transport

Department:
Transport
REPUBLIC OF SOUTH AFRICA

SAMSA
SOUTH AFRICAN
MARITIME SAFETY AUTHORITY

South Africa's National Oil Spill Contingency Plan (NOSCP) Maritime 2019-2024

Volume 1

Implementation Plan

Date	01 October 2019
Amendment	0

Incident Reporting

Report any marine oil spill related incident to:
Tel: +27(0)21 938 3300

Privacy Statement

This document was written for the purposes of marine oil spill response. Any information contained in this document, including names, addresses, contact details may not be used for any other purpose, or disclosed to any third party, unless prior written consent from the Department of Transport is obtained.

Foreword

The Department of Transport (DoT) has a legal responsibility of providing and fulfilling statutory obligations towards marine pollution prevention response of the Republic of South Africa's coastline of more than 3 000 kilometres in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act 6 of 1981, Marine Pollution (Prevention of Pollution from Ships) Act 2 of 1986 and in the Marine Pollution (Intervention) Act 64 of 1987. These Acts give powers in respect of Pollution casualties in so far as pollution occurs, or threatens to occur within waters under South African jurisdiction, being waters comprising the internal and territorial waters, the exclusive economic zone, etc. The Marine Pollution (Control and Civil Liability) Act 6 of 1981 in its preamble the Act aims: "*To provide for the protection of the marine environment from pollution by oil and other marine harmful substances, and for that purpose to provide for the prevention and combating of pollution of the sea by oil and other harmful substances; to determine liability in certain respects for loss or damage caused by the discharge of oil from ships, tankers and offshore installations; and to provide for matters connected therewith*".

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. Domestically, the Constitution (Act No. 108 of 1996: Section 24 of the Bill of Rights): provides that everyone has a right to an environment that is not harmful to their health or well-being and to have the environment protected for the benefit of the present and future generations through reasonable legislative and other measures. The latter section illustrates clearly that the government has a legal obligation to protect the environment through the development and the implementation of the Plan to fulfil this obligation amongst other statutory legislative measures put in place. These rights are embedded in the supreme law in South Africa, which is the Constitution and affords every citizen access to petition a competent court of law to hear the matter and enforce their rights or perceived violations.

Furthermore, the 2017 version of the South African Comprehensive Maritime Transport Policy makes provision for the DoT, in co-operation with other Departments and agencies, to maintain a comprehensive Contingency Plan to ensure compliance with the provisions of the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC).

I welcome the modernisation of our Oil Spill Response Capability in the country with the implementation of an Incident Management System (IMS) in accordance with international obligations through the OPRC Convention which South Africa has ratified and being a full member of the International Maritime Organization (IMO) responsible for uniformity in international regulation of the shipping industry.

I therefore encourage the relevant national departments, agencies, the shipping fraternity and the oil and gas sectors to use this Plan in their endeavours when responding to an oil spill incident.

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Mr. Alec Moemi
Director-General: Transport
Department of Transport

Date: 06/12/2019

Milnerton Lagoon, Cape Town

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Definitions

Agency	A division of government with a specific function, or a non-governmental organisation.
Assisting Agency	An agency or organisation providing personnel, services, or other resources to the agency with direct responsibility for incident management.
Blowout	The loss of well control from drilling, completion, production wells, well intervention or work-over.
Coastal Environment	The environment within the coastal zone.
Coastal Waters	(a) any wetland in the coastal zone, and includes: (i) land adjacent to coastal waters that is regularly or periodically inundated by water, salt marshes, mangrove areas, inter-tidal sand and mud flats, marshes, and minor coastal streams regardless of whether they are of a saline, freshwater or brackish nature, and (ii) the water, the subsoil and substrata beneath, and bed and banks of, any such wetland.
Coastal Zone	The area comprising coastal public property, the coastal protection zone, coastal access land and coastal protected areas, the seashore, coastal waters and the exclusive economic zone and includes any aspects of the environment on, in, under and above such area.
Command	The act of directing, ordering, or controlling, by virtue of explicit statutory, regulatory or delegated authority.
Complex Incident	Two or more individual incidents located in the same general area that are assigned to a single Incident Commander or to Unified Command.
Convention	The International Convention of Civil Liability for Oil Pollution Damage, signed in Brussels on 29 November 1969 and published for general information under Gazette Notice No. 58 of 1978 in the Government Gazette No. 5867 of 27 January 1978, and includes any amendments thereof and additions thereto signed, ratified or acceded to by the Republic of South Africa.
Co-operating Agency	An agency supplying assistance other than direct operational or support functions or resources to the incident management effort
Co-ordination	The process of systematically analysing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available

	resources to meet specific objectives. The co-ordination process (which can be either intra- or interagency) does not involve dispatch actions. However, personnel responsible for co-ordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc.
DEA local coastal oil spill contingency plans	Plans compiled and maintained by DoT and the Department of Environmental Affairs (DEA) which set out the actions to be taken when there is a threat of oil impacting on the shoreline, or where an impact has occurred. The coastline from the Orange River mouth to the Mozambique border is divided into zones, each of which has its own specific local coastal contingency plan.
Delegation of Authority	A statement provided to the Incident Commander by the Agency Executive delegating authority and assigning responsibility. The Delegation of Authority can include objectives, priorities, expectations, constraints, and other considerations or guidelines as needed. Many agencies require written Delegation of Authority to be given to Incident Commanders prior to their assuming command on larger incidents.
Disaster	A progressive or sudden, widespread or localised, natural or human-caused occurrence which (a) causes or threatens to cause (i) death, injury or disease; (ii) damage to property, infrastructure or the environment; or (iii) significant disruption of the life of a community; and (b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources;
Disaster Management disaster risk reduction	Either a policy goal or objective, and the strategic and instrumental measures employed for: (a) anticipating future disaster risk; (b) reducing existing exposure, hazard or vulnerability; and (c) improving resilience.
Disaster Management Head	The individual within each political subdivision that has co-ordination responsibility for jurisdictional disaster management.

