	Hikdop Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
260	Surigao del Norte	Surigao City	Rasa Island Wilderness Area	National	1981	Undetermined	Undetermined
261	Surigao del Norte	Tagana-an	Bayagnan Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
262	Surigao del Norte	Tagana-an	Bilabid Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
263	Surigao del Norte	Tagana-an	Caye Island Mangrove Swamp Forest Reserve	National	1981	Undetermined	Undetermined
264	Surigao del Norte	Undertermined	Awasan Island Wilderness Area	National	1981	Undetermined	Undetermined
265	Surigao del Norte	Undertermined	Sibale Island Mangrove Swamp Forest Reserve	National	1981	123.5333333	9.8666667
266	Surigao del Norte	Undertermined	Tagbaoba Island Wilderness Area	National	1981	Undetermined	Undetermined
267	Surigao del Norte	Undertermined	Baong River Mangrove Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined
268	Surigao del Norte	Undertermined	Islands of Lamagon, Cepaya & Corbeto	National	Undetermined	Undetermined	Undetermined
269	Surigao del Sur	Hinatuan	Mahaba Island Mangrove Swamp Forest Reserve/Fish Sanctuary	National	Undetermined	126.3713333	8.41211111
270	Surigao del Sur	Multiple	Mangrove areas along the municipalities of Lavigan and Valencia up to Taon River of the Municipality of Barcelona	National	1981	126.4233333	8.1666667
271	Surigao del Sur	Undertermined	Condona Island Mangrove Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined
272	Surigao del Sur	Undertermined	Gordon Island Mangrove Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined
273	Surigao del Sur	Undertermined	Malubog Pt. to Sambalawan MSRF	National	Undetermined	Undetermined	Undetermined
274	Surigao del Sur	Undertermined	Masopelid Island Marine Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined

275	Surigao del Sur	Undertermined	Pisan Island Mangrove Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined
276	Surigao del Sur	Undertermined	Pongao Bay Mangrove Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined
277	Surigao del Sur	Undertermined	Tagasilay to Tigbao River Mangrove Swamp Forest Reserve	National	Undetermined	Undetermined	Undetermined
278	Surigao del Sur	Undertermined	Tumalong Bay Mangrove Swamp Forest Resserve	National	Undetermined	Undetermined	Undetermined
279	Tawi-Tawi	Mapun	San Miguel Island Turtle Sanctuary	National	Undetermined	Undetermined	Undetermined
280	Tawi-Tawi	Turtle Islands	Turtle Islands Wildlife Sanctuary	National	1999	118.166667	6.166667
281	Zamboanga del Norte	Dapitan City	Aliguay Island Protected Landscape and Seascape	National	Undetermined	123.2245167	8.742916667
282	Zamboanga del Norte	Dapitan City	Selinog Island Protected Landscape and Seascape	National	Undetermined	123.4169	8.854722
283	Zamboanga del Norte	Labason	Murcielagos Islands Protected Landscape and Seascape	National	Undetermined	122.4540261	8.114809216

ANNEX 11. GUIDELINES FOR SELECTING OFFSHORE AREA RESPONSE STRATEGY

Below are the practical guidelines for selecting and implementing Offshore Area response strategies:

I. Mechanical Response Strategies.

A. Containment - Booms

- Work for most oil types on large or small oil volumes
- Containment is most effective when the booms can be accurately directed towards the oil. The use of appropriate MARPOL vessel is recommended when deploying booms. Vessels are good platforms to carry and deploy the oil spill boom in the location and direction of the oil spill.
- Almost always assume leakage even under the best of circumstances.
- Deployment of booms only as good as the crew that deploys and controls the same.
- Use of Ocean Booms are highly recommended.
- Non-static piece of equipment requires constant attention of the responders.
- Offshore containment and mitigation costs can be high per barrel, but still considerably less than shoreline cleanup and resource damage.

B. Recovery - Skimmers

- Different skimmers work for different types of oil.
- Inefficient in rough waters
- Oil recovery rate equals total volume recovered less the amount of water
- Oil recovery cannot exceed storage capacity
- Offshore recovery costs can be high per barrel

C. Recovery - Temporary Storage Tanks

- Use of appropriate vessels and barges for oily wastes collected is recommended if required for transportation.
- Oily wastes should be temporarily stored in purpose-built containers.
- Use of fast tank is recommended, not only for the collection of oil and wastes, but to prevent secondary contamination.
- However, other containers such as drums and rubbish skips may be used provided that they are properly marked and segregated.

II. Chemical Dispersant Response Strategies

- Dispersion can be a very effective method for oil removal from water surface.
- Environmental effects of chemical dispersion at sea are much lower than the effects of oil in the coastal zone
- Chemical dispersion can be effective with minimal environmental effects in near-shore zone with good water (tidal) circulation
- Dispersion does not preclude other actions taking place concurrently like

mechanical application.

- Aerial spraying is recommended since it can cover very large areas (tens of hectares per minute).
- Only PCG approved dispersants should be used.
- Use of dispersants must be approved by the PCG through the Commander, MEPCOM.

III. In-situ Burning.

- In-situ burning (now discouraged due to national laws)

IV. Other Considerations.

A. Surveillance and Monitoring

- Monitoring and survey of oil spill is necessary to determine the proper response strategy to be employed. In some cases, No-Response approach may be applied.

B. No-Response Approach

- No-Response approach implies allowing oil to spread and weather naturally
- The No-response approach may be chosen when it is found that the use of available spill response resources for mechanical recovery and/ or dispersion will not provide a net environmental benefit compared to the No-response.
- No-Response may be applied when the:
  - Oil spill is light when oil or emulsion has viscosity below 2cst or the oil is of a low density (high evaporation and natural dispersion), and is expected to be dispersible;
  - Oil spill will not reach or affect any marine protected area, mobile animals (birds and marine), and/or endangered species;
  - Oil spill trajectory reveals that it will NOT reach the shoreline;
  - There is sufficient wave energy to gradually reduce the oil amount on the sea surface; and
  - Weather does not permit oil spill response and recovery activities.

ANNEX 12. GUIDELINES FOR SELECTING COASTAL ZONE RESPONSE STRATEGY

Below are the practical guidelines for selecting and implementing Coastal Zones response strategies:

I. Mechanical Response Strategies

A. Containment - Booms
- Work for most oil types on large or small oil volumes
- Containment is most effective when the booms can be accurately directed towards the oil. The use of appropriate MARPOL vessel is recommended when deploying booms. Vessels are good platforms to carry and deploy the oil spill boom in the location and direction of the oil spill.
- Only as good as the crew that deploys and controls the same
- The same requires constant attention from the responders.
- Use of ocean booms and/or suitable boom are highly recommended.
- Coastal Zone containment costs can be less than shoreline cleanup and resource damages depending on the kind of shoreline seabed.

B. Recovery - Skimmers
- Different skimmers work for different types of oil
- Inefficient in rough waters
- Oil recovery rate equals total volume recovered less the amount of water
- Oil recovery cannot exceed storage capacity
- Offshore recovery costs can be high per barrel

C. Recovery - Temporary Storage Tanks
- Use of appropriate vessels and barges for oily wastes collected is recommended if required for transportation.
- Oily wastes should be temporarily stored in purpose-built containers.
- Use of fast tank is recommended, not only for the collection of oil and wastes, but to prevent secondary contamination.
- However, other containers such as drums and rubbish skips may be used provided that they are properly marked and segregated.

II. Chemical Response Strategies

A. Dispersants
- Use of dispersant or cleaning agent is only recommended for non-sensitive coastal zones.
- Dispersion can be a very effective method for oil removal from water surface
- Environmental effects of chemical dispersion at Coastal Zones depends upon suitability of its application based on depth of water

- Chemical dispersion can be effective with minimal environmental effects with good water (tidal) circulation.
- Dispersion does not preclude other actions taking place concurrently (i.e., mechanical recovery.
- Aerial spraying can cover very large areas (tens of hectares/ acres per minute)
- Dispersants should not be used at water depths below 30m, unless there are clear environmental benefits obtained by this use.
- Only PCG approved dispersants should be used.
- Use of dispersants must be approved by the PCG through the Commander, MEPCOM.

III. In-situ Burning

In-situ burning (now discouraged due to national laws)

IV. Other Considerations

A. Surveillance and Monitoring
- Monitoring and survey of oil spill is necessary to determine the proper response strategy to be employed. In some cases, No-Response approach may be applied.

B. No-Response Approach
- No-Response approach implies allowing oil to spread and weather naturally
- The No-response approach may be chosen when it is found that the use of available spill response resources for mechanical recovery and/ or dispersion will not provide a net environmental benefit compared to the No-response.
- No-Response may be applied when the:
  - Oil spill is light when oil or emulsion has viscosity below 2000cst or the oil is of a low density (high evaporation and natural dispersion), and is expected to be dispersible;
  - Oil spill will not reach or affect any marine protected area, mobile animals (birds and marine), and/or endangered species;
  - Oil spill trajectory reveals that it will NOT reach the shoreline;
  - There is sufficient wave energy to gradually reduce the oil amount on the sea surface; and
  - Weather does not permit oil spill response and recovery activities.

ANNEX 13. GUIDELINES FOR SELECTING SHORELINE OR NEAR SHORE RESPONSE STRATEGY

Below are the practical guidelines for selecting and implementing shoreline or near-shore response strategies:

I. Mechanical Response Strategies

A. Containment - Booms
- Work for most oil types on large or small oil volumes
- Containment is most effective when the booms can be accurately directed towards the oil. The use of appropriate MARPOL vessel is recommended when deploying booms. Boats are good platforms to carry and deploy the oil spill boom in the location and direction of the oil spill.
- Only as good as the crew that deploys and controls the same
- The same requires constant attention from the responders
- Appropriate oil spill booms must be used for containment and deflection. E.g. Fence boom, solid boom, shore sealing booms
- Shoreline containment and clean up can be difficult, labor intensive, and cost expensive.

B. Recovery - Skimmers
- Different skimmers work for different types of oil
- Inefficient in rough waters
- Oil recovery rate equals total volume recovered less the amount of water
- Oil recovery cannot exceed storage capacity
- Shoreline recovery costs can be high per barrel

C. Recovery – Sorbents
- Sorbents can be defined as any material which will recover oil through absorption or adsorption.
- There are three basic kinds of sorbents
  - Natural organic materials such as bark, peat moss, straw, hay, feathers, coconut husks, and sugar cane waste (bagasse)
  - Mineral-based materials such vermiculite, perlite, and volcanic ash;
  - Synthetic organic sorbents such as polyurethane foam and polypropylene fibres.
- Sorbents are recommended to be used in sensitive coastal zones

D. Recovery - Storage Tanks:
- Use of appropriate vessels and barges for oily wastes collected is recommended if required for transportation.
- Oily wastes should be temporarily stored in purpose-built containers.
- Use of fast tank is recommended, not only for the collection of oil and wastes, but to prevent secondary contamination.
- However, other containers such as drums and rubbish skips may be used provided that they are properly marked and segregated.

E. Other Strategies
- High pressure flushing in rocky areas
- Ambient water - low pressure washing in sensitive areas
- Sandblasting (if found appropriate)
- Vacuum trucks
- Tractor, Ripper, Bulldozer, Motor Grader, Elevating Scraper, Front-Loader, and End-Loader

- Berms and trenches, if applicable.

II. Chemical Dispersants Response Strategies

A. Chemical Dispersants
   - Use of dispersant or cleaning agent is only recommended for non-sensitive shorelines.
   - Dispersion can be a very effective method for oil removal from water surface
   - Environmental effects of chemical dispersion at shoreline or near-shore depends upon suitability of its application based on depth of water.
   - Chemical dispersion can be effective with minimal environmental effects with good water (tidal) circulation.
   - Dispersion does not preclude other actions taking place concurrently (i.e., mechanical recovery).
   - Dispersants should not be used at water depths below 30m, unless there are clear environmental benefits obtained by this use.
   - Only PCG approved dispersants should be used.
   - Use of dispersants must be approved by the PCG through the Commander, MEPCOM.

B. Bioremediation
   - Bioremediation is any process that uses decomposers and green plants or their enzymes to improve the condition of contaminated environments.

III. Manual containment and recovery

- Manual removal of oiled materials by scooping gears (e.g. hand, shovels, rakes, dippers and pail).
- Manual cutting of vegetation.

IV. In-situ Burning.

- In-situ burning (now discouraged due to national laws)

V. Other Considerations.

A. Surveillance and Monitoring:
   a. Monitoring and survey of oil spill is necessary to determine the proper response strategy to be employed. No-Response approach may be applied in shoreline only in exceptional circumstances, like when there are cliffs which prevents response but still requires continuous monitoring.

ANNEX 14. BEHAVIOUR OF OIL ON TYPES OF SHORELINES

TYPE & SIZE RANGE COMMENTS

Oil is often carried past rocky outcrops and cliffs by reflected waves but may be thrown up onto the splash zone where it may accumulate on rough or porous surfaces. In tidal regions, oil collects in rock pools and may coat rocks throughout the tidal range. This oil is usually rapidly removed by wave action but is more persistent in sheltered waters.

Oil penetration increases with increasing stone size. In areas with strong wave action, surface stones are cleaned quickly by abrasion whereas buried oil may persist for some time. Low viscosity oils may be flushed out of the beach by natural water movement.

Particle size, water table depth and drainage characteristics determine the oil penetration of sand beaches. Coarse sand beaches tend to shelve more steeply and dry out at low water enabling some degree of penetration to occur particularly with low viscosity oils. Oil is generally concentrated near to the highwater mark. Fine grained sand is usually associated with a flatter beach profile remaining wet throughout the tidal cycle so that little penetration takes place. However, some oil can be buried when exposed to surf conditions for example, during a storm.

Extensive deposits of mud are characteristic of low energy environments. Little penetration of the substrate by oil occurs because the sediment is usually waterlogged but oil can persist on the surface over long periods. If the spill coincides with a storm, oil can become incorporated in the sediment and persist indefinitely. Animal burrows and plant root channels can also bring about oil penetration.

ANNEX 15. CLEAN UP TECHNIQUES

ROCKS, BOULDERS & MAN-MADE STRUCTURES

Stage I

Where vehicles or boats can reach the water's edge the oil can be collected using skimmers, pumps, or vacuum trucks. Many skimmers do not perform well in shallow water or in waves while a vacuum truck or tank trailer may work better. Typically, these can collect 20 m^3 per day. As far as possible, free water collected with the oil should be allowed to settle and then be drained off before the oil is taken away for disposal. On some shorelines the oil can be flushed off the rocks or stones and collected with booms or floating ropes.

Where vehicles are unable to get sufficiently close to the water's edge, the oil has to be picked up manually using buckets, scoops or other containers. Open-topped 200-litre drums are unsuitable because they are hard to manhandle over rocky terrain when full. However, drums can be carried in small boats for collecting oil trapped amongst rocks. Oils that are particularly fluid can be easily handled by applying sorbents.

The most effective absorbents are synthetic materials such as expanded polyurethane foam and polypropylene fibers. These seems to be expensive but some can be used several times. In the absence of synthetic products, naturally occurring local materials such as rice stalks, straw, palm fronds, coconut husks, sugar cane waste (bagasse) and the likes. The oil or oil-sorbent mixture can then be collected with forks and rakes and carried from the collection point in heavy gauge plastic bags or small containers. Using too much sorbent can be a nuisance if it causes secondary pollution and a good rule is not to apply more than can be readily recovered.

Stage II & III

In many cases, once the mobile oil has been removed, the remaining oil on rocks, boulders and man-made structures can be left to weather since a hard surface film readily forms, minimizing the spread of pollution. However, where rocky shores are part of the coastal amenities, further cleaning can be achieved by washing with water under pressure. Either hot or cold water can be used depending upon equipment availability and oil type: higher temperatures and, on occasions, even steam is required to dislodge viscous oils. Typically, water is heated to about 60°C and sprayed at 10-20 Liters per minute from a hand lance operating at between 80 and 140 bar. Oil released in this way must be collected; otherwise it may pollute previously cleaned or uncontaminated surfaces.

The oil may be flushed down into a boom at the water's edge and collected with skimmer or vacuum trucks or it may be collected by arranging sorbents at the base of the surface being cleaned. In tropical and sub-tropical environments hot water washing is likely to be less effective than in temperate climates since oil exposed to the sun becomes baked on to the rock. Small areas can be cleaned by sand blasting.

Whereas many marine plants and animals will survive a single oiling, any of the methods described above will lead to the destruction of most of the marine biota. Some physical damaged to the treated surfaces themselves may also occur. These methods

should therefore be reserved for areas where there is easy access. And where members of the public are likely to come into contact with oil if no action is taken.

The use of dispersants can sometimes assist oil removal although such use should be restricted to areas where water movement will allow rapid dilution and to prevent damage to sensitive marine life. In some instances, and particularly with more viscous oils, the dispersant acts simply to dislodge the oil from the surface and does not produce a dispersion. In such cases every effort should be made to collect this oil to prevent recontamination.

Stains can sometimes be removed by brushing dispersant into the oil or by applying it as a gel and then hosing off the oil/dispersant mixture. By this stage of the clean-up the oil will be in the form of extremely thin films and so only very light applications will be required.

COBBLES, PEBBLES AND SHINGLES

Stage 1

This type of shoreline is probably the most difficult to clean satisfactorily because much of the oil will have penetrated deep into the beach through the spaces between the stones. The first stage clean-up for this type of shoreline follows similar lines to the previous one: pumping fluid oil where possible or removing it by hand. The poor load-bearing characteristics of such beaches can hinder the movement of both vehicles and personal.

Stage ll & lll

Water at high pressure can be used to flush surface oil to the water's edge but some of the oil will also be driven into the beach. Low viscosity oils may be washed out from between the stones and the use of dispersants can sometimes enhance this. Inevitable some oil will penetrate further into the beach after the stones at the surface have been cleaned. This will slowly leach out as a sheen bovver a period of weeks or longer. The removal of oily stones will rarely be practical and will usually only be possible if tracked front-end loaders can be used. Removal of stones should only be considered if it is certain that it will cause serious beach erosion and that it will be possible to dispose to dispose of the material.

Another approach which might be used in location subject to vigorous winter storm is to cover the oiled area with stones from higher up the beach, so providing a clean surface during the summer for those using the beach for recreation. Some weathering will occur due to summer temperatures and then, during the natural rearrangement of the beach that takes place in the winter, the oil be broken up and dispersed. This method can only be used where the beach is moderately oiled and is not suitable for finer beach materials because the oil tends to migrate back to the surface. The beach profile may also be permanently altered and natural sea defenses weakened.

One way to remove the greasy film that often remains on stones after cleaning is to push the top layer into the sea where the abrasive action caused by the waves rapidly clean them however, this obviously inappropriate if oily stones underneath is then

exposed. It should also be appreciated that it may be several years before a cobble beach profile is restored since vigorous wave action is necessary to lift stones of this size back up the beach.

SAND BEACHES

Stage I

Very often sand beaches are regarded as a valuable amenity resource and priority is given to cleaning them. Inter tidal sand flats, on the other hand, are often biologically productive and important for commercial fisheries. Environmental considerations may therefore dictate the selection of method likely to cause the least additional damage, such as those described later for muddy shores.

Recreational beaches often have good access although on some shorelines temporary roadways may have to be constructed to allow heavy equipment onto the beach. Whilst bulk oil can be removed relatively easily from sand beaches, a desire to clean them quickly can sometimes lead to difficulties. In a major spill a balance has to be struck between the speed with which large quantities of oil can be collected using heavy machinery and the associated increased contamination of beach substrate. To a large extent this is determined by beach type coarse sand beaches are frequently unable to support any vehicle without its wheels or tracks sinking into the sand and causing oil to be mixed further inti the beach. Worse still, vehicles driven onto the beach may become immobilized once loaded.

Manual methods must be used where there is no access for vehicles, no hard-standing at the top of the beach, or if it is too far for pump or suction hoses to reach the water's edge. Oil, as well as oiled sorbents and debris, can be collected in heavy gauge plastic bags or other containers and carried up the beach. Above the high-water mark.

Flat hard packed beaches may support heavy vehicles such as graders and front-end loaders. The grader's blade is set to skim just below the beach surface and the oil and sand drawn into lines parallel to the shoreline. Ideally, the grader should start from the clean end of the beach and wok upwards. This may have to be modified depending on the pattern of contamination, state of the tide and whether the sand is loose or compact. The accumulated oil is then picked up by front-end loaders. The work can be done using front-end loaders alone although the amount of sand picked up will then inevitably be greater. In all cases, care must be exercised to ensure that excessive removal of sand does not result in beach erosion.