District Municipality	A municipality that has municipal executive and legislative authority in an area that includes more than one municipality, and which is described in section 155(1) of the Constitution as a category C municipality.
Ecosystem	A system of relationships between animals and plants and their environment.
Emergency	Means a serious, unexpected, and often dangerous situation requiring immediate action.
Emergency preparedness	a) A state of readiness which enables organs of state and other institutions involved in disaster management, the private sector, communities and individuals to mobilise, organise and provide relief measures to deal with an impending or current disaster or the effects of a disaster; and b) The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current hazard events or conditions.
Environment	The surroundings within which humans exist and that are made up of: (a) the land, water and atmosphere of the earth; (b) micro-organisms, plant and animal life; (c) any part or combination of (i) and (ii) and the interrelationships among and between them, and (d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.
Exclusive Economic Zone (EEZ)	Means the sea beyond the territorial waters, but within a distance of two hundred nautical miles from the coast or the baselines. The United Nations Convention on the Law of the Sea (1982) and the Maritime Zones Act (No. 15 of 1994) are to indicate the exact outline of the "base line".
Hazardous event	Defined as an incident which occurs when a hazard is realised.
Hazards	Defined as a potential source of human injury, damage to the environment, damage to property, or a combination of these potential sources of harm.
Incident	An occurrence or event, natural or human-caused that requires an emergency response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, hazardous

	materials spills, weather-related disasters, medical emergencies, and other occurrences requiring an emergency response.
Incident Coding	A pragmatic approach in assigning a level of response associated to the overall complexity of the incident. Incident coding is not to be confused with Oil Spill Tiering.
Likelihood	Chance of something happening.
Local Municipality	A municipality as contemplated in section 2 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000).
Minister	In this document The Minister of Transport unless otherwise defined.
National	Pertaining to the National Government of the Republic of South Africa.
National Disaster Management Centre	The National Disaster Management Centre established by section 8(1) of the Disaster Management Act.
National Incident Command System	A system mandated by the Disaster Management Act that provides a consistent nationwide approach for national, provincial, and municipal governments; the private sector; and non-governmental organisations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.
Offshore installation	A facility situated wholly or partly within the prohibited area and which is used for the transfer of harmful substances from a ship or tanker to a point on land or from a point of land to a ship or tanker or from a bunkering vessel to a ship or a tanker, and includes any exploration or production platform situated within the prohibited area and used in prospecting for the mining of natural oil.
Oil	Petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products.
Organ of State	A national, provincial or municipal organ of state; any organ of state referred to in section 239 of the Constitution of the Republic of South Africa, 1996.
Owner of a ship	Any person to whom a ship or a share in a ship belongs.
P&I Club	Representatives of the ship owner's protection and indemnity insurance.
Pollution damage	(a) Loss or damage outside the vessel or platform by contamination resulting from the escape or discharge of bunker oil from the vessel; (b) Further loss or damage caused by preventive measures.

Port	A place, whether proclaimed a public harbour or not, and whether natural or artificial, to which ships may resort for shelter or to load or discharge goods or persons.
Principal Officer (PO)	The officer in charge of the office of the South African Maritime Safety Authority (SAMSA) at any port.
Prohibited area	Internal waters, the territorial waters and the EEZ and, in relation to an offshore installation, includes the sea within the limits of the continental shelf.
Response	The activities that address the short-term, direct effects of an incident. (a) Response includes immediate actions to save lives, protect property, and meet basic human needs; (b) Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavourable outcomes; (c) As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; on-going public health and agricultural surveillance and testing processes; immunisations, isolation, or quarantine.
Responsible Party	Any person or organisation who has a responsibility for taking any action in the event of an incident.
Risk	A combination of the likelihood of the occurrence of harm and the severity of that harm.
Role players	Persons and/or organisations who are considered to have a role to play in preventing and combating oil pollution of the sea and coast.
Sea	(a) The high seas (b) All coastal waters, and (c) Land regularly or permanently submerged by sea water, including- (i) The bed, subsoil and substrata beneath those waters and land flooded by sea water which subsequently becomes part of the bed of coastal waters, including the substrata beneath such land.

Stakeholders	Persons who may have an interest in any of the activities being undertaken in relation to the incident or who may in any way be impacted by the incident.
Terminal	Any shore-based facility which is used for the transfer of liquid substances from ship to shore or from shore to ship and includes the associated bulk storage tanks.
Territorial sea	The sea up to a limit not exceeding 12 nautical miles, measured from the baselines of the country as determined in accordance with The United Nations Convention on the Law of the Sea (UNCLOS).
Tiers 1, 2 and 3	Categories of response to an incident which require a local, national or international response, with Tier 1 being the lowest category of response. Tier 3 being the highest category requiring response from Government and international assistance.
Vessel	In the context of this Plan, means any ship, tanker or offshore installation that could in the event of an incident, cause or threaten to cause pollution of the marine environment by a harmful substance.
Wreck	Includes any flotsam, jetsam, lagan or derelict, any portion of a ship or aircraft lost, abandoned, stranded or in distress, any portion of the cargo, stores or equipment of any such ship or aircraft and any portion of the personal property on board such ship or aircraft when it was lost, abandoned, stranded or in distress.

Abbreviations

DEA	Department of Environmental Affairs
DG	Director-General
DMR	Department of Mineral Resources
DoT	Department of Transport
EEZ	Exclusive Economic Zone
GCIS	Government Communication and Information System
HNS	Hazardous and Noxious Substances
IC	Incident Commander
ICASA	Independent Communications Authority of South Africa
ICP	Incident Command Post
ICS	Incident Command System
ILO/LOF	Inter-agency Liaison Officer/Liaison Officer
IM	Incident Management
IMOrg	Incident Management Organisation
IMS	Incident Management System
JIC	Joint Information Centre
MDDA	Media Development and Diversity Agency
MLO/PIO	Media Liaison Officer /Public Information Officer
MRCC	Maritime Rescue Co-ordination Centre
NDMC	National Disaster Management Centre
NEBA	Net Environmental Benefit Analysis
NEMA	National Environment Management Act
NOSCP	National Oil Spill Contingency Plan
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
OSCP	Oil Spill Contingency Plan
P&I	Protection & Indemnity
PASA	Petroleum Agency South Africa
PDMC	Provincial Disaster Management Centres
PO	Principal Officer
PPE	Personal Protective Equipment
SAMSA	South African Maritime Safety Authority
SANCCOB	Southern African Foundation for the Conservation of Coastal Birds

SANParks	South Africa National Parks
SAPS	South African Police Service
SAR	Search and Rescue
SOG	Standard Operating Guideline
SOP	Standard Operating Procedures
TNPA	Transnet National Ports Authority
UNCLOS	United Nations Convention on the Law of the Sea
VIP	Very Important Person

Section 1

NOSCP Distribution List

Provincial Disaster Management Centre, Western Cape

NOSCP Accessibility

All vessel operators and offshore installation operators need to be aware of the contents of the National Oil Spill Contingency Plan (NOSCP) in the event their vessels or offshore installations are involved in any incident or accident in South African waters that sees the plan invoked.

The following National Departments responsible for responding to an oil spill at sea would require updated copies of the NOSCP:

CapeNature
Department of Environmental Affairs (DEA)
Department of Mineral Resources (DMR)
Department of Transport (DoT)
Koeberg Nuclear Power Station
National Disaster Management Centre (NDMC)
P&I (Protection & Indemnity) Club
Petroleum Agency South Africa (PASA)
Provincial Disaster Management Centres
South Africa National Parks (SANParks)
South African Maritime Safety Authority (SAMSA)
South African Police Service (SAPS)
Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)
Transnet National Ports Authority (TNPA)

The NOSCP can be accessed via the following media:

1) DEA website
2) DoT website;
3) SAMSA website;
4) TNPA website;

Updated copies of the NOSCP will be distributed to all relevant stakeholders as needed or required.

Section 2

Implementation Framework

West Coast Oil Spill Exercise

Durban rocky shore

In terms of the Marine Pollution (Control and Civil Liability) Act 6 of 1981, the DoT is charged with the responsibility for responding to a national marine oil spill incident. In terms of the South African Maritime Safety Authority Act 5 of 1998, SAMSA administers these responsibilities on behalf of the Minister in terms of delegated authority and legislative framework in place.

Considering all other relevant legislation, including the Disaster Management Act 57 of 2002 and National Environmental Management Act 107 of 1998, the NOSCP sets out the roles and responsibilities of most of the persons and parties likely to be involved in a national response to a marine oil spill in South Africa. It also contains relevant information and recommended procedures on how to act in the event of an oil spill.

The NOSCP recognises that no two incidents are ever the same and therefore the level and intensity of a response varies from incident to incident. This Plan outlines combined stakeholder arrangements designed to allow a rapid and co-operative response to marine oil spills within the defined area. The Plan is complemented by Government and Industry contingency plans prepared at regional, port and facility levels. Matters of detail are contained in local, site specific, contingency plans. This Plan also co-ordinates the provision of national and international support.

Purpose and Scope

The NOSCP aims to promote the planned and nationally co-ordinated response to any marine oil spill, in order to:

(a) Protect human health and safety;

(b) Minimise detrimental environmental impacts; and

(c) Provide for the restoration of the environment, as nearly as is practicable, to pre-spill conditions.

In the event of an incident, a response should be formulated according to the following priorities:

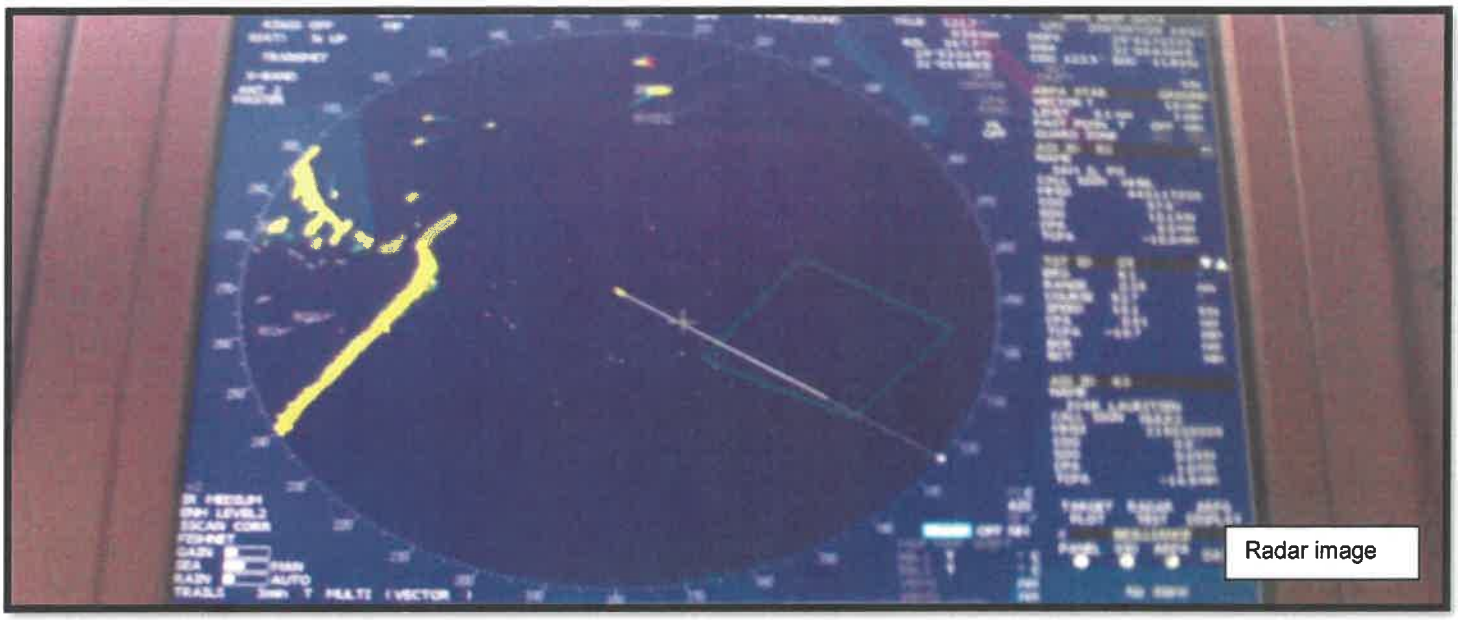
(a) Human health and safety;
(b) Natural environment;
(c) Commercial resources;
(d) Amenities; and
(e) Reputation.

Decision-making on the most appropriate response will be undertaken using the process of the Net Environmental Benefit Analysis (NEBA).

The above priorities could be re-prioritised depending upon the circumstances surrounding the incident. However, **safety of life always remains the first priority**. The scope of this Plan outlines a national response for oil and gas spills from all the maritime sectors.

This Plan can be applied to both fixed facilities and structures that pose marine pollution risks, including, but not limited to:

- Ships and ocean-going vessels;
- Ports and coastal oil-related activities;
- Marine transport of oil and bunkering, including ship to ship transfers; and
- Offshore oil and gas exploration, development and production facilities (Rigs and drilling vessels).