Stage II

Moderately contaminated oily sand and debris is best removed from sand beaches by teams of men working in conjunction with front-end loaders, the latter being used solely to transport the collected materials to temporary storage sites at the top of the beach. Typically, each person collects between 1 and 2 m^3 per day by this method. Front-end loaders and the heavy machinery can be used to pick up the oily sand directly and can remove as much as 100-200m^3/day/machine. As a rule, however, the oil content of sand collected manually contains 5-10% oil. This is because heavy equipment tends to mix the oil into the sand and is less selective in what it picks up with the result that at least three times as much sand is removed as compared with manual methods.

To make the most efficient use of each front-end loader, the clean-up teams should collect the city sand into piles or alternatively fill 200-litre drums placed at intervals along the beach. To prevent oil being spread up the beach the front-end loader should work from the clean side as far as possible. Vehicles equipped with low pressure tires are generally more suitable than tracked vehicles.

Where there is no possibility of getting vehicles onto the beach the collected oily sand has to be carried off the beach in plastic bags. Heavy duty bags such as those used for fertilizer are suitable. They should not be filled completely because of the difficulty in carrying them over soft sand. A simple two-man litter can be made to carry the bags. Plastic bags exposed to strong sunlight for more than about 10 days will begin to deteriorate and so disposal of the filled bags should not be delayed.

Stage III

After most of the contaminated beach material has been removed, that remaining is likely to be greasy ang discolored. The will not usually be sufficiently clean for recreational beaches and a final stage will be necessary. Dispersants can be used, applied from back packs agricultural vehicles or aircraft. The dispersant should be allowed 30 minutes' conduct with the oily beach before being washed by the incoming tide. In non-tidal regions or in areas without strong surf action, hosing with sea water may be to achieve a good dispersion.

Another method particularly appropriate for lightly oiled tidal beaches is periodically to plough or harrow the affected beach at low water. The oil is then mixed with a greater volume of sand and more frequently exposed to weathering process.

Oil can be released from coarse-grained sand passing high volumes of water through sections of the. Sea water is drawn through a high capacity pump and distributed through a number of hoses at low pressure. By directing the water into a small area of beach oil can be floated out and flushed to the water's edge for collection. The method is slow and limited to the treatment of small areas at a time.

The material remaining after the clean-up of dry sand beaches is usually in the form of small nodules of oily sand up to about 50mm in diameter. These, and tar balls washed up along the high-water mark, can be picked up using beach cleaning machines which skim the top surface of the beach pass the sand through a series of vibrating or rotating screens. The oily lumps are retained within the vehicle while the clean sand is allowed to drop back the beach. Such machines were designed originally for general beach litter.

If the spill coincides with the tourist season it may be necessary to return the beach to its original condition in the shortest possible time. Clean sand can be brought in from elsewhere and spread over any remaining lightly oiled sand. As far as possible, this clean san should have the same grain size as the natural material so that it does not alter the physical and biological characteristics of the beach. If a finer grained sand were to be used as replacement there is a risk that might be washed away too quickly. When sufficient notice is available before a spill reaches a beach, it may be appropriate to move some of the sand above the high-water mark. This material can then be replaced after the beach has been cleaned.

MUDDY SHORES

Whenever possible it is preferable to allow oil that arrives on this type of shoreline to weather, particularly where it has been washed up into vegetation. It has often been found that activities intended to clear pollution have result in more damage than the oil itself due to physical disturbance and substrate erosion.

Marsh vegetation often survives a single oil coating and in several coating and in several instances new plants have been found to grow through a covering of oil where removal of the oil is essential to prevent its transfer elsewhere, low pressure water hoses can be used to flush it into open water where it may be contained within a boom for subsequent collection. This technique is best applied by cutting and removal of oiled vegetation might be considered but must be balanced against the longer-term damage likely to be caused by trampling.

Similar considerations apply to mangroves. Where the trees are particularly dense and there is a high risk of oil being carried further into mangroves stands, it may be necessary to remove some vegetation to allow access so that the oil can be flashed out. This may prevent destruction of mangroves over a wider area but it should be appreciated that this approach will cause local damage, the recovery of which is likely to be slow.

ANNEX 16. GUIDELINES FOR SELECTING IN-LAND RESPONSE STRATEGY

Below are the practical guidelines for selecting and implementing in-land response strategies:

I. Mechanical Response Strategies
- A. Containment - Booms
  - Booms are applicable only over in-land bodies of waters.
  - For information on booms refer to Annex G, H, or I.
- B. Recovery - Skimmers
  - Skimmers are generally applicable only over in-land bodies of waters.
  - However, there are special type of skimmers that may be used over land.
- C. Recovery – Sorbents
  - Sorbents can be defined as any material which will recover oil through absorption or adsorption.
  - There are three basic kinds of sorbents
    - Natural organic materials such as bark, peat moss, straw, hay, feathers, coconut husks, and sugar cane waste (bagasse)
    - Mineral-based materials such vermiculite, perlite, and volcanic ash;
    - Synthetic organic sorbents such as polyurethane foam and polypropylene fibers.
  - Sorbents are recommended to be used in sensitive coastal zones
- D. Recovery - Storage Tanks:
  - Work boats or appropriate watercrafts may be used in case of oil spill over in-land bodies of water.
  - Oily wastes should be temporarily stored in purpose-built containers.
  - Use of fast tank is recommended, not only for the collection of oil and wastes, but to prevent secondary contamination.
  - However, other containers such as drums and rubbish skips may be used provided that they are properly marked and segregated.
- E. Other Strategies
  - High pressure flushing in rocky areas
  - Ambient water - low pressure washing in sensitive areas
  - Sandblasting (if found appropriate)
  - Vacuum trucks
  - Tractor, Ripper, Bulldozer, Motor Grader, Elevating Scraper, Front-Loader, and End-Loader
  - Berms and trenches
  - Controlled flooding
  - Bioremediation

II. Manual containment and recovery
- Manual removal of oiled materials by scooping gears (e.g. hand, shovels, rakes, dippers and pail).
- Manual cutting of vegetation.

III. Surveillance and Monitoring of oil spill is necessary to determine the proper response strategy to be employed.

ANNEX 17. OILED WILDLIFE RESPONSE PLANNING

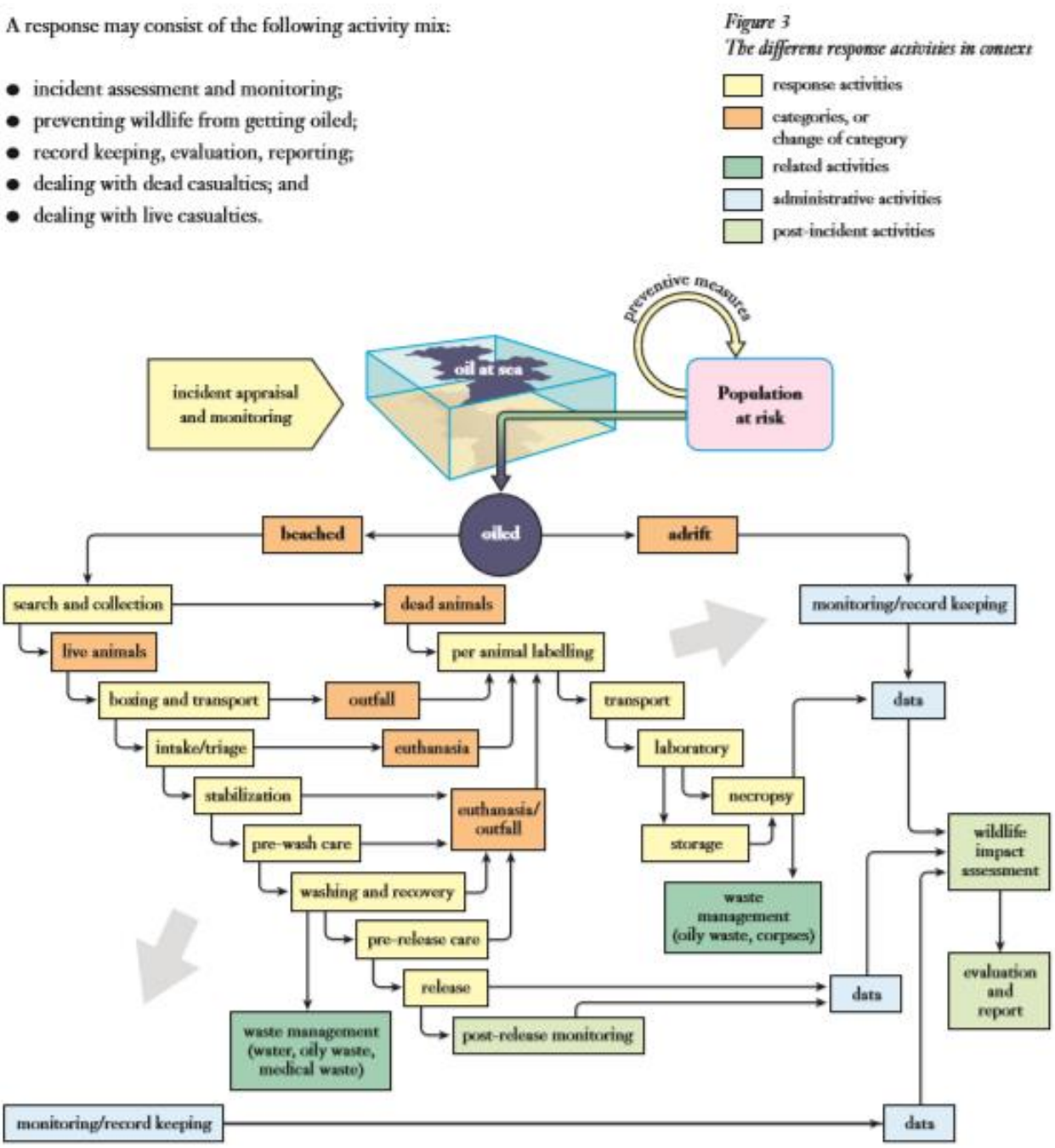
Based on IPIECA Report Series Volume 13

*IPIECA guidelines are updated from time to time. The ***Oil Spill Report Series*** is replaced by the ***Good Practice Guides*** which can be found in this link: http://www.oilspillresponseproject.org/.

A response may consist of the following activity mix:

- incident assessment and monitoring;
- preventing wildlife from getting oiled;
- record keeping, evaluation, reporting;
- dealing with dead casualties; and
- dealing with live casualties.

Figure 3
The different response activities in context



Incident appraisal

Incident appraisal should involve the collection of the following key information:

- size of spill, type of oil, expected drift and weathering of oil released, etc.;
- location of oil in relation to sensitive wildlife areas;
- time of year/season (affects behaviour of animals and habitats they may be using);
- potential threat to wildlife at sea and on the shore;
- potential for further pollution;
- wildlife and habitat already impacted;
- estimate of the number of losses at sea (unreported casualties);
- resources available;
- need for external support;
- consideration of the need for triage/euthanasia.

Hazing techniques

Visual techniques include balloons, reflectors, flags, etc. Auditory techniques include loud noise and alarms or the use of wildlife distress calls. Occasionally, a combination of activities can be used, for example, a carefully prepared flight path before or after dispersant spraying can deter wildlife from impacted areas.

Incident assessment and monitoring

A competent incident assessment will be key to a successful response, and will help determine the magnitude and nature of the response needed.

Whereas strategic objectives should be clearly identified as part of the plan, priority actions are decided on the basis of incident assessments. These normally take place on a day-to-day basis throughout the operation. A wildlife response that is fully integrated into the overall contingency plan will benefit directly from information that is centrally collected, e.g. oil movements, weather forecasts. The routine aerial survey flights that track oil movements could also be accessed by wildlife responders. This can provide additional relevant information, such as the presence of wildlife in threatened areas or the number of oiled animals at sea.

These additional data will allow responders to anticipate and plan for an appropriate level of response and make the necessary adjustments (scaling up, scaling down).

Preventing wildlife from becoming oiled

Preventing wildlife from becoming oiled is not always possible. The incident command centre must separate what is feasible from what is not, based on a technical assessment of the situation, balanced with a realistic expectation for success and reasonable cost benefit. Some methods that can be used specifically to prevent wildlife from getting oiled are described below.

Deterrence/hazing

Sometimes it is possible to keep clean, healthy individuals away from the oil. In many instances, such efforts are only practical in 'near-perfect' conditions. A variety of deterrents—visual, auditory and sensory—can be used and are collectively referred to as *hazing*.

It should be noted that hazing at sea is more difficult than on land, especially with drifting oil. From time to time the technique applied to scare animals may need to be altered due to habituation. Hazing works best in small, well-defined spill areas such as small bays, harbours, narrow inlets etc., which can be surrounded by a variety of scaring devices. An attempt at hazing should be well planned and should be devised with input by those familiar with the local species and their habitat, the topography, and a variety of hazing techniques. There must be clean areas for animals to move to where they will not be disturbed. It is important to ensure that hazing efforts do not make the situation worse by inadvertently moving animals into the oiled area or causing oiled animals to scatter.

Pre-emptive capture

This strategy aims at capturing animals before they have the opportunity to become oiled. Such an undertaking, however, is complex and requires good pre-planning. Pre-emptive capture is best restricted to species that are relatively easy to capture or of particular interest, e.g. endangered animals. Before considering this approach, a complete plan including capture, transport, holding and release strategies and resources should be identified.

Record keeping, evaluation and reporting

Throughout the wildlife response operation, records should be kept for purposes of impact assessment, evaluation (lessons learnt) and submission of claims for compensation.

For the impact assessment, it is crucial that an estimate of the total number of animals affected (dead or alive when found on the beach), the species, their age structure and their (possible) origin are provided. Dead animals as well as live individuals washed ashore should be recorded and examined. The fate of the live creatures throughout the process of rehabilitation (euthanasia or death, rehabilitation, tagging and release) should be individually recorded and reported, ideally on a centralized database where all data are regularly collated. Pro-forma data collection forms should be agreed with stakeholders (scientific and other institutes, welfare organizations) in advance of any incident.

To be able to evaluate the response and the adequacy of the contingency plan, and to obtain compensation for money spent on rehabilitation efforts, it is important that records be kept of the response activities, the input of human and non-human resources, and the decision-making process at any stage of the response.

How to assess impact

- Calculate numbers of affected animals per species, sex and age category.
- Identify colonies/populations of origin as accurately as possible.
- Report the information in an accessible format.
- Examine survival or population trends in potentially affected colonies (where monitoring data are available).

Incident reporting and publication

A report written on the incident and the response can be used for future reference. Such a report should include lessons learned and recommendations for modifications of the response plan.

Publication in an international peer-reviewed paper is also recommended so that the experience can be shared internationally.

Dealing with dead casualties

Corpses provide essential information for an impact assessment and wider ecological interest. Therefore, the adequate and systematic collection and storage of dead oiled animals is essential. Each corpse must be individually labelled for later identification and analysis. Details should include location, date found and cause of death and, if the animal died in rehabilitation, any additional activity undertaken such as cleaning, blood sampling, feeding, etc.

Collected individuals are received and logged on arrival at the post-mortem centre. If numbers are large, labelled corpses should, wherever possible, be deep frozen. In the case of low numbers and adequate facilities, animals can be processed immediately. Dead specimens may be kept for later reference, evidence (a legal requirement in some countries) or scientific research and natural history collections. Processed carcasses must be disposed of properly.

Planning for drift experiments

- Drift blocks or representative corpses should be made available or prepared in advance.
- Samples should be put out at sea in a way that the natural die-off at sea is adequately mimicked.
- Search effort should stay identical during the drift experiments.

Beach surveys of oiled birds

Research on the search for, and recovery of, birds after an oil spill has demonstrated that a number of carcasses will not be recovered. These should, however, be taken into account when assessing the total mortality of the incident. Such losses can result from:

- rewash—birds that wash ashore, but refloat at a later tide;
- predation/scavenging;
- search efficiency—birds may be overlooked due to their colour and small size, as well as the search method (e.g. by foot, or vehicle); individuals may also travel considerable distances from water to seek shelter in dunes or vegetation;
- departure from the area—birds (in particular those that are lightly oiled) may leave the area and never be found;
- removal/burial by the public—it may be necessary to inform the public of the importance of reporting dead individuals.

Assessment of birds lost at sea

It is important to estimate total mortality rather than just numbers washed ashore. Therefore, an estimate may need to be made of the numbers of casualties lost at sea. Drift experiments will help determine how likely it is that oiled birds will be washed ashore. This is particularly useful for offshore spills. In near-shore incidents where most birds are still alive when arriving on shore, the losses at sea may be considered insignificant.

Necropsy

To clarify the species composition, the casualties may need to be identified by specialists. For many species, including heavily oiled specimens, necropsies are required for ageing and sexing, while the careful documentation of ringed individuals, plus the collection of the appropriate biometrics are needed to be able to assess the probable areas of origin of stranded birds. Tissue samples may also be required for analysis in some countries for litigation. Systematic examinations of carcasses should also accommodate the needs of any ongoing wildlife pathology or biology programmes normally operating in affected regions, where possible. It is recommended that the status of necropsy activities in the response is discussed with the oil spill management authorities beforehand, to ensure approval in relation to the recuperation of incurred costs.

Dealing with live casualties

The treatment of wild animals in captivity should always be considered as a 'last resort' activity after all efforts to keep them from being oiled have failed. Treatment, i.e. the physical handling, will need clear objectives and a carefully developed triage strategy which is agreed by all stakeholders, ideally as part of the response plan. If possible, triage should already start on the beach especially when animals are found which are not in a condition that merits collection and rehabilitation. These are best euthanized immediately by a qualified person.

To be successful in treating live oiled animals, there are a number of critical components and strategies. Components include facilities, human resources and equipment. Strategies include capture, transport, intake and stabilization, cleaning and conditioning, and release and post-release monitoring.

Left: a red-breasted merganser in oil

Right: necropsy lab at the University of A Coruña (Prestige, November 2002)

Facilities

If live casualties are to be handled, appropriate facilities, equipment and trained staff will be required. In a large incident these may include:

- beach collection points;
- forward collection, stabilization and initial care centres;
- stabilization centres (forward holding/distribution point);
- primary cleaning and rehabilitation centre;
- pre-release facility

Beach collection points

These are basic facilities which act as a focal point for beach collection on shores where high animal casualties are likely. Their design should offer short-term accommodation, rehydration, quiet and possibly contingency for initial triage. Casualties are then prepared for onward transport either to the forward collection points, or directly to the primary centre. Small numbers of staff are required to man these facilities. Physical requirements should include the ability to maintain a temperature in animal areas of at least 21 °C (70 °F), hot water for cleaning equipment, and good ventilation.

Forward collection/stabilization/initial care centre

A short-term first aid point; strategically located for good access to a range of affected beaches. Here casualties are given immediate care and stabilization prior to onward transport to purpose-built cleaning and rehabilitation centres. Casualties may stay for short periods (up to 24 hours) until fit for travel. It may be necessary to provide cleaning facilities but these are not essential (see *Cleaning* on page 20). Staff should include experienced rehabilitator(s) and should allow for regular (daily) veterinary visits. Physical requirements should include the ability to maintain a temperature in animal areas of at least 21 °C (70 °F), hot water for cleaning equipment, and good ventilation.

Primary (principal) cleaning and rehabilitation centre(s)

A facility designed to accommodate, clean and rehabilitate oil casualties. Ideally it should be centrally placed with good communications to other sites and centres. It can be a permanent or a temporary facility. (See boxes on '*Facility requirements*', pages 20 and 21). Staff, including volunteers will be required for all aspects of husbandry, cleaning, administration and back-up. Ancillary personnel will also be needed for support and maintenance. A large range of staff is required from administration to veterinarians, experienced rehabilitators and inexperienced volunteer staff. Requirements include adequate space to house species and numbers expected. Ventilation should provide 12 exchanges of air per hour in animal care areas. Adequate amounts of water under pressure (60–80 psi) should be available for cleaning animals and delivered at appropriate temperatures, i.e. circa 39 °C. Electrical power should be adequate; and there

Triage: allocating oiled wildlife casualties to appropriate treatment regimes

Triage is the principle or practice of sorting casualties in battle or disaster or other patients into categories of priority for treatment. (The Collins English Dictionary)

In practice, wildlife triage permits allocation of received oiled wildlife casualties to different treatment regimes on the basis of clinical needs or likelihood of positive outcomes.

However, when resources are limited, the triage process may be modified to prioritize treatment of individual animals of high conservation value, while animals of lower conservation value may be relegated to less resource-intensive treatments.

Euthanasia, or the humane killing of animals, may be perceived erroneously as 'failure'. However, a proportion of the animals may have a low probability of return to the free-living breeding population as a result of severity of exposure, pre-existing starvation or concurrent injury or disease. It is regarded as more humane to kill these individuals than to persevere with rehabilitation.

(See box, *Example of a triage regime*, overleaf.)