Radar image

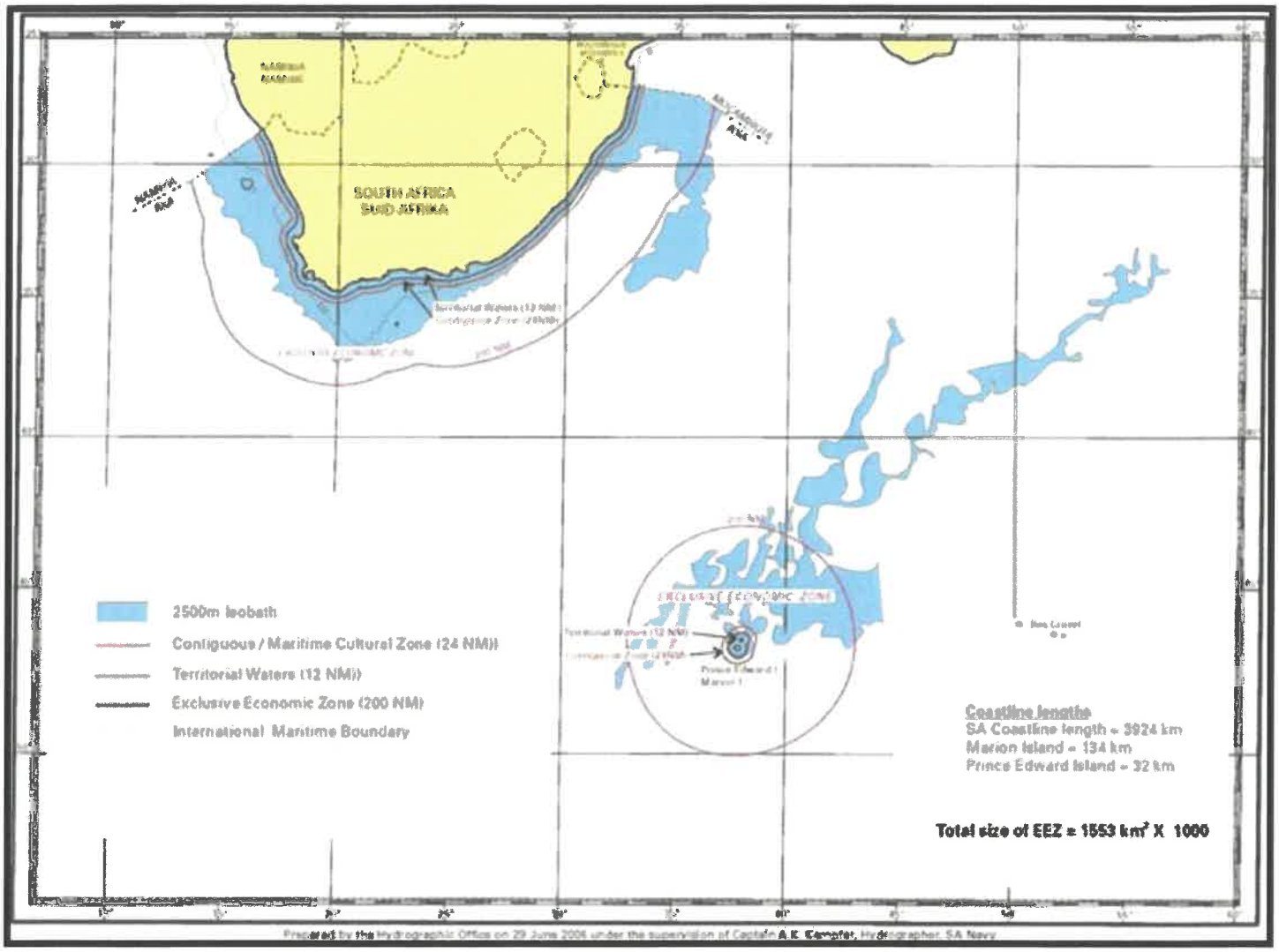
Search and Rescue Incident

Safety of life takes precedence over all other operations. In the case of a Search and Rescue (SAR) requirement during a marine oil spilling incident, the relevant Maritime Rescue Co-ordination Centre (MRCC), or Rescue Sub Centre will be the lead agency during the SAR operation and may then assume a support role once the SAR incident is resolved. Nothing prohibits the simultaneous resolution of the incidents, even the utilisation of the same assets co-ordinated via the Incident Management (IM) structure and governed by the incident response prioritisation. For the Maritime Search and Rescue Emergency Contact Number, refer to the SAMSA website.

Oil Spill Incident Management

The NOSCP recognises that specific characteristics can affect the way the incident is managed. The IMS for shipping and marine oil and gas sector incidents are based on the following principles:

1. Operational management of maritime incidents rests with the commercial sector, i.e. towage and salvage contractors, with the oversight role played by the Government;
2. The system must be scalable and flexible to meet the demand of the incident;
3. The role of the South African government is to oversee the actions of the ship-owner/master and towage and salvage contractors;
4. The need to facilitate communication with amongst key stakeholders in relation to appropriate action and situational information; and
5. The requirement to provide for the separation of the maritime incidents and marine pollution response functions for significant incidents.



Area of Coverage

The geographical area covered by the NOSCP includes all South African Territorial Seas including offshore islands and territories, South Africa's EEZ, and the High Seas, where an oil spill has the potential to impact on South African interests.

Durban Estuary Boom deployment

IMOrg for Preparedness and Response

An Incident Management Organisation (IMOrg) for Preparedness and Response is to be created and enabled according to the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC) Bill guidelines. The function of the IMOrg would be to develop and maintain operational effectiveness of the national system for preparedness and response. It would provide oversight and assess level of preparedness. The IMOrg is chaired by the DoT, with the various ministries, agencies and interested entities forming part of the IM structure, will be members of the IMOrg.

Following the endorsement on 25 October 2016 by the Oceans Economy Ministerial Management Committee, the Interim IMOrg was established as a transitional measure to allow South Africa to maintain the national system for preparedness and response to marine pollution, to assess the level of preparedness and response to marine pollution, and to advise, co-operate and take any other action which may be appropriate in order to respond appropriately to marine pollution in the South African waters.

Plan Activation and Response Mobilisation

The process for responding to an emergency incident would start with the detection of the incident, the relevant vessel owner or offshore installation operator activating its Oil Spill Contingency Plan (OSCP) and notifying SAMSA.

Should a polluter be unable to deal with an incident, it would then be handed over to the national maritime IM structure and the polluter would fulfil a supportive role. The IC will decide under which conditions an incident is escalated.

IMS Roles, Responsibilities and Organisational Arrangements

The South African Unified Command IM structure will be activated to respond to all marine related oil spill incidents where the capability of the first responder is insufficient. Any

organisational response must be aligned and have the ability to interface with the national IM structure.

The IM structure will convene at the Command Post, which is to be established at the closest suitable location to the incident, as directed by the Incident Commander.

Role of the Principal Officer

The Principal Officer (PO) is responsible for:

- Assessing the capability of the responding party;
- Monitoring the effectiveness of the response; and
- Completing the Alert Report/Incident Briefing Form IMS 201, if necessary.

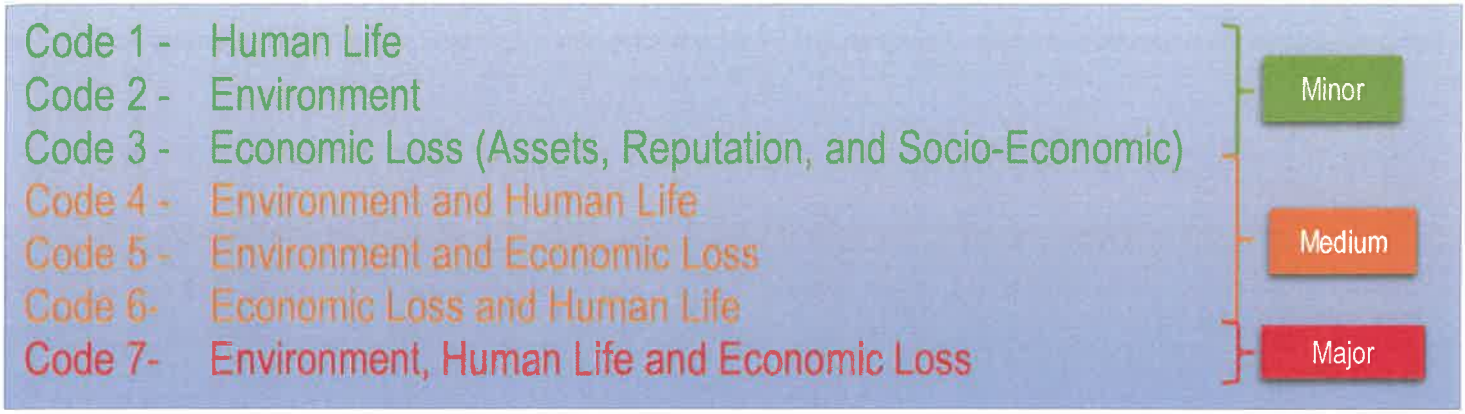
In the case of a tier 1 spill, the PO would make an assessment and through SAMSA notifies the focal points of DoT and other institutions, for notification and recording purposes. The PO would fulfil the role of the on-scene commander. In cases of tier 2 or 3 spills, the PO would recommend to the Director-General (DG): Transport, as the custodian of the plan, for the activation of the NOSCP. As a result, the IM structure will be mobilised for the purpose of emergency response.

Note: The IM structure will respond to a spill in the event there is no incident owner at the time of the notification of a spill.

Role of the Disaster Management Centres

Should the national maritime IM structure not be able to cope with an incident, or a disaster be declared in terms of the Disaster Management Act, 2002, the IM structure would then approach the National Disaster Management Centre (NDMC) to assist in determining the level of co-ordination required from the NDMC and for the latter to provide the required support for the IM structure to deal with the disaster event.

It is important to note that the role that the Provincial Disaster Management Centres (PDMCs) and their respective coastal units will play in this regard. A national declaration does not mean that provincial administrations are exonerated from the incidents. The NDMC assists with national co-ordination of the incident and the provincial and local authorities implements on the ground.



Incident Coding

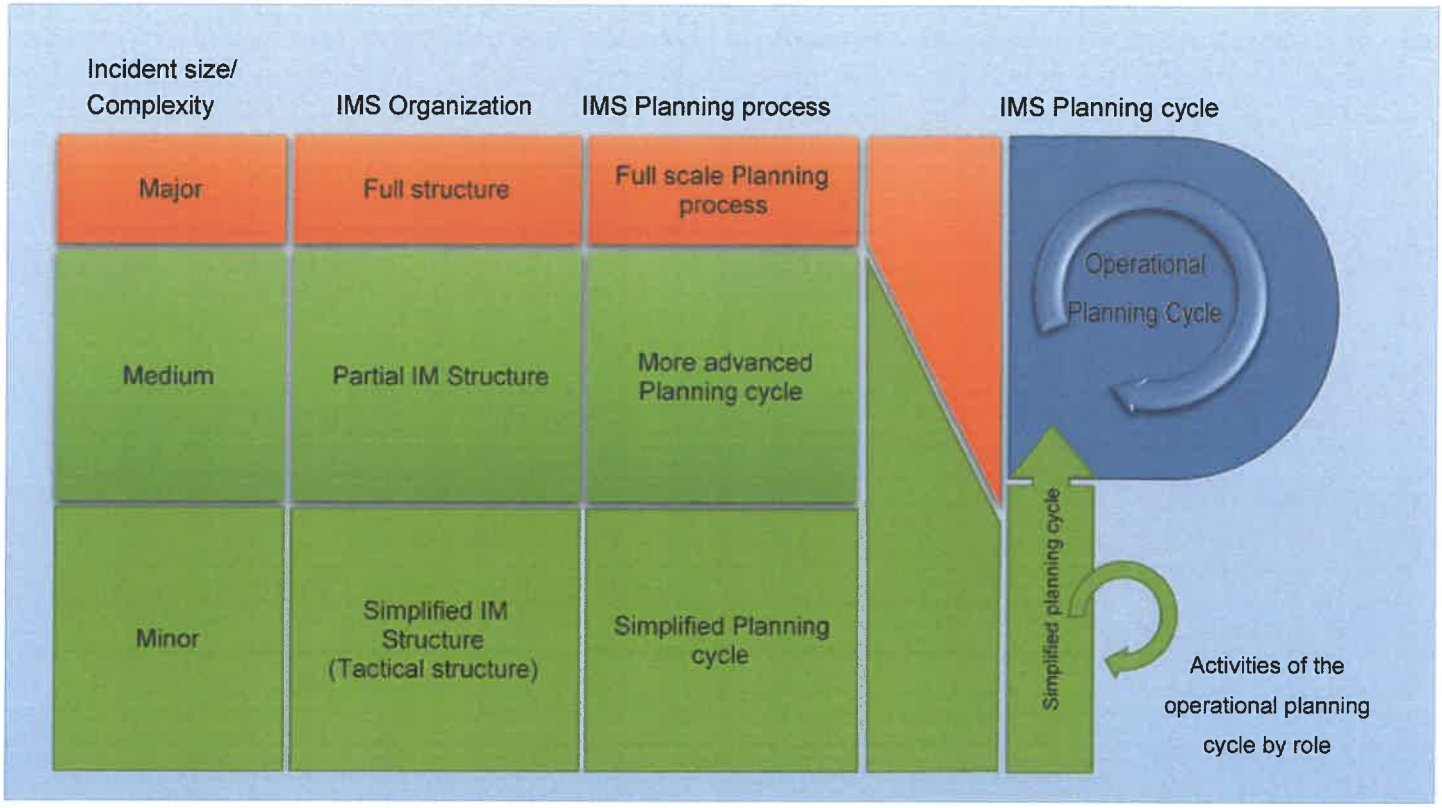
An IMS is a scalable, systematic method for co-ordinating and controlling the wide variety of important activities, resources and response organisations from a central command post. The size and complexity of every incident is different and will vary depending on the severity of the incident. However, the severity of the incident is not the only variable that could be considered. An incident could be characterised by its immediate impact the incident may have. Furthermore, the type of incident can affect who the relevant responders should be and the nature of the overall response. This would then allow for a more coordinated and efficient response while maintaining an overall objectivity of the response.