Administering first aid to a Gannet in an initial care centre (Prestige, *2002*)

Capturing an oiled Eider Duck (Rockness, *2004*)

Example of a triage regime

In this example, establishing a triage regime for birds involves dividing the casualties into three categories, as follows:

Category 1 may include:
- birds that are physically fit; and/or
- with a temperature at, or above, a predetermined criterion; and/or
- are known breeding adults.

Category 2 may include:
- birds with a temperature at intake below a predetermined criterion; and/or
- are covered with additional and caustic substances; and/or
- are suffering from broken limbs.

Category 3 may include:
- birds that are below a pre-determined weight criterion; and/or
- are suffering from multiple injuries; and/or
- are in need of care that is not readily available.

The process of triage involves making a veterinary decision as to how each individual casualty should be dealt with, e.g.:
1. euthanize if unlikely to survive (Category 3); or
2. invest professional care into selected casualties (Subcategory 2A) which may make suitable candidates for moving to Category 1—otherwise (Subcategory 2B) demote to Category 3 (euthanasia); or
3. attempt (early) cleaning and release with good prospects for long-term survival in the wild (Category 1).

should be sufficient space for the storage of supplies and food, as well as for human needs.

Satellite centre for rehabilitation care, conditioning and release preparation

Where space in the principal centre is, or is likely to become, limited, consideration should be given to additional areas or sites for pre-release conditioning and release preparation. Ideally, these are annexed to the principal centre, however, thought can be given to establishing a facility elsewhere, possibly near to a release point. Experienced staff are required at this unit.

Search and capture

The goal of search and capture is to collect as many live oiled animals as quickly as possible and in the best possible condition to maximize survival. Collection of oiled wildlife will in most situations take place primarily on the shoreline. However there will be situations where on-water collection should be considered for the effective capture of oiled animals before they become so debilitated that their chance of survival is severely affected.

Direct liaison with the overall operational command is required to establish the appropriate level of health and safety equipment and procedures, access to beaches, and smooth integration with other activities within the oil spill response.

Casualties will have to be contained for removal from the beach either to appropriate transport or, in a larger incident, to a central beachhead collection point. Suitable containers will be required. Well ventilated, cardboard boxes are ideal for most bird species; however, mammals will require significantly stronger containers or purpose-designed transport, for example, stretchers for seals.

Personnel health and safety must be assured. Safe and efficient capture will require experience and practice in capture techniques and the use of the relevant safety equipment. Training may be required for the rescue and collection of some species for example, large birds or seals. If handling a large oiled animal is considered dangerous for any reason, then no attempt should be made to capture it.

Capture techniques will vary according to species but in most cases two people will be required for a successful capture. In general, the oil may have rendered birds flightless but only reduced their ability to dive and avoid being caught. Most mammals and birds will still be able to run or swim. A significantly weakened animal may move slowly and be fairly easy to catch; others may need to be trapped in a net or cornered for capture by hand. Chasing oiled casualties unnecessarily will add to the animals' stress and reduce their ability to recover and should be considered only as a last resort.

Preparation for transport to a predetermined centre, either for initial triage or stabilization, is critical and depends on the distances and terrain involved. Road transport is most often used but boats or aircraft are also suitable if the casualties are well prepared.

Transportation of live animals

Pre-planning and great care is essential if this area of work is to be a success. Transporting sick birds over any distance is stressful and losses can be significant if certain essential criteria are ignored.

Direct communication with the principal cleaning centre and the Wildlife Response Centre (WRC, see page 22) is essential. The transport plan should detail container guidelines, species space requirements including numbers per container, ventilation and temperature control, as well as treatment protocols prior to transport.

Additional legal paperwork may be necessary at border controls and, in some countries, requirements for domestic transport must also be met (e.g. a 'green card' in France). Consult with the incident command/government advisor/liaison for help in this regard.

Intake/triage

The physical condition of live animals which are admitted to the facilities may range from very weakened and completely oiled individuals to strong and lively ones which are only partly covered with oil. The process of triage enables the responder to prioritize and to select those animals that may have the best chance of surviving further treatment and, after their rehabilitation, a return to the wild to rejoin the breeding population. Other considerations for triage decisions may include species conservation value, age priority or the resources available. Low priority species with little chance of release should be considered for euthanasia. Triage is an ongoing process throughout treatment. It will usually be part of the initial intake evaluation where the animal is examined by qualified personnel and individually documented. The establishment of basic triage criteria is essential for good animal welfare as well as efficient use of limited resources. A basic set of criteria can always be adjusted to cope with specific circumstances (see box on page 18).

Animals that die or are euthanized

Animals that die in care or those which are euthanized should be documented and kept for further analysis. An necropsy would be required to establish the cause of death because it is important to detect captivity-illnesses like aspergillosis. There may be legal stipulations placed on dead oiled animals. Discussions with local agencies with legal responsibility for animal welfare will identify any such stipulations and should be able to arrange for the issuing of any necessary permits, etc.

Essential requirements for transportation

- Good ventilation to every container; oil fumes can be toxic; a problem exacerbated by confinement.
- Keep animals at a reasonable temperature; neither too hot nor too cold.
- Ensure species contained together are compatible; fighting can break out even between individuals of the same species.
- Well constructed cardboard pet containers, to allow for all the above, plus portability; these are often flat-packed for storage. For larger animals, purpose-built containers may be required.
- Good ventilation of the vehicle.

Experienced veterinarians play an important role in the rehabilitation centre.

Facility requirements for rehabilitation of oiled birds

- One large central room (preferably gymnasium size) to house and treat oiled birds.
- Unlimited quantities of soft, warm water (39–41 °C/102–110 °F) of good pressure (60–80 psi) for cleaning birds.
- Means to dispose of used cleaning solution and rinse water, e.g. sink or shower drains to sewer system, or storage tanks for disposal.
- Means to dispose of medical and solid oily wastes, e.g. units for storage and transport of used syringes, oiled cleaning rags, bedding and transport boxes to approved disposal facilities.
- Good ventilation to prevent excessive oil fumes and humidity, and to help prevent diseases.
- Temperature control to maintain a draught free, warm environment (24–29 °C/ 75–85 °F).
- Electrical capability, min. 200 amps, 120/240 volts, single-phase service and (if possible) ground-fault interrupter.
- Communication system—at least one telephone line or other form of communication located away from wildlife and cleaning activities.
- One or more small rooms, to serve as functional areas.
- An adjacent outdoor area/campground for storing equipment and conducting activities such as preparing birds for release.
- Separate room for food storage and preparation.
- Reasonable security.
- Parking space.

Stabilization

Early stabilization will promote recovery. As casualties become settled and warmed, and stress levels are reduced, a routine of veterinary care, feeding and watering can begin. Simple quiet areas for further, more detailed assessment and triage can be provided. Cleaning of casualties is largely unnecessary at this early stage, but provision must be available to clean the worst covered individuals and/or to remove particularly toxic agents.

An environment capable of maintaining the affected animal at a normal body temperature is essential. Prevention of escape is also high on the list of requirements and therefore some kind of animal cages within the building will be necessary. Prefabricated cages, tanks and boxes can all be utilized, depending on the species and the nature of their condition. Caging should provide adequate ventilation and appropriate space for comfort, and should be easily cleanable or have disposable surfaces and visual barriers.

Good husbandry of the casualties is important for their long-term future. Food, water, cleanliness of the environment and identification of any significant deterioration in their condition are essential, as is early veterinary care. Experience in oiled animal management is paramount to a successful operation. Different species will require a range of management procedures to ensure good welfare.

Cleaning

As the condition of each animal improves, cleaning can be undertaken using trained and experienced cleaners. Facilities that provide continuous hot water at constant pressure and temperature are essential. Adequate supplies of a recognized quality oiled bird detergent (e.g. Fairy, Dawn, Dreft) need to be available. The facility must have the ability to properly contain and dispose of contaminated wastewater.

Continual assessment of the animals in care is essential, and experienced animal-management staff is crucial. Good hygiene and calm, quiet operation is demanded throughout for the successful recovery of these animals. The maintenance of a good environment suitable for the species and their recovery is therefore critical.

Once the animals are clean and considered physically fit, they should be moved to protected facilities where they can swim in clean water and have access to dry areas. Feeding remains a constant requirement and quality food is needed throughout. The aim is to allow birds to be as active as possible improving both the integrity of their plumage and their physical fitness.

Discrete and frequent observation of animals in these areas is important to assess their level of waterproofing, fitness, behaviour and readiness for release. Evaluation for release should be as rigorous as the initial intake examination, and each animal's recovery documented. Criteria commonly utilized include healed

Far left: the cleaning of a bird requires experienced washers—the plumage can easily be damaged.

Near left: before it is released, a bird should be ringed for scientific purposes.

injuries, haematological parameters, body condition and fitness, waterproofing, and behaviour.

Release and post-release monitoring

There are a number of considerations that should be included in planning for the release of animals on completion of rehabilitation. The natural history of the species, including foraging, migration and breeding habits; the clean up stage in and around the release area; and the weather forecast and time of day may all affect the likelihood of survival of wildlife after release. Consultation with species experts and local wildlife experts may be invaluable to balance the threat of re-oiling versus secondary problems related to further captivity. Wildlife plans should include contact information for organizations, agencies and individuals that should be contacted in the event of a spill to assist with or oversee release and post-release monitoring. These may include governmental wildlife agencies, universities, wildlife societies and environmental NGOs.

Each animal should be uniquely marked prior to release; ringing/banding groups are usually keen to assist in this process. Mammals can be marked using a variety of methods ranging from passive marking systems such as flipper tags or ear tags to sophisticated active devices such as radio transmitters and satellite tags.

If recognized marking techniques are used within official schemes, the data will be centrally recorded and a unique picture of response events can be captured. The breeding successes of African penguins *(Spheniscus demersis)* following the *Treasure* oil spill in 2000 are countered with the negative information about the poor survival of guillemots from some spills.

Quality of food

In captivity, wild animals should be given food that most closely matches their natural diet. Food should be fresh and nutritious. Rehabilitation success in birds, in particular with regard to waterproofing after washing, depends to a large extent on the fat content of the food given to them. Fat or oil from faeces will settle on the water surface of their swimming pool and can re-pollute the plumage of cleaned birds. A low-fat diet will therefore aid significantly the overall cleaning success.

Facility requirements for rehabilitation of seals

- Dry, draught-free, well ventilated space.
- Floors must be easily cleaned with water and detergent.
- Good waste water drainage and disposal.
- Possibility of keeping animals at a level which allows dirty water and faeces to drain away.
- It is better to use a small room for one seal than a bigger room for two.
- A small pool (1.2 m x 1.2 m x 1 m, or a bath tub) for one seal is more practical than one big pool for a larger number of animals.
- Movement of animals must be kept to a minimum.
- Heating is not always necessary, except to prevent water systems freezing. Seals can be kept warm with heat lamps and jugs of hot water.
- Facilities for the preparation of fish (for food), including a large freezer and sinks of sufficient size where frozen food can be easily thawed in warm running water.
- A clothes washing machine and dryer.
- Freezing facilities for keeping dead animals.
- Documentation required for the operation of the facility, including protocols (e.g. strict quarantine).

ANNEX 18. MANAGING OILY WASTE STORAGE AND DISPOSAL

It is expected that the oil spill response operation will generate several types of waste. Key consideration on the collection, handling, transport and disposal of these waste are the types, characteristics and quantities of waste. These factors largely depend on the specific clean-up method employed and may change as the operation progresses.

Some general principles in managing waste generated from spill response operation are the following:

- Provide safe working conditions and all necessary personnel protection
- Comply with all applicable laws and regulations
- Minimize the risks of pollution in all operations
- Cooperate with all local community and governmental agencies to limit impacts on local waste disposal facilities
- Handle, store, and transport oily waste in appropriate containers, tanks, and trucks
- Control the amount of waste generated by implementing waste reduction principles
- Segregate oily and non-oily waste to allow optimum reclamation and disposal
- Dispose of all waste in a safe manner and at Project-approved disposal sites

1. SEGREGATION AND WASTE MINIMIZATION

Segregate waste at the point of generation to facilitate subsequent handling and disposal:

- Segregate all oily waste from non-oily wastes
- Transport all oily solid waste to a central waste processing area.
- Further segregate oily waste as required to facilitate final disposal

Waste minimization is essential during spill response operations. To the maximum extent feasible, minimization should be achieved through prevention and reduction of waste generated during cleanup. Waste management and operations personnel are responsible for making use of their field experience to identify other practical ways of minimizing waste generation by recycling, reusing materials, or employing different clean up method.

Guidelines for reducing waste generation are enumerated below:

Solid waste:

- do not mix any oil, fuel, or oily waste with trash and garbage
- prevent oily waste from contaminating soil; use liners beneath drums, tanks, or cleaning operation sites
- use sorbent pads and booms until they become moderately oiled
- when collecting mousse patties and oiled sand and gravel, minimize the collection of underlying or nearby clean sand or gravel
- challenge the source of improperly labeled waste or whenever there is a

suspicion that waste did not come from the current spill cleanup effort

Liquid waste:

- cover areas used for storage of fuel, chemicals, and waste to minimize the accumulation of rainwater
- do not order more chemicals/ solvents than are reasonably needed; finish using one container prior to opening another one
- take precautions not to contaminate fuels, lube oils, and waste with water or solid contaminants; keep tops and bungson drums, tanks, and other containers
- examine disposal implications before using chemical additives (e.g. demulsifies in recovered oil)
- use cleaners sparingly, even if they are biodegradable; do not use excessive amounts or flush with large amounts of water
- use wash water sparingly; ensure that hoses, valves, and faucets do not leak and are closed when not in use
- if there is any question about the source or content of waste oil, keep it separate from other waste oils until its source can be identified or it can be sampled and tested

2. WASTE COLLECTION, PACKAGING AND STORAGE

Procedures for waste collection and storage differ for different types of wastes. A number of readily available materials can be used to package materials recovered during spill response. Techniques available for packaging and storage of oil spill wastes include:

- tank vessels (liquids),
- barges (liquids or solids),
- flexible towable tanks/ pillow tanks (liquids),
- lined earthen pits(solid),
- lined earthen dikes(solid),
- prefabricated kits(liquids),
- sealed-top drums (liquids or solids),
- livestock tanks (liquid),
- oil filled tanks (liquid),
- unused above- ground tanks (liquids),
- unused under- ground tanks (liquids),
- dumpsters (solid),
- supersacks‖ (solid), and
- plastic trash bags (solids).

3. TRANSPORTATION

Waste transportation options include:

- freight boats
- tank trucks or railroad tank cars
- freight trucks or rail road freight cars
- light trucks
- aircraft
- dump trucks

Transportation options will be selected based on the type and quantity of waste to be moved. If possible, separate vessels and trucks will be used to transport oily and non-oily wastes

4. DISPOSAL OPTIONS

After initial collection and packaging and temporary (interim) storage of oiled wastes, final disposal and treatment options will be evaluated. Techniques available for disposal include:

- Reprocessing/Recycling
- Landfarming/Bioremediation
- Open Pit Burning
- Incineration

5. DISPOSAL OPTION FOR DIFFERENT WASTES GENERATED DURING AN OIL SPILL RESPONSE OPERATION

5.1 Disposal of Recovered Oil

Considerations for the choice of a disposal method includes:

- How clean the material is; whether it is primarily free of debris and not highly emulsified
- Availability of local disposal and recycling resources
- Cost of disposal processes
- Environmental factors
- Local regulatory issues

5.2. Reprocessing

Reprocessing's excellent means of disposal for recovered oil, especially when the liquids contain little debris. Typical sites that can accept oil for reprocessing include refineries, pipeline pump stations, terminals, and production facilities.

Depending on the reprocessing facility used, the disposal of several hundred bbl/hour is typically achievable. An advantage of this method is that oil is salvaged and reused; however, transportation costs can be high, depending on the distance between the reprocessing facility and the storage site. No auxiliary equipment is needed other than for transportation.

5.3. Supplemental Fuel/Reuse

Waste material, such as recovered oil and lube oil, may be used as fuel if appropriate facilities such as cement kilns are available to handle wastes as fuel.

5.4. Bio-treatment

Bio-treatment includes land farming and composting.

5.5 Land Farming

Land farming is an option for the disposal of recovered liquids. In land farming, recovered liquids are spread on selected sites and combined with the soil, moisture, and nutrients in the presence of oxygen to promote bacterial degradation of the hydrocarbon components. This requires uniform applications of oily waste over the selected land parcel.

The most suitable sites are large fields with deep, tillable soil with adequate moisture. Some sites might require the placement of aligner. At the site, the soil is prepared, nutrients and waste are applied, and the field is tilled periodically. The soil pH must be controlled, and the field must have less than 1 to 2% grade. Run off is collected for reapplication during dry periods or treated (separation) before discharge.

This is a proven method that can be implemented quickly. Furthermore, the oil degrades rapidly. Applications can be made every 6 to 8 weeks during warm weather. The method requires a large surface area and periodic maintenance to fertilize, till, and spread oil. Required equipment typically includes a tractor, plow, fertilizer, and a tank truck with a spray bar. After several years, the site can be replanted with grass or other vegetation.

5.6 Composting

Composting is similar to land farming in that the hydrocarbons are biologically degraded. Usually composting is done in a pile, using wood chips or other similar material as a bulking agent. Recovered liquids are sprayed on the pile, with moisture and nutrients added. The pile is periodically mixed for aeration. Force deration using a blower and perforated piping enhances the degradation rate. Composting can be done at a lined site or on an asphalt/concrete pad. Required equipment typically includes a front-end loader/ backhoe, aeration system, fertilizer, wood chips, and mixing equipment.

5.7 Disposal of Waste Oil

Oily waste in this category includes crank-case oil, hydraulic oil, and contaminated fuel. Such waste will be typically cleaner (primarily free of debris and not highly emulsified) than other liquid wastes. Therefore, the waste will be amenable for disposal by reprocessing, use as supplemental fuel or incineration.

5.8 Disposal of Oil-Contaminated Water

Factors affecting the selection of disposal options for this type of waste are:

- The amount of free oil present
- The level of dissolved hydrocarbon present
- Whether the waste contains surfactants or other chemicals
- Discharge location

The disposal option will therefore depend primarily on the source of the oil- contaminated water. The following is a list of possible treatment options according to the waste water source. The degree of treatment required also depends on the discharge location and sensitivity.

6. Disposal of Recovered Oily Water

6.1. General

This type of waste typically contains free oil without surfactants. An oil/ water separator is used to remove the free oil. Recovered free oil is transported to an appropriate facility for disposal, and the treated water is discharged.

For oil spills, gravity separators are simple devices that rely on residence time to provide sufficient oil/ water separation. Typically, 30 to 45 minutes residence time is sufficient for good separation. Vertical or horizontal portable tanks with sufficient residence time can be used as separation vessels. Earthen basins with oil retention baffles and overflow weirs canal so be constructed in the field. Prefabricated separators with and without plate packs are also available, but require significant time to mobilize.

6.2. Disposal of Wash Water

This waste results from washing oiled equipment, boats, booms, gear, etc. If the waste contains no surfactant, then oil-water separation should be sufficient. If surfactants were used for the washing process, then the oil would typically be emulsified in the wash water. In this case, emulsion breakers should be added before oil-water separation.

6.3 Disposal of Ballast/ Bilge Water

This type of waste is typically free of surfactants, and oil-water separation is sufficient prior to discharge. Discharge is to comply with international and national laws.

6.4 Disposal of Rainwater

Rainwater runoff from storage areas for oil and oily waste would typically be lightly contaminated with oil and be surfactant- free. Oil-water separation is normally sufficient prior to discharge.

6.5 Disposal of Non-Oily Wastewater

Oil spill cleanup operations can generate large amounts of liquid sewage wastes, both on shore and offshore, that originate strictly from domestic sources such as toilets, laundry, showers, and kitchens. The volume of this waste is proportional to the number of cleanup workers involved. Some small amount of non-oily waste water may also originate from laboratory facilities as wash water or sample water.

7. Solid Waste

7.1 Disposal of Oily Solid Waste

Oily solid waste will be collected, segregated, and stored either at the centralized waste storage area or at the sites of cleanup operations. Most oily waste will be stored in plastic bags after collection. Vegetation debris will most likely be piled (not bagged) on location.

Land filling, incineration (including open burning) and land farming are the key disposal options available for oily solid waste.

7.2 Land filling

A land fill is an excavated area of land that serves as a disposal site for solid waste. Waste is deposited in a land fill and is periodically (usually daily) covered with soil to control vapors, odors, and littering.

The key concern with land filling of oily solid waste is protection of underlying drinking water aquifers, if any. This concern influences the location and design of landfills. If the hydrogeology is suitable, a liner may not be required. If not suitable, a means of controlling leachate, such as a membrane liner or clay liner, may be required. Land filling of liquid waste should be avoided.

Fixation, also known as stabilization, makes certain types of waste more amenable to disposal in landfills. The method can augment landfill disposal of oily solid wastes that include free liquid. It can also be used for sludge residuals from storage tanks and water treatment facilities, as well as for oil-contaminated sand and soil. Solidification prior to landfilling can reduce the leachability of oil and metals from the waste.

The fixation/ stabilization (F/S) process involves the addition of various stabilizing agents or solidifying binders (singularly or in combination), such as lime, cement, fly ash, silicates, or organic polymers, to a waste to physically and chemically immobilize contaminants. F/S treatment results in improved handling and physical characteristics and decreased solubility (decreased leaching) of contaminants. Mixing of the reagents with the waste can be done using a mechanical mixer, backhoe, or frontend loader.

7.3. Land Farming/Composting

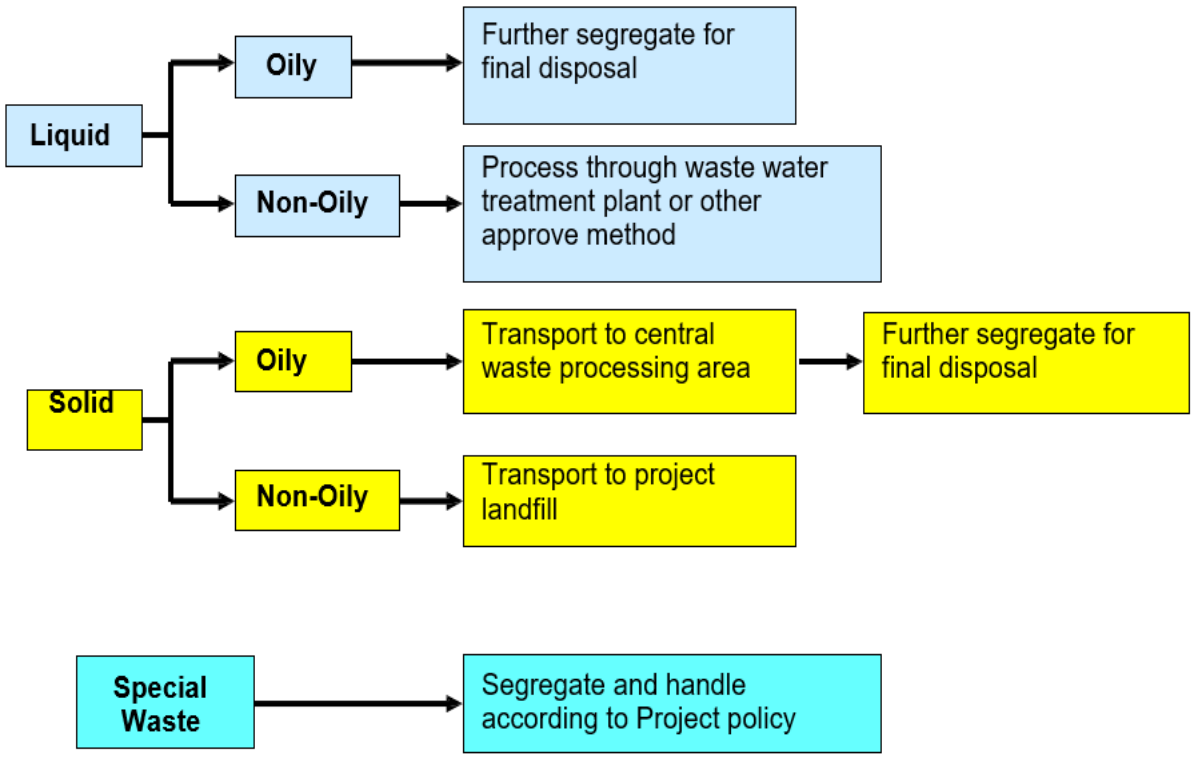
Land farming and composting are options for the disposal of oily solid waste. The processes are also applicable to oily sludges, oiled sand, seaweed, water treatment sludges, and contaminated soil.

7.4. Disposal Options for Non-Oily Solid Waste

Non-oily solid waste such as garbage and trash are generated from a variety of sources during oil spill cleanup operations. Care will be taken to separate non-oily solid waste from oily waste and to maintain separation until ultimate disposal. Separate trucks for on shore operations will be maintained for the transportation of non-oily solid waste, which may be disposed of by incinerator, or may be sent to an appropriate landfill with capacity to handle the waste for disposal.

The refuse produced by a large-scale oil spill cleanup operation may exceed the capacity of existing project landfills and incinerators. It may be necessary to expand the capacity of the available facilities, or to construct new facilities.

Waste Management Diagram



8. Procedure for Recycling or Disposal of Recovered Oily Waste

During the oil spill response:

- contact the owner of the oil to determine their preference for recovery/ disposal

(the final decision should still be made by the Commandant, PCG); and

- contact one of the oil reception companies listed in Annex-G II or in the Regional Oil Spill Contingency Plan, with respect to collecting the recovered oily waste for re-use and recycling.

If the oil spill reception companies agree to collect the recovered oily waste for recycling and disposal, no further action on this matter will be required by the PCG.

If the companies do not agree to collect there covered oily waste for recycling / disposal the nit must be contained within temporary storage facilities or centralized handling facility awaiting disposal.

Where possible, temporary storage facilities should be operated under a system of controlled segregation and inventory (e.g. liquids and solids separated).

Recovered oil and associated matter that is contained in temporary storage should remain in temporary storage until the appropriate recycling or disposal option has been decided.

Recycle or dispose of the recovered oil in accordance with the organization's resource consents.

9. Procedure for Cleaning and Disposing of Oil Spill Response Equipment and Associated Gear

If the oil spill response equipment and associated gear needs to be cleaned during the response operation then no resource consent would be needed because this work is required to controlled and cleanup the marine oil spill ǁ (Refers311MTA1994). However, this should be carried out in a responsible manner where by the oil that is being cleaned off the equipment is captured and contained in temporary storage facilities.

An inspection by the On-Scene Commander on the premise before and after use of the property is to be carried out. Written documentation is required on the state of the site prior to use and following rehabilitation. Photos should be taken if possible. A representative of the site owner and PCG should sign off the site after use.

Where possible, final cleaning of oil spill response equipment and associated gear should be carried out at a site with appropriate resource consents. Care should be taken to ensure that no oil is lost during transportation to the cleaning site.

Procedures are to be put in place for receiving equipment and dispatching cleaned items back to the correct facility. Major items that are on hire should be cleaned and returned to the hire center before minor items owned by the local authority (except those required by the response). The Operations Officer should liaise with the site supervisor for items to be cleaned and dispatched to reduce traffic congestion and risk of accidents.

Oil spill response equipment and associated gear that requires disposal should be retained in temporary storage until the appropriate disposal option has been determined. No resource consent is required for temporary storage as long as the storage facility is provided to assist with the control and clean-up of the marine oil spill.

Dispose of the oil spill response equipment and associated gear in accordance with the disposal organization's resource consents. It is recommended that an Equipment Decontamination Plan be prepared. An example of one is shown below.

EXAMPLE ONLY

Equipment Decontamination Plan

Date: Time

Objective:

To prevent secondary contamination of any area of the …….. Region by undertaking cleaning and management of oiled equipment in an environmentally appropriate manner which results in no contamination of uncontaminated areas.

Method:

•Inspection done of premise before and after use with owner/manager of the property. Written documentation required of the state of the site prior to use and after rehabilitation (photos helpful).

• Sign off after the site has been used by both representatives of owner and representative of PCG.

•Procedures put in place for receiving the dirty equipment and dispatching clean items back to the correct areas/owners.

•Equipment to be given a level of priority:

- Major items that are on hire to be returned to the hire center;
- Minor items owned by local authority unless called for by On-Scene Commander; and

- PCG Equipment.

• The Operations Officer should liaise with supervisor for items to be cleaned and dispatched, thereby reducing traffic congestion and risk of accidents.

•Collect all oiled equipment when it is no longer required in the field (an assessment needs to be made at the same time- undertaken by the Operations Officer).

•Use polythenetoline transporters. Sand or zeolite may be required for soak age. Take smaller items (RIB, floats and buoys) to appropriate sites for cleaning as required.

•Wash all equipment using the following cleaning technique:

- Kerosene pre-wash.
- Wipe as necessary,
- Water blast.
- Leave to dry on drained pad.

• Store all gear that is oiled and that does not need to be immediately cleaned on a polythene-based bund. This can be made by using silage wrap and 4x 2 timbers that will prevent any liquid contamination of land or potential entry into stormwater systems.

•Collect all contaminated water and direct it to an oily water separator.

•Cover skip/jumbo bins each night.

•Segregate oiled liquid and solids from non-oiled liquid and solids.

•Inspect premise and organize cleaning of oily water separator at the end of cleaning the gear.

Temporary Storage Areas

Gear can be stored on site (out of water) provided the gear is placed on to polythene and as much as is possible of any contamination is contained within this. DON'T wash down any oil contaminated equipment anywhere other than a bunded site or at approved site. Bunded areas need to be covered to prevent rain fall intrusion.

PPE gear that requires cleaning should be taken to..... All gear that is notable to be cleaned there should be stored in containers or in containment at.....

For un-oiled equipment only

The…… can be used for drying and packing.

Transportation of Oiled Equipment

The larger items and booms will be transported out of the area by truck and trailer units utilizing the following methods:

•Sand, zeolite or sorbentroll shall be used in the bottom of the truck/trailer;

•Polythenelines the sides of the trailer and bottom of the truck/trailer;

•A second layer of saw dust or sorbent roll; and

•Items wrapped in polythene.

ANNEX 19. PCG LIST OF OIL SPILL EQUIPMENT AND SUPPLIES

Note: This list should be updated annually, every Last Quarter, as supplies are consumables or expendables.

CONSOLIDATED OIL SPILL EQUIPMENT AND SUPPLIES

As of February 2019

MEPU NCR-CL (MANILA)		UNIT	QTY
1.	Bilge and Skimmer 100m X 300mm	UNIT	5
2.	Pair of acid Resistant Gloves	UNIT	1
3.	Instruction Card	UNIT	1
4.	Hand Gloves	UNIT	11
5.	Elastic American Marine M100 Oil Skimmer with reel	UNIT	1
6.	Lamor Rock Cleaner Skimmer System	UNIT	1
7.	Elastic American Marine E150 Pump	UNIT	1
8.	Maximax Floatation Oil Containment Boom	UNIT	1
9.	Beach Broom Set	UNIT	1
10.	Absorbent Kits	UNIT	2
11.	Craftsman 26pc Combination Wrench Set	UNIT	1
12.	QT Collapsible Tank	UNIT	1
13.	Funnel	UNIT	2
14.	Wix Fuel Filters	UNIT	57
15.	Trailer for Containers	UNIT	1
16.	MARPOL Spill Response Kit	UNIT	1
17.	H/D Absorbent Mats	UNIT	10
18.	Anti-Static Waste Bags and Ties	UNIT	4
19.	Eye protector	UNIT	4
20.	Elastic American Marine Hydraulic Power Pac-D	UNIT	1
21.	Stone Catcher	UNIT	1
22.	Hot Water Pressure Cleaner	UNIT	1
23.	Anchor Set	UNIT	2
24.	PPE Set	UNIT	5
25.	Black and Decker Tool Box	UNIT	1
26.	Craftsman 118pc Mechanics Tool Set	UNIT	1
27.	Just rite Safety Can (7,6 Liter Type)	UNIT	2
28.	Bucket	UNIT	1

29.	Vehicle (as prime mover)	UNIT	1
30.	Oil Spill Kit w/ (5btls)	UNIT	1

MEPO SUBIC

NO	DESCRIPTION	UNIT	QTY
1.	Absorbent Pads	kilo	2
2.	Back pack sprayer	1	1

MEPO BATAAN

NO	DESCRIPTION	UNIT	QTY
1.	Chemical Dispersant	drum	1
2.	Oil Spill Boom	seg	4

MEPU NELZN (APPARI)

NO	DESCRIPTION	UNIT	QTY
1.	Electric Pressure Pump	unit	1
2.	Generator Set (Jiandong)	unit	3
3.	Oil Spill Boom (Solid boom)	segment	7
4.	Fence Boom	segment	2
5.	Backpack Sprayer (Tung Ho)	unit	2
6.	Hard Hat (Best Guard)	Pcs.	5

MEPU WLZN (LA UNION)

NO	DESCRIPTION	UNIT	QTY
1.	Electric Pressure Pump	pc	1
2.	Generator (Jiandong)	pc	3
3.	Back pack sprayer	pc	1
4.	Robin High Pressure Pump w/ Accessories	unit	1
5.	China Oil Spill Boom	segment	15
6.	Chemical Dispersant	drums	18

7.	GPS	pc	1
8.	Boots	pairs	10
9.	Hard Hat	pc	6
10.	Absorbent Pads	bale	1
11.	Absorbent Boom	pcs	4

MEPU BICOL (BICOL)

NO	DESCRIPTION	UNIT	QTY
1.	OIL SPILL DISPERSANT	drum	15
2.	OIL SPILL BOOM	segment	23
3.	BOOTS	pair	8
4.	ANTI-STATIC WASTE BAGS	pc	4
5.	H/D ABSORBENT MATS	pc	15
6.	BACK PACK SPRAYER	pc	2
7.	HARD HAT	pc	18
8.	GPS 72 (PORTABLE)	unit	1
9.	BILGE AND SKIMMER 100MM X 30MM	unit	5
10.	GLOVES	pair	4
11.	ACID RESISTANT GLOVE	pair	1
12.	PORTABLE CARRY BAG	pc	1
13.	SPILL INSTRUCTION CARD	pc	1
14.	ABSORBENT BOOM (4 SEG IN 1 BALES 8’ X 10’	bales	3
15.	ABSORBENT PADS	bales	6
16.	SAFETY BOOTS	pair	13

MEPU STL (BATANGAS)

NO	**DESCRIPTION**	**UNIT**	**QTY**
1	Oil Spill Dispersant (Polysolve 215)	Drum	11
2	Solid Oil Spill Boom (20 ea per meters)	Seg	3
3	Back Pack Sprayer	Unit	1
4	Boots	Pair	19

MEPU EV (LEYTE)

NO	DESCRIPTION	UNIT	QTY
1.	Oil Spill Boom (China)	UNIT	29
2.	20 FT Container Mobile Office Van	UNIT	1
3.	Dispersant	5	drums

MEPU WV (ILO-ILO)

NO	**DESCRIPTION**	**UNIT**	**QTY**
1	ELASTIC AMERICAN MARINE M100 OIL SKIMMER WITH REEL	PC	1
2	POWER PACK –D	PC	1
3	ROCK CLEANER SKIMMER SYSTEM	PC	1
4	STONE CATCHER	PC	1
5	ANCHOR SET	SET	1
6	OIL TRANSFER HOSE FOR M100	SET	1
7	HYDRAULIC HOSE SET FOR SKIMMER	SET	1
8	PETROVAC PETROLEUM HOSE	PCS	3
9	FLEXWING OILFIELD HOSE (OIL TRANSFER HOSE)	PCS	2
10	FLEXIBLE HOSE FOR ROCK CLEANER	PCS	3
11	BEACH BROOM SET	UNIT	1
12	RYCO AVENGER HOSE	SET	1
13	ABSORBENT KITS	DRUM	1
14	JUSTRITE SAFETY CAN (7.6 L TYPE)	PCS	2
15	FUNNEL	PCS	2
16	BUCKET	PC	1
17	WIX FUEL FILTERS	PCS	57
18	OBM (MERCURY 30HP)	UNIT	1
19	TRAILER FOR CONTAINER	UNIT	1
20	JIANDONG GENERATOR (CHINA)	UNITS	5
21	BACK PACK SPRAYER	UNIT	1
22	SPRAYER ARM	UNITS	2
23	SAMPLE BOTTLE	PCS	5
24	PORTABLE CARRY BAG	EA	1
25	GPS 72	EA	1
26	ELECTRIC SPRAYER PUMP (CHINA)	UNITS	5
27	OIL SPILL KIT	EA	1
28	OIL SPILL BOOM	SEG	30
29	CHEMICAL DISPERSANT	DRUM	6
30	MULTI-SKIMMER	SET	1
31	ABSORBENT BOOM (4 SEGMENT IN 1 BALES) 8’X10’	BALES	6

32	ABSORBENT PADS	BALES	12

MEPU SV (DUMAGUETE)

NO	**DESCRIPTION**	**UNIT**	**QTY**
1	GPS 72	EA	1

MEPU CV (CEBU)

NO	DESCRIPTION	UNIT	QTY
1.	Boom Rail	Unit	1
2.	Garmin Trex H personal Navigator GPS	Unit	1
3.	Rock Cleaner Skimmer System	Set	1
4.	Arm Sprayer	Unit	2
5.	Multi-Skimmer	Set	1
6.	Oil Skimmer – Hydraulic Drum Elastic M-100	Pc	1
7.	Power Pack D-10 with Centrifugal Transfer Pump – Kubota Engine (10 HP)	Set	1
8.	Elastic American Marine M100 Oil Skimmer with Reel of 4 sets Bearing – up to 200 GPM (45 cu.m/hr)	Set	1
9.	Hydraulic Power Pump	Pc	1
10.	Stone Catcher	Pc	1
11.	Elastic American Marine M150 Pump (blue) - 180 GPM (40 cu.m/hr) – 48 psi (made in USA)	Set	1
12.	Mitsui Cov 3 Hydraulic Power Pack - dated September1993	Unit	1
13.	COV E2 Oil Skimmer with 1.5 Transfer Pump - dated September 1993	unit	1

MEPU NM (CDO)

MEPU NM (CDO) NO	DESCRIPTION	UNIT	QTY
1.	GENSET	unit	5

2.	ELECTRIC SPRAYER	unit	6
3.	OIL SPILL BOOM (Solid Type)	seg	19
4.	BACK PACK SPRAYER	unit	2
5.	CHEMICAL DISPERSANT	drums	12 and 12 liters
6.	SORBENT BOOM	SEGMENTS	5
7.	SORBENT PADS	PADS	10
8.	HYDRAULIC POWERPACK	unit	1
9.	OIL SPILL BOOM (fence type)	seg	10
10.	OIL SKIMMER	unit	1

MEPU SEM (DAVAO)

Description	**Unit**	**Qty**
Harbor Reel with Generator (YANMAR)	unit	1
Solid Floatation Boom (20mtrs per segment)	seg	12
250 mtrs Inflatable Ocean Boom with Generator	unit/ van	2
Absorbent Booms (4 segment in 1 Bale 8'x10')	bales	6
Absorbent Pads	bales	10
Mitsui COV-3 Drum Type Skimmer	unit	1
Hydraulic Power Pack (MITSUI COV 3)	unit	1
Bridgestone Honda Robin Diesel	unit	1
Oil Transfer Pump (YANMAR)	unit	1
Lombarbini Water Pump (HARRIER)	unit	1
Blower Pump	unit	2
Arm Sprayer	ea	2
Back Pack Sprayer	ea	1
Bullet tank (Cap. 14,000 ltrs)	set	1

Debris Plastic Bags	bag	50
Steel Anchor	ea	1
GPS	ea	1
Electric Sprayer	unit	4
Generator	unit	2
Robin High Pressure Pump w/ accessories	unit	2
Skimmer GT 185	unit	1
Power Pack GT 185	unit	1
Reel of Hydraulic Suction Hose GT 185	unit	1
Solid Floatation Boom	seg	7
Solid Floatation Boom (EXPANDI)	seg	2
Steel Anchor	ea	2
Hydraulic oil	pail	1
20 footer Container Van @Panabo	unit	1
MAXIMAX Floatation oil containment boom with reel (150 meters)	unit	1
Elastic American MARINE m100 oil skimmer	unit	1
Power Pack-D (KUBOTA)	unit	1
Rock Cleaner Skimmer system	unit	1
Stone Catcher	pc	1
Hot Water Pressure Cleaner	unit	1
Elastic American Marine e150 pump	unit	1
Hydraulic hose set	pcs	3
Flexing Oil field hose (oil transfer hose)	pcs	2
Ryco Avenger hose (hydraulic hose)	set	1
Petrovac Petroleum hose	pcs	3
Flexible hose	pcs	3
Beach broom set	pc	1
Craftsman 26 pcs combination wrench	set	1
Craftsman 118 pcs mechanics tool set	set	1
Black and Decker tool box	ea	1
PPE set	set	5
Anchor	set	2
Justrite Safety Can (7.6 liter type)	pcs	2
Absorbent kits	drum	2
QT Collapsible Tank	pc	1
WIX fuel filters	pcs	57
Funnel	pcs	2
Containment Boom (fence) 30 mtrs per seg.	seg	10
Rock Cleaner Skimmer System	unit	1
Hydraulic Hose for D10 & E150	set	1
Multi-Skimmer	unit	1
Containment Boom Mooring Equipment 23 lbs	pc	1