Purpose of the incident coding

The response to an incident involving an offshore installation (vessel, or structure) requires highly specialised technical personnel and equipment. Mobilisation of resources is expensive and requires extensive logistic arrangements to be initiated. It is for this reason that an incident coding system is developed to specifically identify the appropriate initial response type and scale. The scale of the incident will be reflected in the size of the IM structure that is initially activated. To provide a practical approach to the coding for an emergency incident involving an off-shore installation, three fundamental key areas of risk were selected

. These are:

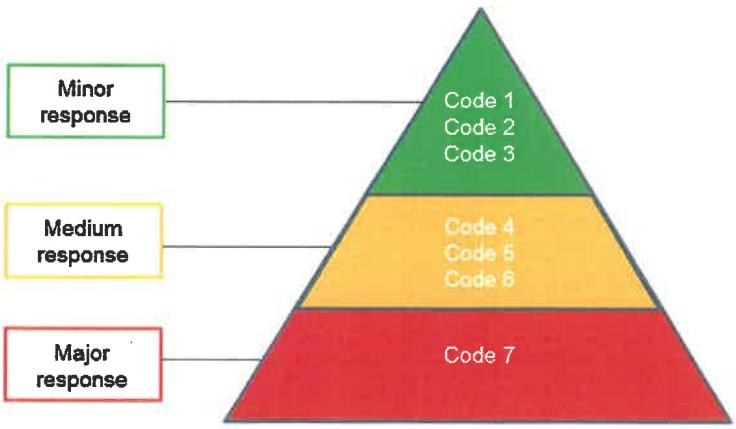
- Human Life
- Environment, and
- Economic Loss (Assets, Reputation, and Socio-Economic)



These were selected on the assumption that the impact would largely be localised and for a response to be based on these three risk areas. However, when an incident occurs, more often than not, multiple codes may be triggered. Therefore, coding for a combination of interactions between these core areas has been developed to better tailor an appropriate response.

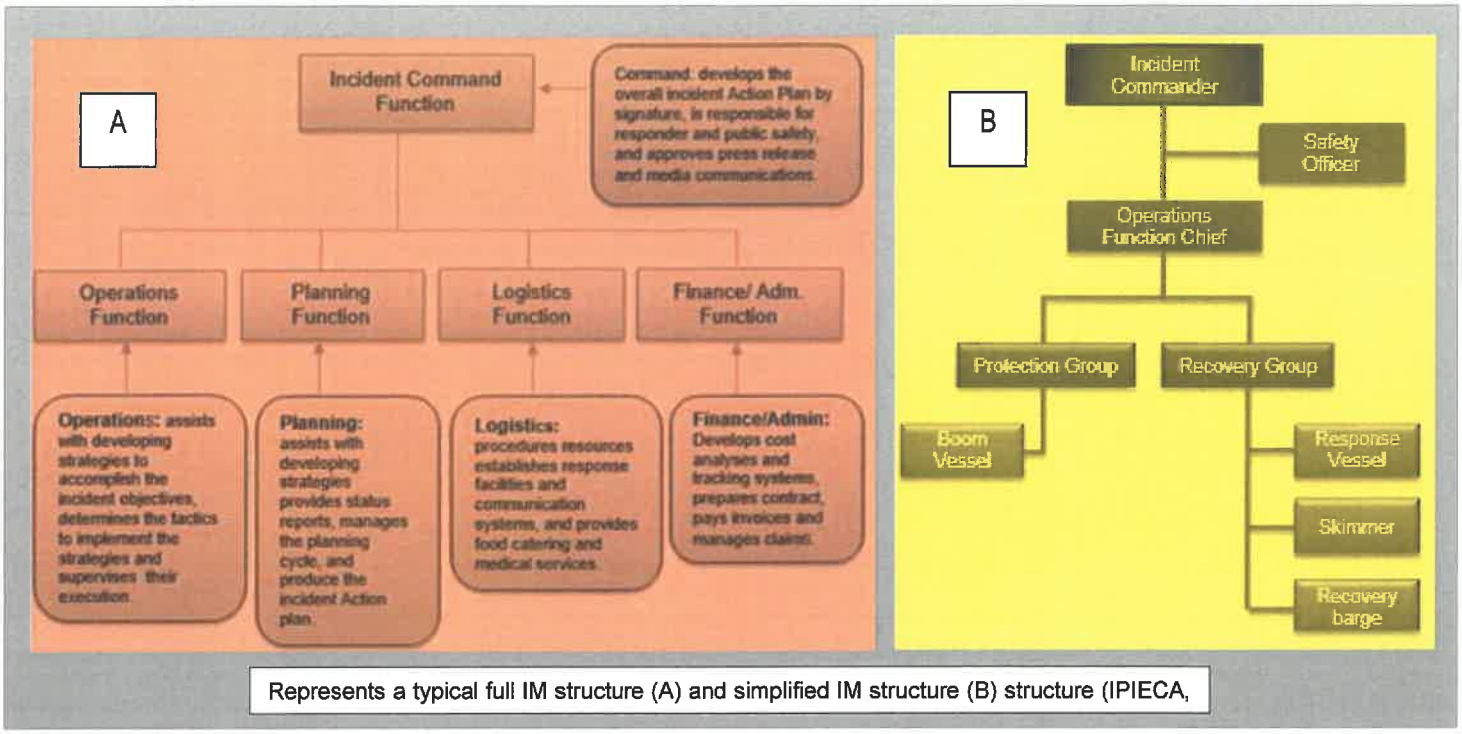
The code reported would assist the Incident Commander in identifying the resources and extent for the initial response required.

An incident involving a single code would require a minor response (in that the resources activated will be very specific to the risk and of a scale considered minor in size). Codes that involve multiple response types would activate a medium response. A major response would trigger three areas of risk and a full IM structure would be activated.



Level of IMS activation

The Incident Commander will be required to activate an IM structure that would be appropriate for the code of emergency which has been reported. The full IM structure will only be activated when a Code 7 incident is triggered. However, regardless of the code triggered, at the time of an incident, the Incident Commander is required to notify all the functional heads of the IM structure to remain on standby until activated, or on completion of the incident.