Tool Box w/ Complete Set of Tools	set	1
Personal Protective Equipment Chem Cover All	set	6
Oil Spill Response Kit	set	1
MAGICCHEM Dispersant	drums	5
NEOS AB-300 Dispersant	drums	3
POLLYSOLVE 215 Dispersant	drums	13

MEPU SWM (ZAMBOANGA)

NO.	**Description**	UNIT	QTY
1.	electric highpressure sprayer	UNIT	7
2.	back pack sprayer	UNIT	4
3.	gasoline driven high pressure sprayer (Robin)	UNIT	2
4.	Global positioning system	PC	1
5.	oil spill boom (China)	SEG	4
6.	oil spill boom (fence type)	SEG	10
7.	Generator (Jiang Dong 3800)	UNIT	6
8.	Oil dispersant (polysolve 215)	DRUM	10
9.	magicchem dispersant	DRUM	6
10.	marine oil spill kit	SET	1

ANNEX 20. PCG LIST SURFACE ASSETS

VESSELS		
	CONTACT NUMBER	EMAIL ADDRESS
BRP SAN JUAN (SARV-001)	09176312751 / 09985858093	brpsanjuan@yahoo.com
BRP EDSA (SARV-002)	09176312791 / 09985858092	brpedsa@yahoo.com
BRP PAMPANGA (SARV-003)	09176312763 / 09985858109	pampangasarv003@yahoo.com
BRP BATANGAS (SARV-004)	09176312678	sarv004@yahoo.com.ph
BRP LAPU-LAPU (MMOV-5001)	09178040603 / 09985856373	brplapulapummov5001@yahoo.com
BRP FRANCISCO DAGOHOY (MMOV-5002)	09178227816 / 09985858290	brpdagohoy@gmail.com
BRP CORREGIDOR (AE-891)	09176312769 / 09185997612	corregidor891@yahoo.com
BRP BOJEADOR (AE-46)	09176269265 / 09985893945	brp.bojeador_ae46@yahoo.com
BRP ILOCOS NORTE (SARV-3501)	09176312788 / 09985853629	brpilocosnortesarv3501@yahoo.com
BRP NUEVA VISCAYA (SARV-3502)	09178424772 / 09985853625	brpsarv_3502@ymail.com
BRP ROMBLON (SARV-3503)	09176312806	brp_romblon3503@yahoo.com
BRP DAVAO DEL NORTE (SARV-3504)	09176312889 / 09985853631	ddnsarv_3504@yahoo.com.ph
BRP TUBBATAHA (MRRV-4401)	09178426607 / 09985854647	brptubbataha_4401@yahoo.com
BRP MALABRIGO (MRRV-4402)	09774494790 / 09985854650	brp.malabrigo@coastguard.gov.ph
BRP MALAPASCUA (MRRV-4403)	09178426619 / 09985855216	brpmalapascua@coastguard.gov.ph
BRP CAPONES (MRRV-4404)	09178426543 / 09985855214	brpcapones4404@gmail.com
BRP SULUAN (MRRV-4406)	09178426566 /	mrrv4406@coastguard.gov.ph
BRP SINDANGAN (MRRV-4407)	09178426734 /	ssindangan@yahoo.com
BRP CAPE SAN AGUSTIN (MRRV-4408)	09178426014 / 09985853626	mrrv.4408@coastguard.gov.ph
BRP CABRA (MRRV-4409)	09178428210 / 09985855306	brp.4409@coastguard.gov.ph
BRP BAGACAY	09178428461 /	mrrv.4410@coastguard.gov.ph

(MRRV-4410)	09985852884	
BRP CAPE ENGAÑO (MRRV-4411)	09062682200 /	mrrv.4411@coastguard.gov.ph
BRP HABAGAT (TB-271)	09176312809	tbhabagat271@yahoo.com
BRP BORACAY (FPB-2401)	09063363642 /	brpboracay@gmail.com
BRP PANGLAO (FPB-2402)	09064525204	brppanglao@gmail.com
BRP MALAMAWI (FPB-2403)	09566708373	brpmalamawi@yahoo.com
BRP KALANGGAMAN (FPB-2404)	09178123830	brpkalanggaman@yahoo.com
MCS-3001	09178129660 / 09998848435	mcs_3001@yahoo.com
MCS-3002	09985853627	dabfarmcs3002@yahoo.com.ph
MCS-3003	09174898775 / 09998848436	cgmcs3003@gmail.com
MCS-3004	09985881220	mcs3004_hunters@yahoo.com
MCS-3005	09178426155 / 09985855206	mcs_3005@yahoo.com.ph
MCS-3006	09178426249	mcs3006@coastguard.gov.ph
MCS-3007	09178426273 / 09998848434	mcs3007@yahoo.com
MCS-3009	09153295009 / 09998848425	mcs3009pcgbfar@yahoo.com.ph
MCS-3010	09178426328 / 09998848428	mcsthirtyten@yahoo.com.ph
SMALL CRAFTS		
	CONTACT NUMBER	EMAIL ADDRESS
DF-7	09399475092 / 09985855209	dfsmallcraftgroup@yahoo.com
DF-300	09178426270 / 09985854332	bords_spartan@yahoo.com
DF-301	09178425889 / 09985851167	df_301@yahoo.com
DF-302	09178425952 / 09985855741	DF302PCG@gmail.com
DF-303	09179892666 / 09208693655	Pcgsmallcraftdf303@gmail.com
DF-307	09178425951 / 09985854325	pbvillam@yahoo.com
DF-308	09178425973 / 09985855740	df308opn@gmail.com
DF-309	09178425074 / 09985855213	df_309@yahoo.com
DF-310	09178425802 / 09985855208	Df_310@yahoo.com
DF-311	09178426023 /	Krandkian311@yahoo.com

	09985851882	
DF-312	09178426024 / 09985851168	dieselfast312@yahoo.com
DF-313	09178383964 / 09985851885	df313JERSONDETAZA@yahoo.com
DF-314	09178425852 / 09985855733	defixture314@yahoo.com
DF-315	09178103611 / 09985851883	lairoselym@yahoo.com
DF-316	09178426033 / 09985854326	delancaster_df316@yahoo.com
DF-318	09178426054 / 09985854631	ricojay77@yahoo.com
DF-325	09178425837 / 09985855211	scgDF325@gmail.com
DF-330	09178425845 / 09985855211	philip_sue@yahoo.com
DF-332	09178426061 / 09985854329	df332c@yahoo.com
DF-334	09178426136 / 09985855742	df334smallcraft@gmail.com
DF-347	09178425862 / 09985855219	dieselfast347@yahoo.com.ph
DB-433	09976097176 / 09187307673	Coast_guard_pasig@yahoo.com
CGC-103	09985851170	Coast_guard_pasig@yahoo.com
CGC-110	09985854634	cgc_oneonezero@yahoo.com
CGC-115	09985854629	Cgc.115@yahoo.com
CGC-132	09985851884	Coast_guard_pasig@yahoo.com
CGC-133	09985855749	quickbrownfox1979@gmail.com
CGC-134	09985855746	coastguardcutter134@gmail.com
MCS-1101	09985881217	dabfar_mcs1101@yahoo.com
MCS-1102	09493680274	warhead5878@gmail.com
MCS-1103	09998848433	mcselevenzerothree@yahoo.com

ANNEX 21. PCG LIST OF AERIAL ASSETS

The Philippine Coast Guard, under its Coast Guard Aviation Force have a number of air assets which includes:

1. Two (2) PCG Helicopters

PCG Helo 163 - DOTR Hanger, Domestic Airport, Pasay City

PCG Helo 1636 - DOTR Hanger, Domestic Airport, Pasay City

2. Two (2) PCG Islander

PCG Islander 251 - DOTR Hanger, Domestic Airport, Pasay City

PCG Islander 684 - DOTR Hanger, Domestic Airport, Pasay City

ANNEX 22. MINIMUM REQUIREMENTS FOR TIER I RESPONSE

Oil spill equipment and supplies are necessary to address oil spills. This NOSCOP includes a list of minimum requirements of oil spill equipment and supply to deploy Tier 1 response. Vessel and facilities have different minimum required equipment and supplies, depending upon their load or capacity.

As discussed in previous parts of this NOSCOP, the sources oil spills are:

1. Vessels (domestic and international);
2. Power plants and Power barges;
3. Shipyards;
4. Refineries, Terminals and depots;
5. Oil exploration and production activities;
6. Offshore mining activities; and
7. Industrial and manufacturing activities

Oil Tankers and Terminal must comply with the requirements set forth by in the International Safety Guides for Oil Tankers and Terminals (ISGOTT), Provision 18.

Additionally, individuals and companies engaged in salvage and wreck removal operations, whether foreign or local, shall be required to have an **operation specific** OSCP and oil spill equipment and supplies prior to being given a salvage permit. For similar purposes, waste treatment facilities are required to have an OSCP. The PCG in relation to this provision shall amend existing memorandum circulars with fees, fines and penalties to ensure compliance.

Timelines for compliance of Annex 22 shall be subject to a separate implementing rule or memorandum circular. The PCG, as far as practicable shall recognize existing equipment and supplies so as long as stakeholders comply with recommended minimum requirements within agreed timelines. However, if the stakeholders OSCP is expired or subject for renewal, then it shall comply with the NOSCOP 2019 standard.

The requirements mentioned herein may be modified without promulgating the whole NOSCOP. A circular revising Annex 22 herein shall suffice.

The PCG shall draft a memorandum circular that shall afford stakeholders the opportunity of applying for the for the reduction on the number of Minimum Equipment and Supplies for Oil Spill Response - Tier 1. The application for reduction shall specifically state the reason thereof and the submission of proof of oil spill response coverage from a pre-contracted Oil Spill Responder or a Oil Spill Response Organization (OSRO). Only PCG approved Oil Spill Responder or Oil Spill Response Organization may be hired to justify the reduction mentioned herein.

VESSELS

Only Philippine registered vessels are required to comply with the minimum oil spill equipment and supplies prescribed in this NOSCOP. Foreign vessels are covered by the requirements set forth by agreements under the authority of the PCG being implemented by the Port State Control.

For purposes of this NOSCOP, vessels are divided into two categories: Oil Tankers and vessels other than oil tankers. Vessels other than oil tankers includes, but is not limited to passenger ships, cargo ship, cargo-passenger ships, roll-on/roll-off (RORO) ships, chemical tankers, LNG ships, power barges and others.

1. OIL TANKER VESSELS

1.1. Oil Tankers Below 50 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 20 kilos B. 4 pcs. C. 4 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	2 Drums	210 liters capacity
4. Oil Spill Dispersant	1 drum	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer or B. 4 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	2 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	4 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	4 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	6 pairs 6 each 6 each 6 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

1.2. Oil Tankers 50 GT up to 149 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 20 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	3 Drums	210 liters capacity
4. Oil Spill Dispersant	1 drum	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer or B. 4 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	3 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	4 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	6 pairs 6 each 6 each 6 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

Oil Tankers 150 GT to 999 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	3 Drums	210 liters capacity
4. Oil Spill Dispersant	2 drums	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer or B. 6 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	4 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	8 pairs 8 each 8 each 8 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

1.3. Oil Tankers 1000 GT and above

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 60 kilos B. 8 pcs. C. 8 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	4 Drums	210 liters capacity
4. Oil Spill Dispersant	4 drums	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer or B. 8 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	6 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	8 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	8 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	8 pairs 8 each 8 each 8 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

2. VESSELS OTHER THAN OIL TANKERS

2.1. Other Vessels Below 50 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 20 kilos B. 2 pcs. C. 2 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	1 drum	210 liters capacity
4. Oil Spill Dispersant	60 liters	Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	2 Backpack Sprayer	≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	1 set, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	2 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	2 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	4 pairs 4 each 4 each 4 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

2.2. Other Vessels 50 GT up to 399 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 20 kilos B. 2 pcs. C. 2 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	2 drums	210 liters capacity
4. Oil Spill Dispersant	120 liters	Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	2 Backpack Sprayer	≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	2 set, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	4 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	4 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	4 pairs 4 each 4 each 4 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

2.3. Other Vessels 400 GT to 999 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 4 pcs. C. 4 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	3 drums	210 liters capacity
4. Oil Spill Dispersant	1 drum	210 liters; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	4 Backpack Sprayer	≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	4 set, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	4 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	4 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	4 pairs 4 each 4 each 4 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

2.4. Other Vessels 1,000 GT to 9,999 GT

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	3 drums	210 liters capacity
4. Oil Spill Dispersant	2 drums	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	4 Backpack Sprayer	≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	4 set, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	4 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	4 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	6 pairs 6 each 6 each 6 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

2.5. Other Vessels 10,000 GT and above

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	3 Drums	210 liters capacity
4. Oil Spill Dispersant	2 drums	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	6 Backpack Sprayer	≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	4 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	8 pairs 8 each 8 each 8 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

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3. TUG BOATS - TOWING DUMB OIL BARGES; OIL BARGES

REQUIRED OIL SPILL EQUIPMENT & SUPPLIES	REQUIRED QUANTITY	REQUIRED SPECIFICATION
1. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
2. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 20 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
3. Empty Drum with portable cover (Open ended drum)	3 Drums	210 liters capacity
4. Oil Spill Dispersant	1 drum	210 liters capacity; Water based, bio dispersant, non-toxic, non-flammable
5. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer or B. 4 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
6. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	3 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
7. Waste Disposal Bag	4 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
8. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
9. Personnel Protective Equipment (PPE)	6 pairs 6 each 6 each 6 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
10. Wooded Hedges		Assorted Size for Shoring of Holes

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4. DIESEL OR OIL FIRED POWER BARGES AND POWER PLANTS

REQUIRED OIL SPILL EQUIPMENT AND SUPPLIES	REQUIRED QUANTITY	SPECIFICATION
1. Oil Spill Boom (Shoreline Protection Boom)	1000 meter or 2x length of the largest vessel that regularly conducts oil transfer for regular operations.	Total height: ≥50cm inflatable Total breaking strength: ≥3,500N/5cm
2. Oil Spill Recovery System (Skimmer System)	1 set	≥ 20,000 Liters/hour capacity light to heavy oil
3. Oil Vacuum Pump	1 set	≥ 20,000 Liters/hour capacity, capable to suck oiled debris
4. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
5. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
6. Empty Drum with portable cover (Open ended drum)	6 Drums	210 liters capacity
7. Oil Spill Dispersant	4 drums	210 liters/drum; Water based, bio dispersant, non-toxic, non-flammable
8. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer B. 10 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
9. Oil Treatment Substance		For oil bioremediation on shoreline and land treatment
10. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	6 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
11. Portable oil Tanks or Fast Tanks	2 pcs	≥ 1,000 liters Erectable or IBC tanks
12. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
13. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
14. Personnel Protective Equipment (PPE)	12 pairs 12 each 12 each 12 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
15. Utility Boat	One (1)	≥3m LOA and ≥60HP (engine)

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5. SHIPYARDS, FLOATING DOCKS

REQUIRED OIL SPILL EQUIPMENT AND SUPPLIES	REQUIRED QUANTITY	SPECIFICATION
1. Oil Spill Boom (Shoreline Protection Boom)	1000 meter or 2x length of the largest vessel that regularly conducts oil transfer for regular operations.	Total height: ≥50cm inflatable Total breaking strength: ≥3,500N/5cm
2. Oil Spill Recovery System (Skimmer System)	1 set	≥ 20,000 Liters/hour capacity light to heavy oil
3. Oil Vacuum Pump	1 set	≥ 20,000 Liters/hour capacity, capable to suck oiled debris
4. Wooden Scupper Plugs	A. Small Wooden Plugs B. Large Wooden Plugs	A. As required according to the number of scupper lips of the ship. B. As required according to the number of scupper lips of the ship
5. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 60 kilos B. 6 pcs C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
6. Empty Drum with portable cover (Open ended drum)	6 Drums	210 liters capacity
7. Oil Spill Dispersant	4 drums	210 liters/drum; Water based, bio dispersant, non-toxic, non-flammable
8. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer B. 8 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥ 1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
9. Oil Treatment Substance		For oil bioremediation on shoreline and land treatment
10. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	6 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
11. Portable oil Tanks or Fast Tanks	2 pcs	≥ 1,000 liters Erectable or IBC tanks
12. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
13. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
14. Personnel Protective Equipment (PPE)	12 pairs 12 each 12 each 12 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
15. Utility Boat	One (1)	≥3m LOA and ≥60HP (engine)

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

6. OIL REFINERIES / OIL TERMINALS / OIL DEPOTS

REQUIRED OIL SPILL EQUIPMENT AND SUPPLIES	REQUIRED QUANTITY	SPECIFICATION
1. Oil Spill Boom (Shoreline Protection Boom)	1000 meter or 2x length of the largest vessel that regularly conducts oil transfer for regular operations.	Total height: ≥50cm inflatable Total breaking strength: ≥3,500 N /5cm
2. Oil Spill Recovery System (Skimmer System)	2 set	≥ 20,000 Liters/hour capacity light to heavy oil
3. Oil Vacuum Pump	2 set	≥ 20,000 Liters/hour capacity, capable to suck oiled debris
4. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 60 kilos B. 6 pcs C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
5. Empty Drum with portable cover (Open ended drum)	6 Drums	210 liters capacity
6. Oil Spill Dispersant	12 drums	210 liters/drum; Water based, bio dispersant, non-toxic, non-flammable
7. Oil Dispersant Sprayer	A. 2 Mechanized Sprayer B. 10 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥ 1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
8. Oil Treatment Substance		For oil bioremediation on shoreline and land treatment
9. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	6 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
10. Portable oil Tanks or Fast Tanks	2 pcs	≥ 1,000 liters Erectable or IBC tanks
11. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
12. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
13. Personnel Protective Equipment (PPE)	12 pairs 12 each 12 each 12 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical
14. Utility Boat	One (1)	≥3m LOA and ≥60HP (engine)

The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

7. OIL EXPLORATION AND PRODUCTION ACTIVITIES AND OFFSHORE MINING ACTIVITIES

Oil exploration and production activities, as well as, offshore mining activities must submit to the PCG for approval their Oil Spill Contingency Plan.

The submission must include the contract they have with their Oil Spill Response Organization (OSRO), to conduct oil spill response if warranted.

8. INDUSTRIAL AND MANUFACTURING ACTIVITIES

REQUIRED OIL SPILL EQUIPMENT AND SUPPLIES	REQUIRED QUANTITY	SPECIFICATION
1. Oil Spill Boom (Shoreline Protection Boom)	1000 meter or 2x length of the largest vessel that regularly conducts oil transfer for regular operations.	Total height: ≥50cm inflatable Total breaking strength: ≥3,500N/5cm
2. Oil Spill Recovery System (Skimmer System)	1 set	≥ 20,000 Liters/hour capacity light to heavy oil
3. Oil Vacuum Pump	1 set	≥ 20,000 Liters/hour capacity, capable to suck oiled debris
4. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
5. Empty Drum with portable cover (Open ended drum)	6 Drums	210 liters capacity
6. Oil Spill Dispersant	4 drums	210 liters/drum; Water based, bio dispersant, non-toxic, non-flammable
7. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer B. 10 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
8. Oil Treatment Substance		For oil bioremediation on shoreline and land treatment
9. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	4 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
10. Portable oil Tanks or Fast Tanks	2 pcs	≥ 1,000 liters Erectable or IBC tanks
11. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
12. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
13. Personnel Protective Equipment (PPE)	12 pairs 12 each 12 each 12 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical

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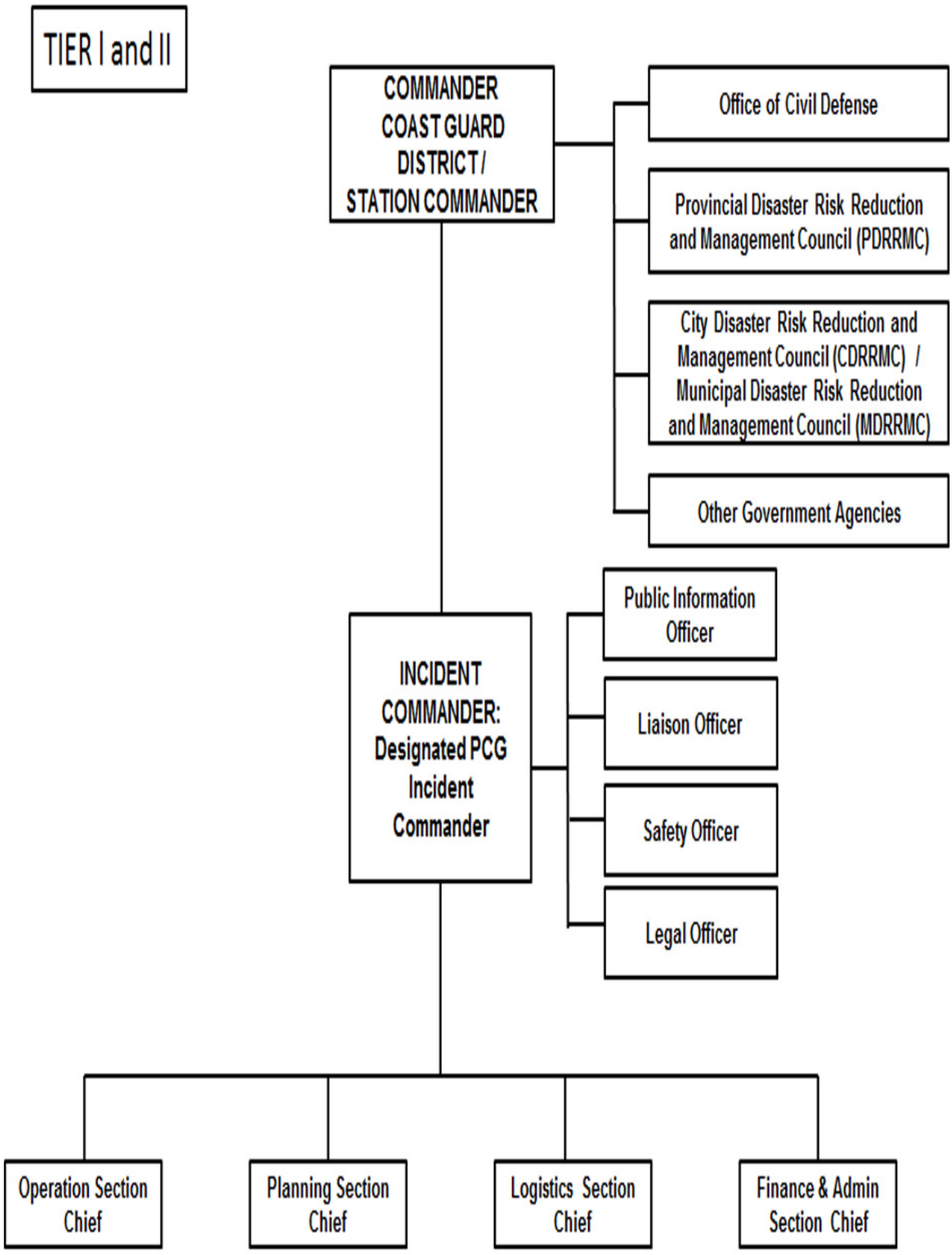
9. WASTE TREATMENT FACILITIES

REQUIRED OIL SPILL EQUIPMENT AND SUPPLIES	REQUIRED QUANTITY	SPECIFICATION
1. Oil Spill Boom (Shoreline Protection Boom)	1000 meter or 2x length of the largest vessel that regularly conducts oil transfer for regular operations.	Total height: ≥50cm inflatable Total breaking strength: ≥3,500N/5cm
2. Oil Spill Recovery System (Skimmer System)	1 set	≥ 20,000 Liters/hour capacity light to heavy oil
3. Oil Vacuum Pump	1 set	≥ 20,000 Liters/hour capacity, capable to suck oiled debris
4. Manual Cleaning Equipment A. Rags B. Brush with long handle C. Water Buckets (non-friction)	 A. 40 kilos B. 6 pcs. C. 6 pcs	 A. Cotton Based B. 4 feet handle C. 20 liter Capacity
5. Empty Drum with portable cover (Open ended drum)	6 Drums	210 liters capacity
6. Oil Spill Dispersant	4 drums	210 liters/drum; Water based, bio dispersant, non-toxic, non-flammable
7. Oil Dispersant Sprayer	A. 1 Mechanized Sprayer B. 10 Backpack Sprayer	A. ≥80 Liters/minute total output Trolley mounted 3kw engine or B. ≥1.0HP or ≥20 liters per minute spray. ≥20psi, non metallic
8. Oil Treatment Substance		For oil bioremediation on shoreline and land treatment
9. Oil Spill Kit 416 (416L Capacity): A. Sorbent Pads – for oil only B. Sorbent Booms - for oil only C. Sorbent Pillows – for oil only	4 sets, composed of the items below: A. 100 each White Heavy Weight Pads 15”x19 B. 4 each White Oil – Only Sock/Net Boom 5”x10’ 2 each White Oil – Only Sock/Net Boom 8”x20’ C. 2 each Red Oil – Only Sorbent Pillows 6”x16”x21” 4 each White Oil – Only Sorbent Pillows 8”x18”	 A. Suitable for light to heavy oil – Absorption capacity: 0.5 liters/sheet B. Suitable for light to heavy oil – Absorption capacity: 2 liters/pc C. Suitable for light to heavy oil
10. Portable oil Tanks or Fast Tanks	2 pcs	≥ 1,000 liters Erectable or IBC tanks
11. Waste Disposal Bag	6 each	Yellow Temporary Disposal Bags & Ties 30”x 6”x60”
12. Utility Box	6 sets	48” x 31’ x 31.5” Utility Box with wheels
13. Personnel Protective Equipment (PPE)	12 pairs 12 each 12 each 12 pairs resistant boots	Nitrile Gloves Safety Goggles Tyvek Coveralls Extra Large Latex Boots or Chemical

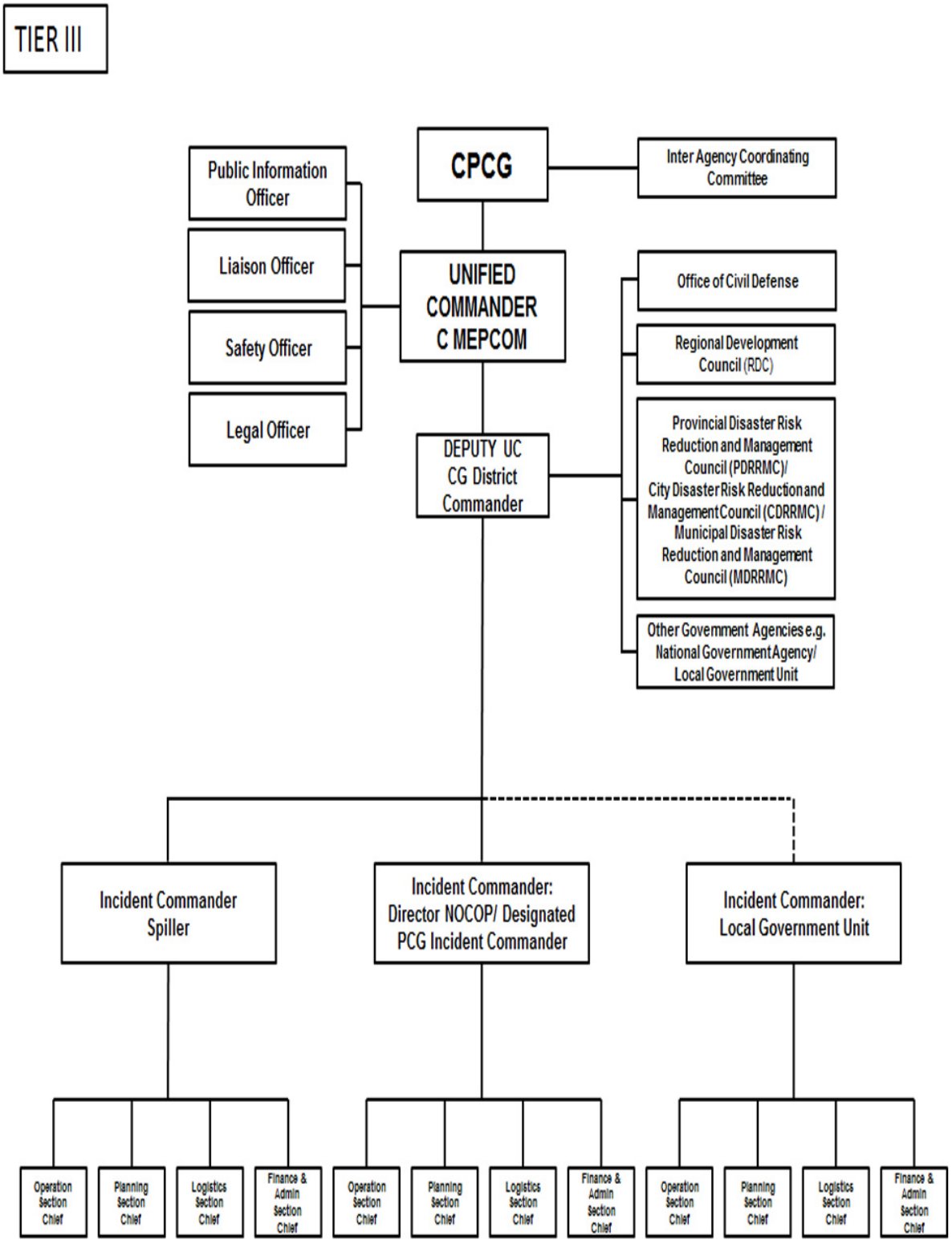
The use of brand names, if any in Annex 22 is not intentional nor an endorsement of the item identified by a brand. An item particularly named may be substituted by another brand provided it is the same required specification. The information that a part of the minimum requirement is a particular brand should be submitted immediately to the PCG for the proper revision.

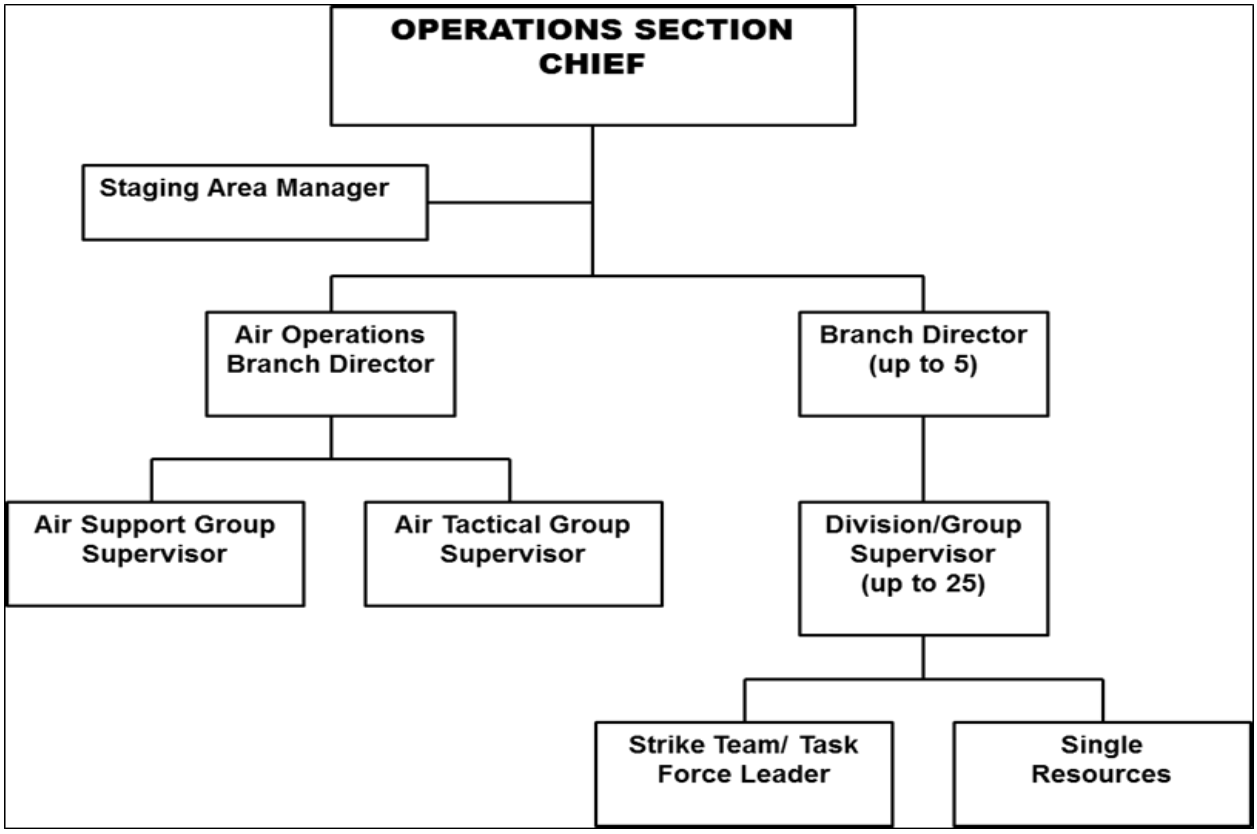
ANNEX 23. TIER I AND II ICS ORGANIZATIONAL STRUCTURE

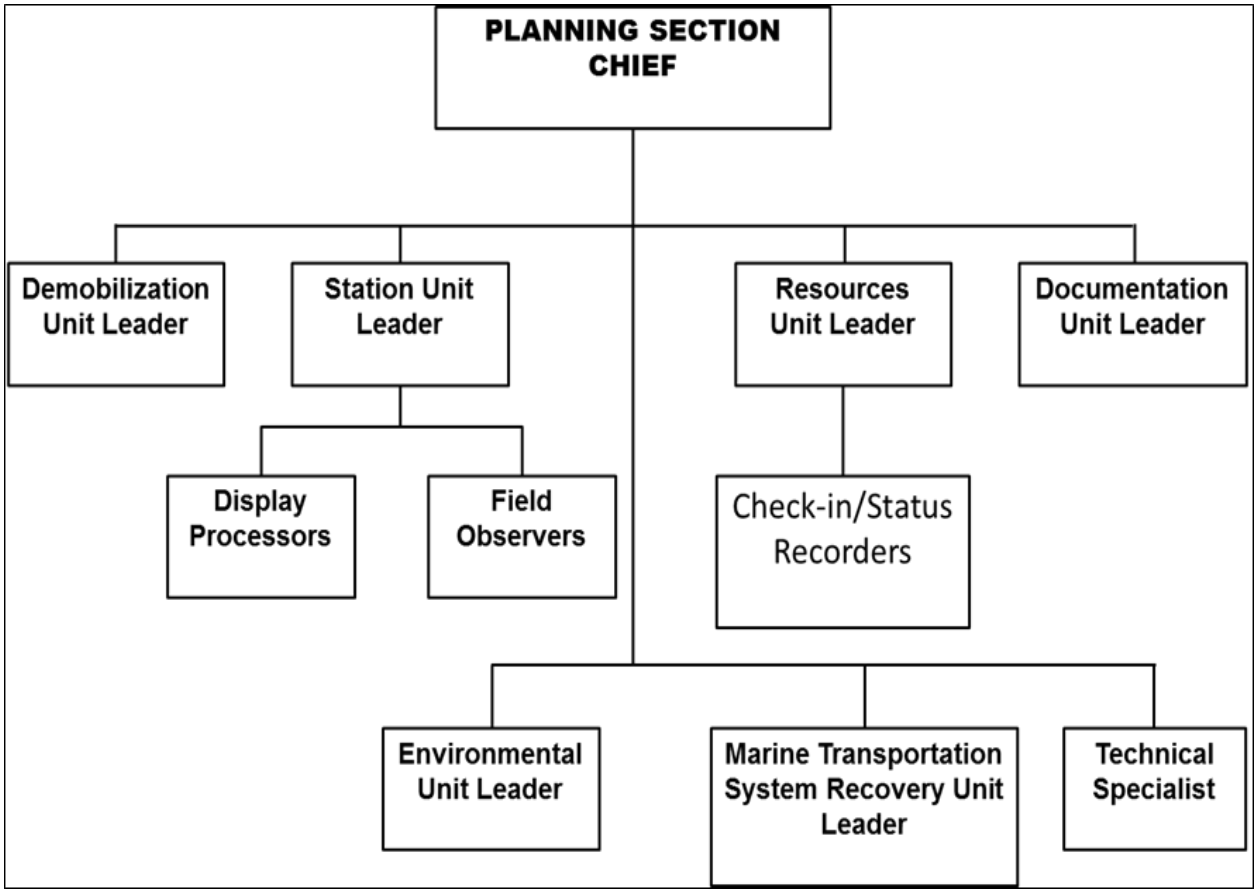


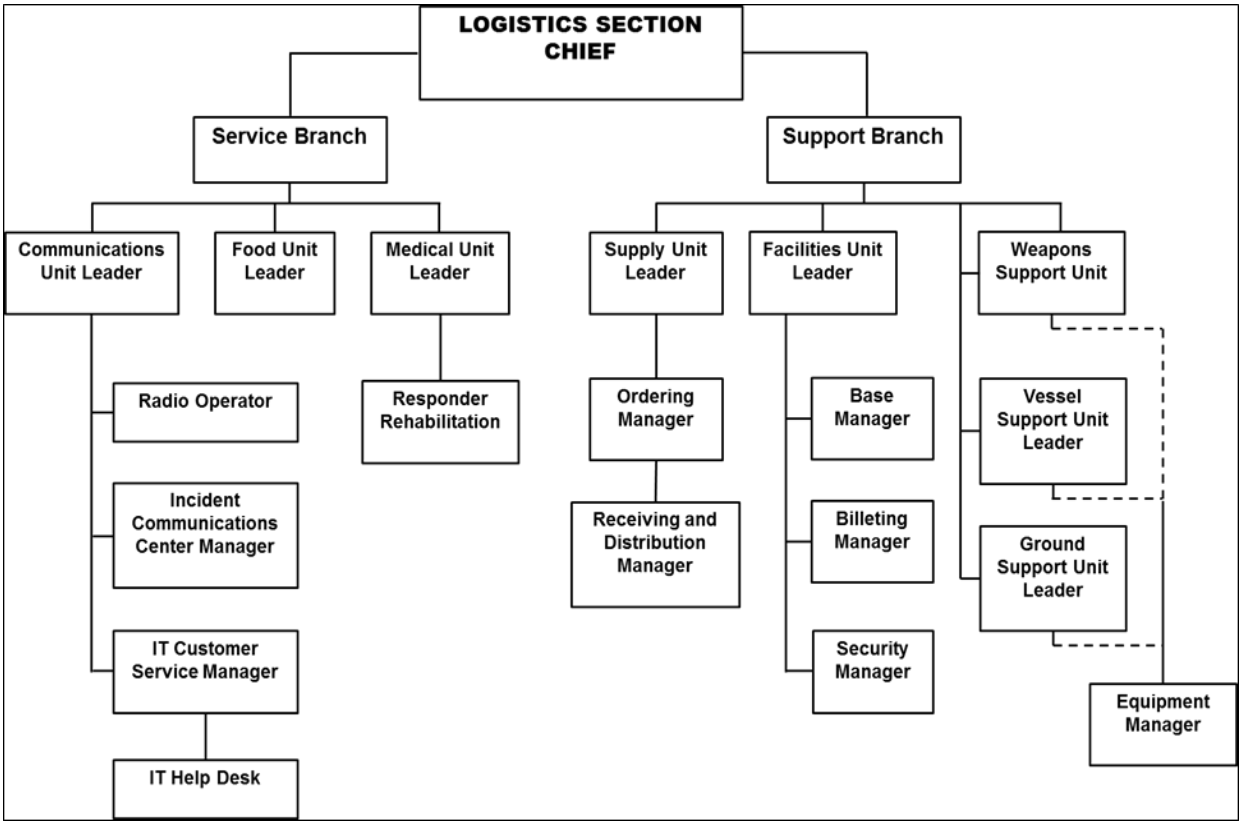
ANNEX 24. TIER III ICS ORGANIZATIONAL STRUCTURE