Represents a typical full IM structure (A) and simplified IM structure (B) structure (IPIECA,

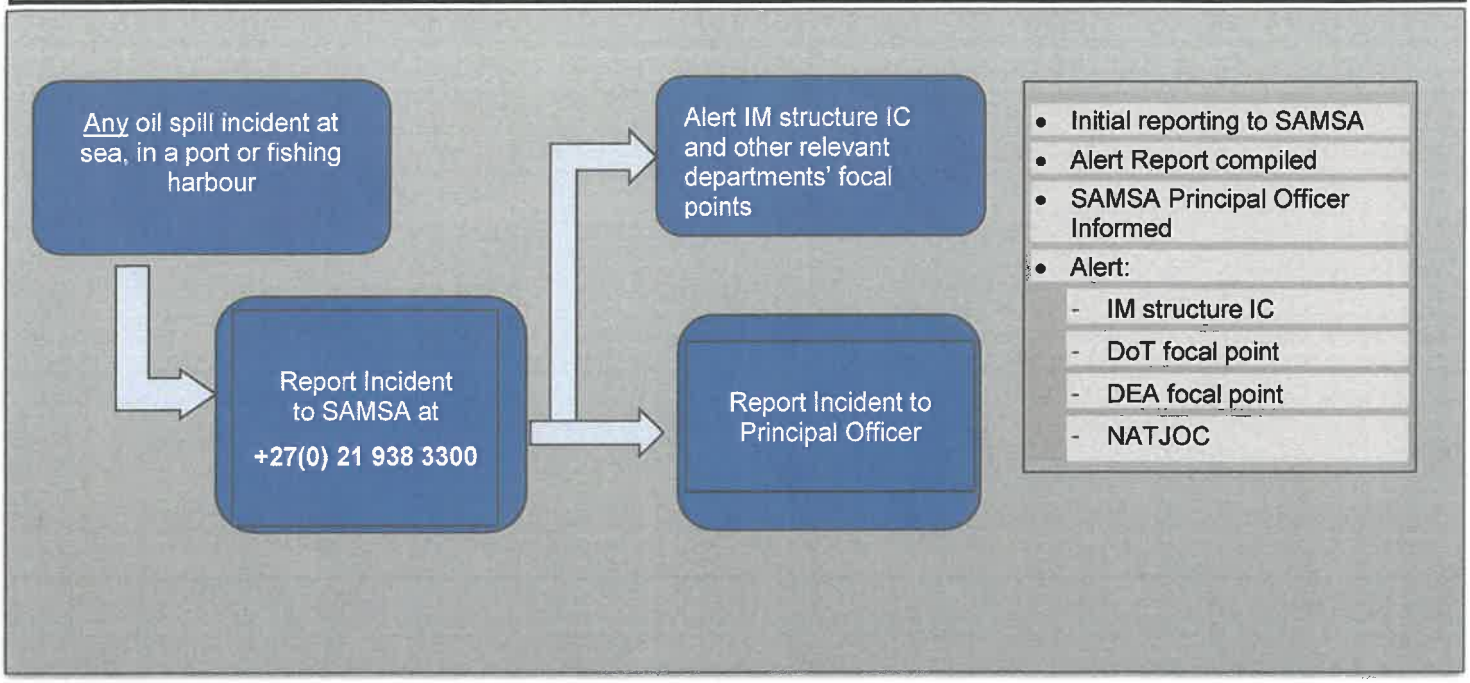
Simplified and full IM structure responses

A simplified IM structure is triggered in situations that do not require an extensive response, but only specialised resources are required. However, depending on the situation, it is possible to scale up or scale down the IM response structure. As the incident demands, the need for additional resources may increase, which would result in the up scaling of the IM structure.

Section 3

Incident Reporting

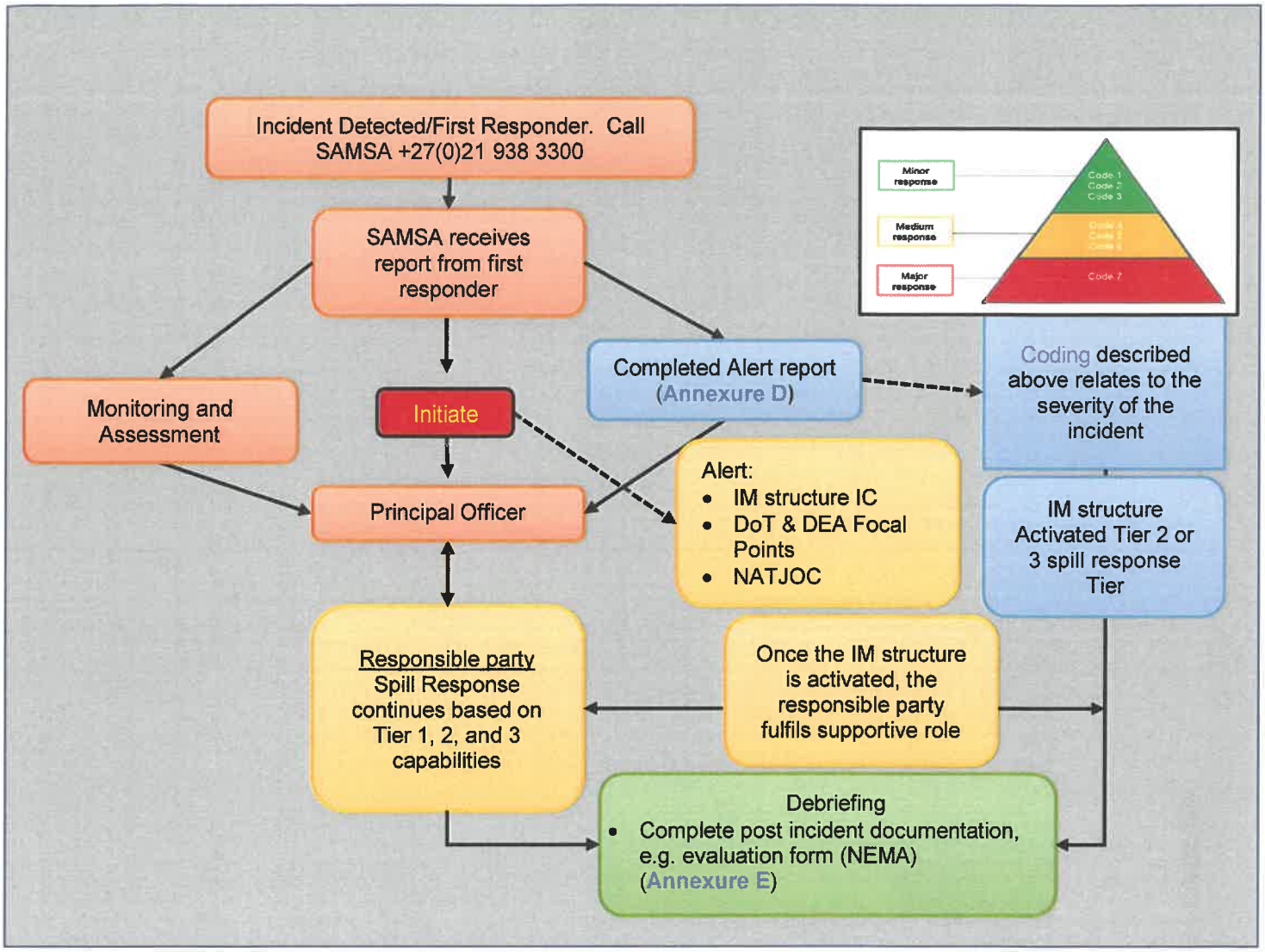
Section 3: Incident Reporting



A Marine Notice addresses the reporting of marine oil spills and shipping incidents, which shall be reported to SAMSA. The initial report may come from any number of sources and be directed to SAMSA. SAMSA would then co-ordinate or advise on the appropriate response. SAMSA will alert the appropriate responders.