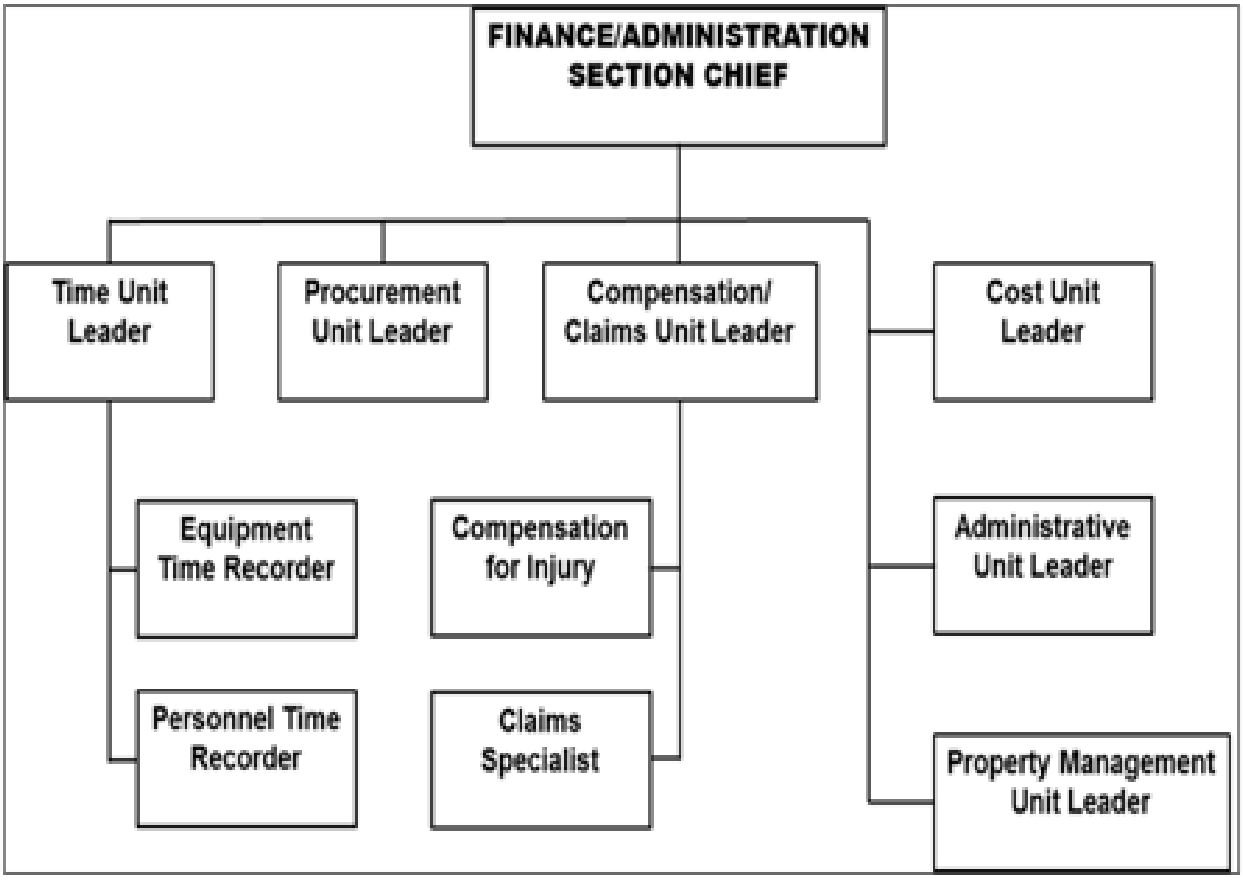
In the event of an oil spill incident, the organizational structure as outlined below shall be followed:




OPERATIONS SECTION CHIEF
Staging Area Manager
Air Operations Branch Director
Branch Director (up to 5)
Air Support Group Supervisor
Air Tactical Group Supervisor
Division/Group Supervisor (up to 25)
Strike Team/ Task Force Leader
Single Resources


PLANNING SECTION CHIEF
Demobilization Unit Leader
Station Unit Leader
Resources Unit Leader
Documentation Unit Leader
Display Processors
Field Observers
Check-in/Status Recorders
Environmental Unit Leader
Marine Transportation System Recovery Unit Leader
Technical Specialist


LOGISTICS SECTION CHIEF
Service Branch
Support Branch
Communications Unit Leader
Food Unit Leader
Medical Unit Leader
Supply Unit Leader
Facilities Unit Leader
Weapons Support Unit
Radio Operator
Incident Communications Center Manager
IT Customer Service Manager
IT Help Desk
Responder Rehabilitation
Ordering Manager
Receiving and Distribution Manager
Base Manager
Billeting Manager
Security Manager
Vessel Support Unit Leader
Ground Support Unit Leader
Equipment Manager


FINANCE/ADMINISTRATION SECTION CHIEF
Time Unit Leader
Procurement Unit Leader
Compensation/ Claims Unit Leader
Cost Unit Leader
Equipment Time Recorder
Compensation for Injury
Administrative Unit Leader
Personnel Time Recorder
Claims Specialist
Property Management Unit Leader

ANNEX 25. DUTIES OF KEY PERSONNEL IN THE IMT

GENERAL MANAGEMENT RESPONSIBILITIES OF THE ICS:

- Prevent further pollution and mitigate the effects of the oil spill;
- Participate in management team meetings as required;
- Receive briefing from immediate supervisor;
- Ensure continuity using in/out briefings;
- Acquire work materials;
- Determine current status of the activities;
- Manage, motivate, and monitor subordinate's performance;
- Provide leadership to subordinates;
- Efficient use of communications network with other areas in the IOS;
- Ensure that response is being carried out at a reasonable cost;
- Resolve any conflict that may arise;
- Maintain a record of team members including names and functions
- Meet with assisting and cooperating company/agency representatives as required
- Review the plan and estimate the needs for the next operational period;
- Advise on current service and support capabilities; and
- Estimate future service and support requirements.

MAIN DUTIES OF THE KEY POSITIONS IN THE ICS:

1. UNIFIED COMMANDER (UC)

- Obtain authorities and policy guidance from CPCG/IACC
- Provide briefings to the next level of command through normal reporting channels
- In coordination with the Incident Commanders, determine level of efforts in need of support
- Identify location and establish an appropriate Command Post
- Establish authorities and policy guidance and communicate to Incident Command Teams
- Develop over all directions, priorities and strategic objectives and convey to IC
- Ensure that the incident response strategies address the direction of the Unified Command
- Establish priorities for assignment and demobilization of critical resources
- Coordinate demobilization of critical resources
- Establish a strategy plan for release of information to the media, to the public, etc.
- Anticipate and analyze long term big picture potential consequences and develop strategic response alternatives

2. INCIDENT COMMANDER (IC)

- Review Common Responsibilities.
- Obtain a briefing from the prior IC (ICS 201-CG).
- Determine incident objectives and general direction for managing the incident.
- Establish priorities.
- Establish an appropriate ICS organization.
- Establish an ICP.
- Brief Command Staff and Section Chiefs.
- Ensure planning meetings are scheduled as required.
- Approve and authorize the implementation of an IAP.
- Approve the Site Safety and Health Plan (ICS 208-CG), if developed.
- Ensure that adequate safety measures are in place.

- Establish the incident specific CIRs and time criticality of the information.
- Coordinate activity for all Command and General Staff.
- Identify and coordinate with key people and officials.
- Approve requests for additional resources or for the release of resources.
- Keep agency administrator informed of incident status.
- Approve the use of trainees, volunteers, and CG Auxiliary personnel.
- Authorize release of information to the news media.
- Ensure Incident Status Summary (ICS 209-CG) is completed and forwarded to appropriate higher authority.
- Order the demobilization of the incident when appropriate.
- Maintain Unit Log (ICS 214-CG) and forward to DOCL for disposition.

3. COMMAND STAFF

3.1. Public Information Officer

- Develop a media strategy and obtain IC/UC approval prior to implementation.
- Develop public and social media information plan.
- Establish contact with other Public Information personnel.
- Locate and establish a JIC.
- Coordinate with the LOFR to provide talking points to IC/UC for press briefings, VIP visits, and town hall meetings.
- Keep IC/UC informed of any potential adverse political, social, and economic impacts.

3.2. Liaison Officer

- Ensures security of both personnel and equipment on site;
- Provides security to foreign personnel assisting in the response operation; and
- Performs other tasks as necessary or directed.
- Obtain a briefing from the incident commander. Insure that all agency resources have completed check-in.
- Initiate the initial contact with the appropriate local support agencies/representatives and provide an initial briefing.
- Identify agency representatives from each agency, including communications link and location.
- Respond to request from incident personnel for inter-organizational problems.
- Monitor incident operations to identify current or potential inter-organizational problems.
- Maintain a post log.
- Establish a working location and advise agency personnel of the incident that the agency representative has corrected.
- Attend planning meetings as required.
- Provide input on the use of agency resources.
- Cooperate fully with the incident commander and staff on local support agency’s involvement at the incident.
- Oversee the well being and safety of agency personnel assigned to the incident.
- Advise of any special agency needs or requirements.
- Determine if any special reports or documents are required.
- Insure that all agency personnel and/or equipment is properly accounted for and released prior to departure.

- Insure that all required agency forms, reports, and documents are complete prior to departure from the incident.
- Have a briefing session with the incident commander prior to departure.
- Maintain a unit log.

3.3. Safety Officer

- Assign site safety responsibilities.
- Establish perimeter and restrict access.
- Characterize site hazards to include identifying the pollutant, obtaining Material Safety Data Sheets, conducting air monitoring, and identifying chemical, physical, and biological hazards (e.g., slips, trips, falls, confined spaces, noise, weather conditions, poisonous insects, reptiles, plants, and biological waste).
- Establish control zones, including the exclusion zone, contamination reduction zone, and support zone.
- Establish minimum safety training requirements.
- Assess personnel training to include verification of Hazardous Waste Operations (HAZWOPER) cards.
- Ensure safety briefings are given.
- Select the PPE response personnel should use.
- Ensure the establishment of decontamination stations.
- Coordinate with the Medical Unit to locate and document hospital, EMTs, and first-aid stations.
- Coordinate with the Medical Unit to document emergency numbers of the fire, police, and ambulance services.

3.4. Legal Officer

- Primarily, provides legal advice concerning liabilities and ramifications that could result from anticipated or completed actions
- Handles legal issues assigned for action.
- Evaluates the legal implications of proposed ongoing response actions that can be taken to avoid or minimize legal liabilities;
- Assists Public Affairs Officer in preparing statements and briefings as required;
- Liaises with the Finance and Administrative Section Chief so that records are maintained in a legally sound manner;
- Reviews contracts and agreements for services, equipment and materials;
- Provides advice to the Planning Section Chief concerning the acquisition of necessary permits for the disposal of wastes;
- Liaises with legal representatives of the spiller and other responsible parties if known.
- Liaises with the different response departments to ensure consistency of legal advice;
- Maintains files, documentation, and physical evidence for any legal actions that may be filed;
- Coordinates with Compensation or Claims Unit Leader for guidance and procedures on taking samples and maintaining a chain of custody of receipt for legal purposes
- Performs other tasks as necessary or directed.

4. GENERAL STAFF

4.1. Operations Section Chief

- Review Common Responsibilities.
- Obtain briefing from IC.
- Evaluate and request sufficient Section supervisory staffing for both operational and planning activities.

- Supervise Operations Section field personnel.
- Implement the IAP for the Operations Section.
- Evaluate on-scene operations and make adjustments to organization, strategies, tactics, and resources as necessary.
- Ensure the RESL is advised of changes in the status of resources assigned to the Operations Section.
- In coordination with the SOFR, ensure that Operations Section personnel execute work assignments while following approved safety practices.
- Monitor the need for and request additional resources to support operations as necessary.
- Assemble and/or demobilize Branches, Divisions, Groups, and task force/strike teams as appropriate.
- Identify and use staging areas.
- Evaluate and monitor the current situation for use in next operational planning period.
- Convert operational incident objectives into strategic and tactical options, which may be documented on a Work Analysis Matrix (ICS 234-CG).
- Coordinate and consult with the PSC, SOFR, Marine Transportation System Recovery Unit Leader (MTSL), THSPs, modeling scenarios, trajectories, etc., on selection of appropriate strategies and tactics to accomplish objectives.
- Identify kind, type, and number of resources required to support selected strategies.
- Determine the need for any specialized resources.
- Divide work areas into manageable units.
- Implement air space de-confliction plans as required.
- Determine the need for an Air Branch Director.
- Request Captain of the Port (COTP) Safety or Security Zone or FAA Temporary Flight Restriction declaration around/over the incident response zone when warranted.
- Develop work assignments and allocate tactical resources based on strategic requirements using the Operational Planning Worksheet (ICS 215-CG).
- Coordinate the development of the Operational Planning Worksheet (ICS 215-CG) with the SOFR to mitigate safety risks.
- Participate in the planning process and the development of the tactical portions of the IAP, including the Assignment List (ICS 204-CG) and Air Operations Summary (ICS 220-CG).
- Review and approve final ICS 204-CG(s) prior to IAP approval.
- Assist with development of long-range strategic, contingency, and demobilization plans.
- Develop recommended list of Operations Section resources to be demobilized and initiate recommendation for release when appropriate.
- Receive and implement applicable portions of the incident Demobilization Plan.
- Participate in operational briefings to IMT members as well as briefings to the media and visiting dignitaries.
- Maintain Unit Log (ICS 214-CG) and forward to DOCL for disposition.

4.2. Planning Section Chief

- Review Common Responsibilities.
- Collect, process, display, and disseminate incident information.
- Assist OSC in the development of response strategies.
- Supervise preparation of the IAP.
- Facilitate planning meetings and briefings.
- Supervise the tracking of incident personnel and resources through the Resources Unit.
- Assign personnel already on-site to ICS organizational positions as appropriate.
- Oversee information management processes and plans, including the development and approval of the Information Management Plan
- Ensure the accuracy of all information being produced by Planning Section Units with special attention to IC/UC CIRs and their reporting requirements.

- Support information requirements and reporting schedules for Planning Section Units (e.g., Resources Unit and Situation Unit).
- Establish special information collection activities as necessary (e.g., weather, environmental, and toxics).
- Assemble information on alternative strategies.
- Provide periodic predictions on incident potential.
- Keep IMT apprised of any significant changes in incident status.
- Oversee preparation and implementation of the Incident Demobilization Plan.
- Incorporate plans (e.g., traffic, medical, communications, and site safety) into the IAP.
- Develop other incident supporting plans (e.g., salvage, transition, and security).
- Maintain Unit Log (ICS 214-CG) and forward to DOCL for disposition.

4.3. Logistics Section Chief

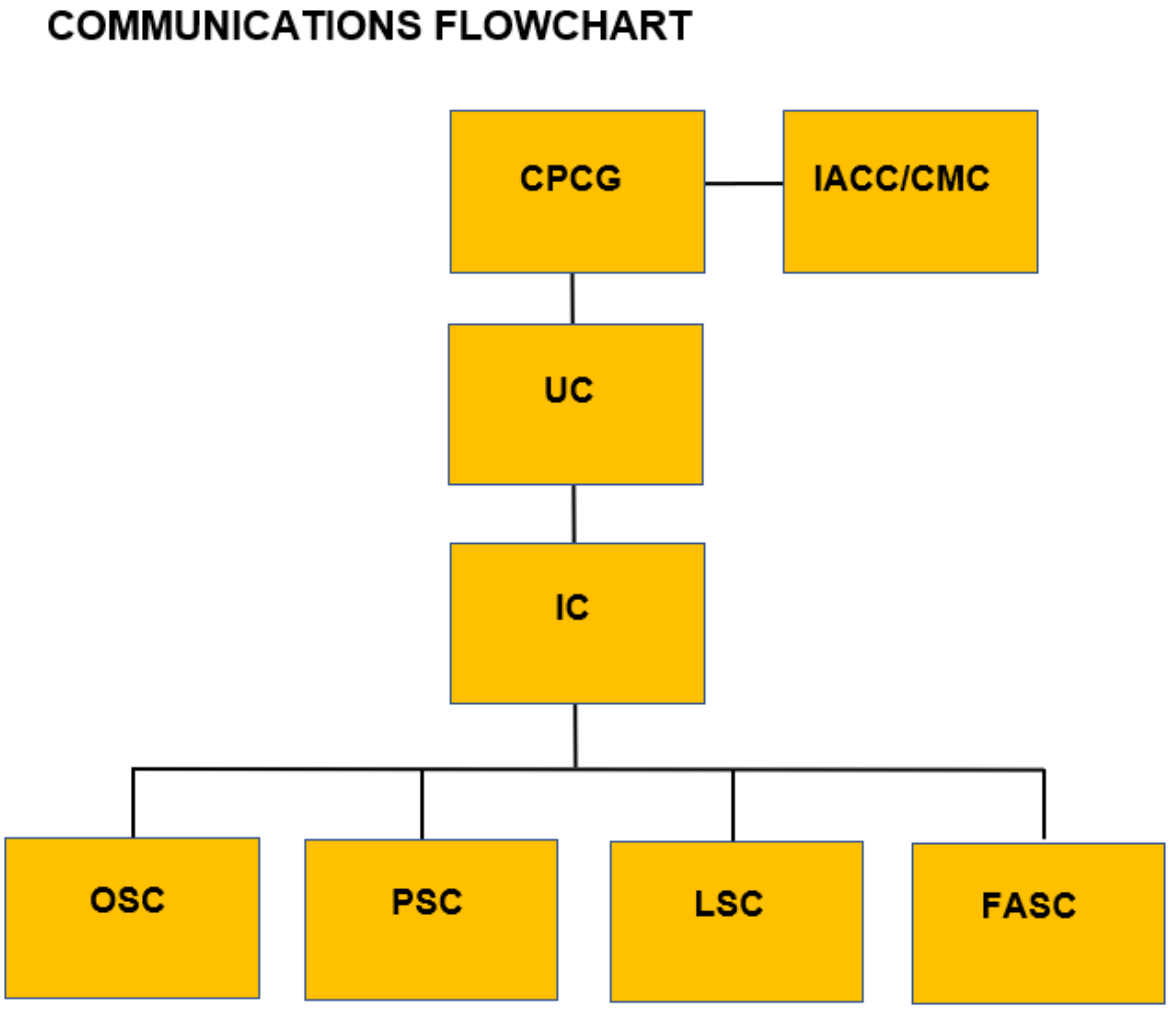
- Review Common Responsibilities.
- Organize the Logistics Section.
- Assign work locations and work tasks to Section personnel.
- Notify the Planning Section/Resources Unit of activated Logistics Section Units, including names and locations of assigned personnel.
- Assemble and brief Logistics Branch Directors and Unit Leaders.
- Participate in the planning process.
- Determine and supply immediate incident resource and facility needs.
- Coordinate and process requests for additional resources.
- In conjunction with Command, develop and advise all Sections of the IMT resource request process, the resource approval process, and use of CG Resource Request form (ICS 213-RR).
- Develop resource ordering process with FSC.
- Review proposed tactics for upcoming operational period to ensure ability to provide resources and logistical support.
- Advise Command and other Section Chiefs on resource availability to support incident needs.
- Identify long-term service and support requirements for planned and expected operations.
- Oversee development of the Communications Plan (ICS 205), Medical Plan (ICS 206), Transportation Plan and Traffic Plan, as required.
- Provide input to the Information Management Plan.
- Identify logistical resource needs for incident contingencies.
- Determine the type and amount of resources ordered and enroute to include reporting of status/location.
- Advise Section Chiefs on resource limitations, constraints, and appropriateness.
- Advise on current service and support capabilities.
- Participate in Business Management Meeting with the FSC.
- Request and/or set up expanded ordering processes as appropriate to support incident.
- Recommend Logistics Section resources to be demobilized and prioritize release order.
- Provide Logistics Section requirements to be included in the Demobilization Plan to DMOB.
- Receive and implement applicable portions of the incident Demobilization Plan.
- Maintain Unit Log (ICS 214-CG) and forward to DOCL for disposition.

4.4. Finance & Administration Section Chief

- Review Common Responsibilities.
- Participate in incident planning meetings and briefings as required.

- Review operational plans and provide alternatives where financially appropriate.
- Manage all financial aspects of an incident.
- Identify all funding sources and ceilings for the response operation.
- Provide financial and cost analysis information, as requested.
- Gather pertinent information from briefings with responsible agencies.
- Develop an operating plan for the Finance/Admin Section.
- Fill supply and support needs.
- Meet with Assisting and Cooperating AREPs, as needed.
- Maintain daily contact with each organization(s) administrative headquarters on Finance/Admin matters.
- Coordinate with the RESL to ensure that all personnel time records are accurately completed.
- Transmit information to home agencies according to policy.
- Provide financial and administrative input to demobilization planning.
- Ensure that all funding obligation documents initiated at the incident are properly prepared and completed.
- Brief organization administrative personnel on all incident-related financial issues needing attention or follow-up prior to leaving incident.
- Develop recommended list of Section resources to be demobilized and initial recommendation for release when appropriate.
- Receive and implement applicable portions of the incident Demobilization Plan.
- Participate in Business Management Meeting with the LSC.
- Actively manage incident funds, differentiating between the various funding sources used to carry out response activities.
- Ensure that financial recording software is open and access to the accounting line is established for the incident.
- Ensure that obligations are entered in financial recording software.
- Ensure that reconciliation of financial management systems is performed in accordance with current CG guidance.
- Adhere to CG undelivered orders policy and procedures.
- Conduct Finance Section status meetings as required.
- Maintain Unit Log (ICS 214-CG) and forward to DOCL for disposition.

ANNEX 26. COMMUNICATIONS FLOWCHART



ANNEX 27. FORM NO. 1: NOTIFICATION OF A MARINE OIL SPILL

Notification of a Marine Oil Spill

Fill in this form with black pen and fax to the Philippine Coast Guard:

TeleFax: (02) 245-9165/ (02)527-3877 **Phone:**(02) 527-8481loc 6137 or6136

Number of pages: _____ Urgent Non-Urgent _____

THIS REPORT MADE BY:

Organization:_____ Date: _____ Time: _____

Phone: _____ Fax: _____ Mobile:_____

ESTIMATED TIER OF RESPONSE

Tier1(Local) Tier2(Regional) Tier3(National)

Location

LAT: _____ LONG: _____

Date of spill: _____

TYPE OF OIL SPILT

Crude HFO LFO Lubrication Oil Marine Diesel Hydraulic Oil
Kerosene/ Av. Gas Petrol/ Gasoline Bilge Unknown Other (details)

ESTIMATED QUANITY OF OIL SPILT: _____

SOURCE OF OIL SPILT: _____

Land-based Vessel Oil Transfer Site Offshore Installation Pipeline Unknown

SOURCE DETAILS

Vessel/ Site Name:

Owner: _____ Name: _____

Address: _____

ACTIVITY

Vessel Loading/ Unloading Refueling Bilge Pumping Capsize Grounding
Collision Sinking Unknown Other (details) CAUSE: _____

_____

Equipment/Mechanical Failure Human Error Vandalism Negligence
Unknown Other (details) _____

ENVIRONMENTAL EFFECTS/DAMAGE RESPONSE/ACTIONTAKEN:

_____

_____

Could spill escalate? Y/N_____ Is media interest likely Y/N____

IF YES TO ALL OF THE ABOVE, TICK URGENT (Vice-Versa) AT THE TOP OF THIS FORM AND FAX

ANNEX 28. FORM NO. 2: POLLUTION REPORT (POLREP)

Pollution Report (POLREP)

Date/time of incident:

Date/time of report:

Location of incident: bearing/ distance:

Lat: Long:

Source of report:

Contacts: Phone Number: Fax Number:

Nature of incident and spill source

Confirmed: Yes/ No:

Point of discharge:

Oil type or description, Identity and position of ships in vicinity:

Cause of discharge:

Nature and extent of pollution:

Drift and rate of pollution:

Has discharge ceased:

Weather/ seastate/ tide:

Samples/ photographs taken:

Agency/ organization:

Contacts details: Phone: Fax:

Action(s) taken:

Details of equipment use:

Additional information:

ANNEX 29. FORM NO. 3: MARINE OIL SPILL ASSESSMENT

Marine Oil Spill Assessment (Page1of 2)

Fill in this form with black pen and fax to the Philippine Coast Guard:

This report made by: ..... Organization: .....
Date: .....Time: .....Phone: .....Fax: .....Mobile: .....
Spill reported by: ..... Organization: .....
Date: .....Time: .....Phone: .....Fax: .....Mobile: .....
Address: .....Availability (next few hours): .....

Spill observed from:

Vessel Name: .....Flag State: .....
Aircraft Identification: .....Altitude: .....ft./m
Land Location: .....

SOURCE OF SPILL: .....Time spill started: .....
Instantaneous spill: .....liters/tonnes Continuous..... liters/tonnes

TYPE OF OIL SPILT.....Specific gravity.....
Product name: .....API gravity.....
Product origin.....Kinematic viscosity.....
Crude oil Pourpoint.....
Refined product Volatility (flashpoint) .....

TOTALAREA AFFECTED BYSPILL			AREA COVERED BY OIL			
Length	x Width =	Total Spill Area	Total Spill Area	X Percentage covered by Oil	÷ 100 =	Total Slick Area
Km	Km	Km^2		Max100%		Km^2

SPILL VOLUME

1. Estimate the proportion of each oil type* within the total slick area (proportion= %÷100)
2. Multiply loadingxproportionxtotal slick area to calculate thevolume of each oil type
3. Sum the volumes of each oil type to estimate total spill volume.....

Oil Appearance	Thickness (mm)	Loading mm^3/km^2		Proportionof TotalSlickArea		TotalSlick Area		Volume (m^3)
Silvery Sheen	0.0001	0.1	x		x		=	
Rainbow Sheen	0.0003	0.3	x		x		=	
Yellow/Brown Slick	0.01	10	x		x		=	
Black/Brown Oil	0.1	100	x		x		=	
Brown/Orange Mousse	1.0	1000	x		x		=	
Total				**(Must=1)**				m^3

*If uncertain of oil type, base all volume estimates on crude/ fuel oil 0.1mmthick = 100m3 of oil/ km2; (=1tonne of oil/Ha)
Give a proportion of total slick area only if more than one type of oil present.

Marine Oil Spill Assessment (Page2of 2)

Fill in this form with a blackpen and fax to the PCG.
Incident Name: .....Report Number: .....
This report made by: ..... Organization: .....Date: .....Time:

LOCATION OF SPILL.....
OR Range and bearing from geographical feature:
Latitude: ..... Bearing: ..... degrees true/magnetic
Longitude: ..... Distance: ..... nm/km
Time position fixed: .....hrs. Feature: .....

POSITION OF SOURCE .....
OR Range and bearing from geographical feature:
Latitude: ..... Bearing: .....degrees true/magnetic
Longitude: ..... Distance: .....nm/km
Time position fixed: .....hrs. Feature:.....

If spill source is a vessel:
Speed: .....knots Approximate course: .....degrees true/magnetic

WEATHER CONDITIONS AT SPILL SITE Sunny Overcast Cloudy Rain Fog
Sea state: ..... Windspeed: ..... knots/km Air temp: .....° C
Wave height.....m Wind direction: ..... degrees true/magnetic Sea temp: .....° C
Water depth:.....m Visibility:.....nm/km Salinity:.....ppt
Weather and sea conditions expected over the next 24 hours:
.....
.....

PREDICTED SPILL MOVEMENT
Plot spill movement on appropriate nautical chart.
Predict slick direction and speed using
100% current velocity and 3% windspeed.
Note: Wind blows FROM thespecified direction; currents flow TOWARDS the specified direction
Current velocity: .....knots/km Tides: next low at.....hrs, height.....m
Current direction:..... degrees next high at.....hrs., height.....m
Predicted slick speed:.....knots/km Predicted slick direction:.....
degrees true/magnetic
Estimated distance to shore/ sensitive area: ..... nm/km
Estimated time for spill toreachshore/sensitive area: .....

Description of coastal areas and resources likely to be affected:
.....
.....
.....

ANNEX 30. FORM NO. 4: POLLUTION INCIDENT EVALUATION FORM

Pollution Incident Evaluation Form

Fill in this form with black pen and Email to the Philippine Coast Guard:

Telefax:(02) 245-9165/ (02)527-3877 **Phone:**(02) 527-8481loc 6137 or6136

Number of pages: Urgent on-Urgent

Person notified:	Time:	Date:

Name of Person Giving Notification:

Phone Number:

Availability of person making notification (next few hours):

Location of Spill:

Time of Spill: Is oil still entering the water? Yes–No

Origin of Spill:

Type of Oil:

Approximate area covered:

Estimated quantity:

What color is the slick?

Any wildlife or wildlife habit at affected or at risk:

Any vessel in the vicinity?

Weather conditions at the spill site:

Wind speed:	Wind direction:
Seastate:	Tide rising/ falling:

Can the person notifying the spill obtain a sample if required? Yes /no:

Any other information which may be helpful?

ANNEX 31. FORM NO. 5: AERIAL SURVEILLANCE OBSERVER LOG

Aerial Surveillance Observer Log

This report made by: ..... Organization: .....
Date: ..... Time ..... Phone: ..... Fax: ..... Mobile: .....

Incident: ..... Date: .....
Observers: ..... Call Sign: .....
Aircraft Type: ..... Area of Survey: .....
Survey: Start Time ..... End Time ..... Average Altitude .....
Wind speed(knots) ..... Wind Direction ..... Cloud Base: .....
Visibility ..... (nm) Time High water ..... Time waster .....

SPILL DETAILS

Spill Grid Parameters by Lat/Long		Spill Grid Parameters by air speed		Spill Grid Dimensions
Length Axis	**Width Axis**	**Length Axis**	**Width Axis**	**Length**
Start Lat:	Start Lat:	Time (secs):	Time (secs):	Width (nm)
Start Long:	Start Long:			Length (km)

Length x Width = Total Spill Area

Km	Km	Km^2

Total Spill Area X (Percentage covered by oil) ÷ 100 = (Total Slick Area)

Percentage covered by oil: _____ Max 100%

Total Slick Area: _____ Km^2

SPILL VOLUME

1. Estimate the proportion of each oil type* within the total slick area (proportion= %÷100)
2. Multiply loading x proportion x total slick area to calculate the volume of each oil type
3. Sum the volumes of each oil type to estimate total spill volume .....

Oil Appearance	Thickness (mm)	Loading mm^2/km^2		Proportion of Total Slick Area		Total Slick Area		Volume (m^3)
Silvery Sheen	0.0001	0.1	X		X		=	
Rainbow Sheen	0.0003	0.3	X		X		=	
Yellow/Brown Slick	0.01	10	X		X		=	
Black/Brown oil	0.1	100	X		X		=	
Brown/Orange Mouse	1.0	1000	X		X		=	
Total				**(Must = 1)**				m^3

*If uncertain of oil type, base all volume estimates on crude/fuel oil 0.1mm thick=100 m3 of oil/ km2; (=1tonne of oil/Ha)
Give a proportion of total slick area only if more than one type of oil present.

ANNEX 32. FORM NO. 6: INCIDENT UPDATE REPORT

The format for update report follows the format of OSC report to DNOCOP and must be transmitted at 0800H and 1600H daily.

Overview of Responder's Forms:
Four separate forms are provided for the responder's use:

- Pollution Incident Evaluation Form
- Notification of a Marine Oil Spill
- Marine Oil Spill Assessment (two pages)
- Request for Maritime Assistance
- Aerial Surveillance Observer Log

Summaryof Forms

1. Pollution Incident Evaluation Form
This form is to be completed by the initial recipient of a reported oil spill. The accomplished form will eventually be submitted to the Headquarters, PCG (Info: HMEPCOM)

2. Notification of a Marine Oil Spill
A template is provided for the CGDistricts to report details of all oil spills to the their respective AOR's. For potentially significant spills, the HPCG (info: HMEPCOM) should be notified immediately, and the Notification Form faxed through as soon as possible. Form in or spills the Notification Form should be faxed through within Twenty-Four (24) hours.

3. Marine Oil Spill Assessment
A template is provided to ensure that the spill information necessary to mount an appropriate response is collected. Information includes spill location, weather conditions, predicted spill movement, spill size and oil type. The form can be updated and used as a situation report (SITREP) through a spill response. This form (2 pages) should be filled in and faxed to the HPCG for significant spills, particularly if assistance may be required.

4. Request for Maritime Assistance
A template is provided to request the HPCG's (Attn: MEPCOM) assistance with equipment and/or specialist advice. For any potentially significant spill, the PCG should be immediately notified of the type and quantity equipment or specialist advice that may be needed. Requests for assistance should be made as early as possible to allow personnel to be notified and prepared for possible mobilization.

5. Aerial Surveillance Observer Log
A template is provided to provide assistance with observing oil spills from the air. These forms will act as helpful reminders to On-Scene Commanders to initiate inquiries aimed at answering all of the relevant questions on the forms. It is acknowledged that all of the items stated will not be answered immediately. Indicate on the initial notification which data is being actively sought. All of this fundamental information must be addressed within the very initial stages of an oil spill response.

ANNEX 33. FORM NO. 7: REQUEST FOR RESPONSE ASSISTANCE

Fill in this form with blackpen and fax to theHPCG:

TeleFax:(02) 245-9165/(02)527-3877 **Phone:**(02) 527-8481loc 6137 or6136

Number of pages: Urgent Non-Urgent

This report made by: .....

Organization: ..... Date: .....Time: .....

Phone: ..... Fax: ..... Mobile: .....

On-Scene Commander: .....Organization: .....

Phone: .....Fax: .....Mobile: .....

THE FOLLOWING ASSISTANCE IS REQUESTED FROM HPCG (Attn: HMEPCOM)

Advice on: Oil characteristics Spill movement Cost recovery
Response options Oil recovery Prosecution
Dispersants Waste disposal Media relations
Other (specify): .....
.....
.....
.....

Staff and equipment: Spill Officers
Equipment operators (Number required: .....)
Equipment (list below)
Other (specify): .....
.....
.....
.....

EQUIPMENT REQUESTED: *(Continue on separate page if necessary)*

Type	Quantity	Priority	Type	Quantity	Priority
.....	.....				
.....	.....				
.....	.....				
.....	.....				
.....	.....				
.....	.....				
.....	.....				
.....	.....				
.....	.....				
.....	.....				

Delivery contact: .....

Delivery address: .....

Phone: .....Fax: ..... Mobile: .....

ANNEX 34. FORM NO. 8: ON-SCENE COMMANDER REPORT FORMAT TO DIRECTOR, NOCOP

OSC REPORT FORMAT TO DIRECTOR, NOCOP

SITUATION

1. Full details on the spill, including type and quantity of material, who is involved, extent or coverage, duration of spill, areas threatened, predicted movement, success of control effort and prognosis.

2. The location, in general and specific terms. The general location would include ports and harbours, terminal, beaches and other waterway river areas. The specific location would be expressed in geographic co-ordinates.

3. The type of material would include the general nature or characteristics, such as persistent oil, toxic material, and harmful substances.

ACTION

Summary of actions taken by the responsible party, local forces and others.

PLANS

Planned actions to take.

RECOMMENDATION

Appropriate actions or request pertaining to the responses.

STATUS

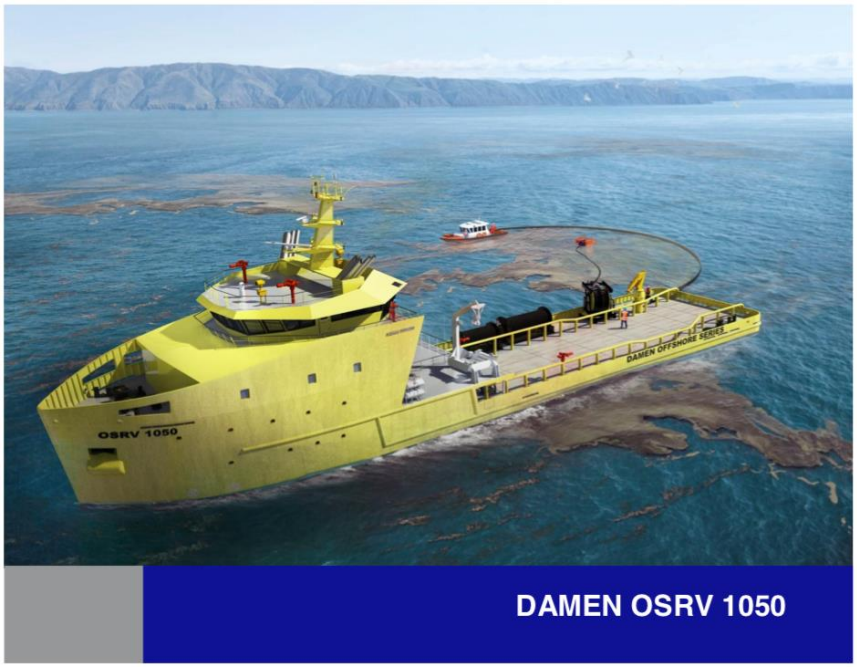
Indicate case cleared participation of response team terminated, as appropriate.

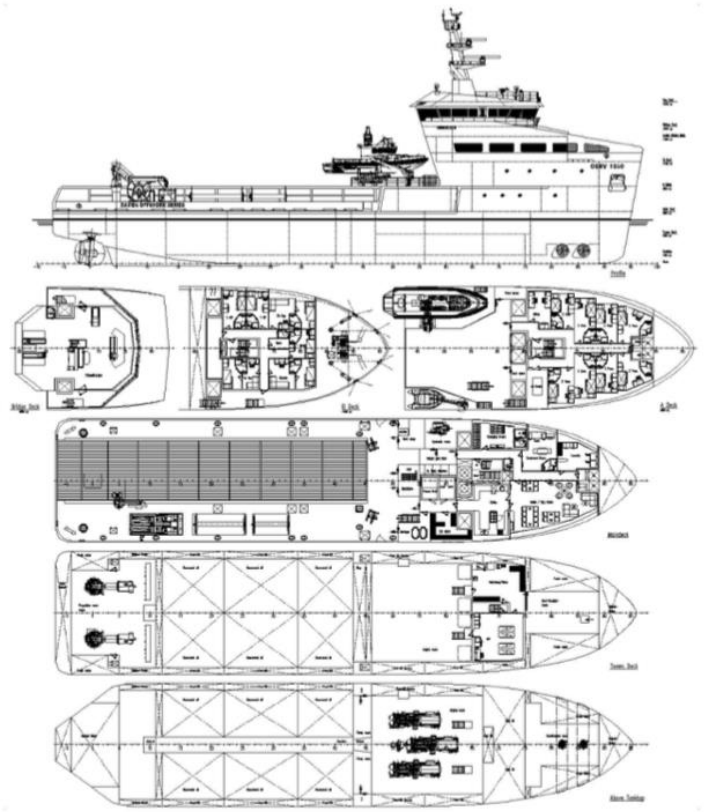
ANNEX 35. LIST OF OIL SPILL RELEVANT CONTACTS NUMBERS

COAST GUARD DISTRICT	MEPUS	ADDRESS	EMAIL ADDRESS	MOBILE NUMBER
CGD North Eastern Luzon		Brgy Centro 9, Aparri, Cagayan	cgdnortheasternluzon@yahoo.com	09178012545 09273223997
	MEPU-NELZN		mepu_nelzn@yahoo.com	09178425190
CGD North Western Luzon		Poro Pt. San Fernando, La Union	cgdnorthernluzon@yahoo.com	09279577497 09296742136
	MEPU-NWLZN		mepgrpnlz@yahoo.com	09178425190
CGD National Capital Region-Central Luzon		Farola, Muelle dela Industria Binondo, Manila	ncrcl@coastguard.gov.ph	09178218124 09279671505
	MEPU-NCR-CL		ncrclmepgru@yahoo.com	09175243166
CGD Southern Tagalog		Sta. Clara pier, Batangas City	cgdstl@coastguard.gov.ph	09178426633 09178732091
	MEPU-STL		mepustl@yahoo.com	09171348805
CGD Bicol		Regional Govt Center, Rawis, Legazpi City	Cgd.bicol@yahoo.com	09178426764 09175796551
	MEPU-BCL	Tabaco Port, Tabaco City	mepgrubicol@yahoo.com	09178425017
CGD Western Visayas		Bo. Obrero, Lapaz, Iloilo City	cgdwv_iloilo@yahoo.com cgdwv@coastguard.gov.ph	09178428447 09053708085
	MEPU-WV		mepuwv@yahoo.com.ph	09177173710/ 091788003343
CGD Southern Visayas		Port area Dumaguete City, Negros Oriental	cgd.sv@coastguard.gov.ph	09176312749 09985858103
	MEPU-SV	San Patricio Blvd. Puno	mepusv@gmail.com	09178425522

		Banago, Bacolod City Negros Occidental		
CGD Central Visayas		Pier 3, Arellano Blvd, Cebu City	viscom_opns@yahoo.com	09178427102 09158228480
	MEPU-CV		mepu_cv@yahoo.com	09178425102
CGD Eastern Visayas		Ebony St. Port area Ormoc City, Leyte	cgsormoc@yahoo.com	09178427656 09296742264
	MEPU-EV		mepu_ev@yahoo.com	09178425099
CGD Northern Mindanao		1280 Corrales extension, Brgy Puntod Port area, Cagayan de Oro, City	cgdnm@yahoo.com cgdnm@coastguard.gov.ph	09178428196 09177062902
	MEPU-NM		mepgru-nm@yahoo.com	09178425156
CGD South Western Mindanao		Naval Station Romulo Espaldon Bagong Calarian, Zamboanga City	hcgdswm@yahoo.com	09178428446 09166260689
	MEPU-SWM		mepgruswm7000@yahoo.com	09178425502
CGD South Eastern Mindanao		Davao Port, KM 10, Sasa wharf, Davao City	cgdsem_8@yahoo.com.ph	09178313197 09217439444
	MEPU-SEM		mepgrusem@yahoo.com.ph	09178196107
CGD Palawan		Light station Tide Pole, Brgy Bagong Silang, Puerto Princesa City	cgdpal@yahoo.com.ph cgdpal@coastguard.gov.ph	09178161072 09279485485
	MEPU-PAL		mepupalawan2014@gmail.com	09178425201

ANNEX 36. Market Research – Sample Marpol Vessel





Note: The use of Damien OSRV design leaflet as part of the Philippines' NOSCOP is not an endorsement of DAMIEN OSRV, but only the initial market study of available Oil Spill Response Vessel (OSRV) the PCG may procure for oil spill response. The PCG's actual oil spill response vessel shall have its own design specification and shall be procured according to appropriate government regulations.