As soon as an incident takes place / is observed, or a person receives a report, hears or overhears any communication which indicates a possible incident (whether a spill or a vessel with problems), the information must be transmitted to the Duty Operator at SAMSA.

The initial information received from the rapporteur is to be captured on the Alert Report/Incident Briefing Form IMS 201.



Process following initial reporting

Any oil spill incident at sea, in a port or harbour has to be reported to the SAMSA. The contact detail of, amongst others, the Incident Commander, functional heads of the IM structure and other relevant contact detail are given in **Volume 2** Annexure F.

Any oil spill incident at sea, in a port or fishing harbour has to be reported to as follows. The figure above demonstrates the process that would follow the reporting on an incident. Based on this information, the relevant PO will recommend the notification, or activation of the IM structure.

As soon as the initial report has been received, the PO and functional heads of the IM structure and key stakeholders will be placed on alert and all possible steps will be undertaken to confirm the incident. The DoT would also be informed through its focal point who would need to make the initial report available to its Director-General.

Incident Command Meeting: Joint Gov/Industry exercise, March 2018

Follow-up Reporting

As the nature of the incident escalates and additional information becomes available, at an appropriate time a full report is to be compiled by the IM structure.

Compliance Reporting

The alert notification to SAMSA is not a substitute for the reporting requirements in terms of any other national or provincial legislation e.g. NEMA. The NEMA Control of Incidents Report appears in **Annexure E**.

Command's Mandate

As soon as practicable, after an incident had been reported, an Incident Commander and Deputy Incident Commander will be appointed in terms of the NOSCP. The Incident Commander shall assume the powers, roles and responsibilities as reflected the South African IMS Manual, with the main task to set objectives and priorities of the response efforts and ensure the safety of people.

The Incident Commander shall appoint the Command Staff and General Staff of the IM structure as required according to the scale and complexity of the incident.

Lines of communication

Formal communications follow the lines of authority. However, in informal communication, information concerning the incident or event can be passed horizontally, or vertically within the organization without restriction.

Internal and External Communication

A major marine incident is usually of immediate interest to both local and international media. It is in the IM structure interest to keep the media fully informed and as regularly as

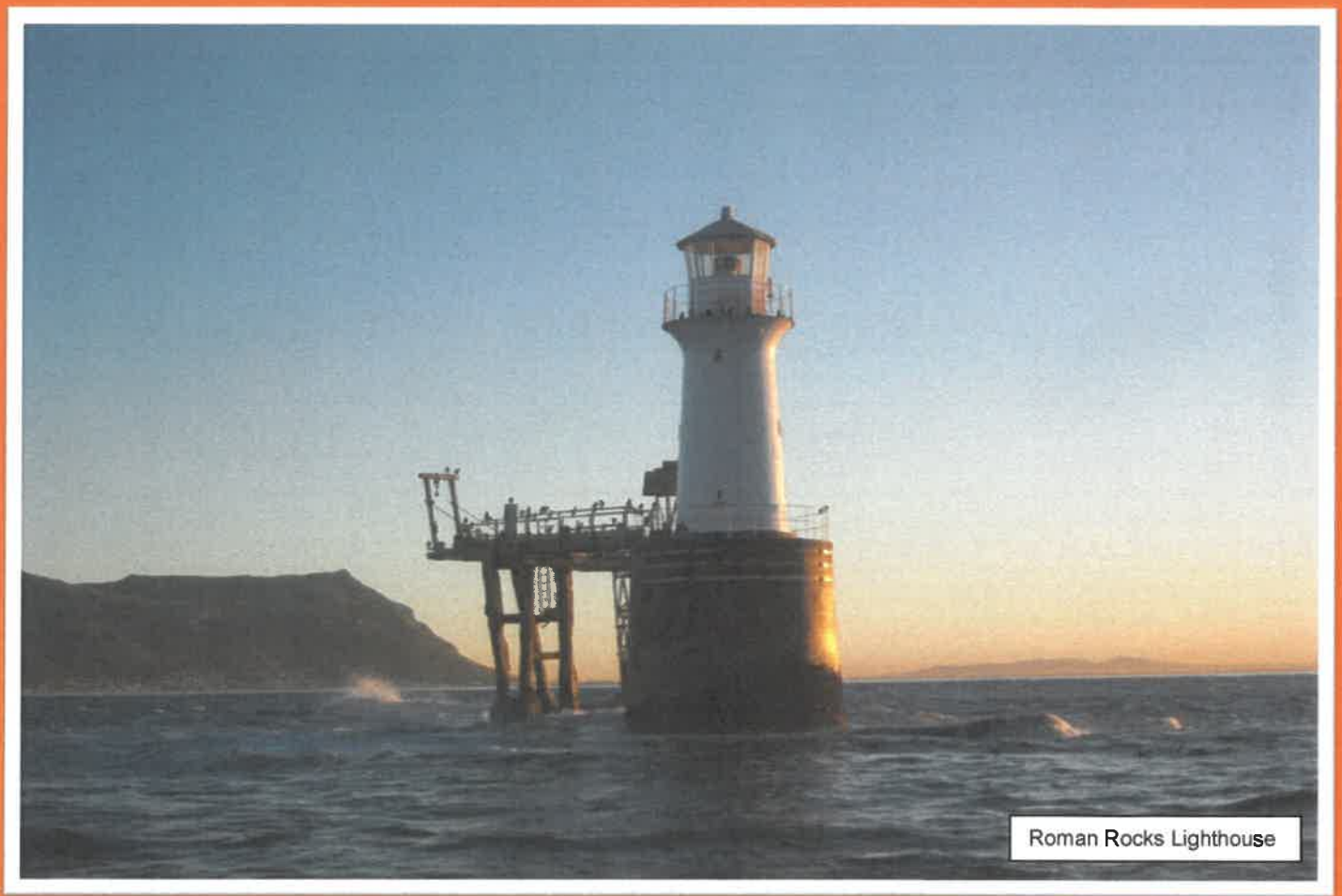
possible, the media should receive reliable information timeously, to avoid the potential of information gaps. These gaps in formation may be inevitably filled by non-official sources, with potential negative consequences for the ongoing operation and personnel involved in it.

During major disasters, Government Communication and Information Systems (GCIS), as part of the Command Staff, should play a leading active role in disseminating information to the media and the public. A communication forum, with a central point of communication, should be established to ensure that all communication protocols and crisis communication issues are well developed and communicated. A media plan and communication strategy should be developed and outline how communication processes will be implemented.

It is the responsibility of the Incident Commander to make information available as soon as possible. Refer to the guidance on the release of public information during incidents.

Section 4

Incident Management System



Roman Rocks Lighthouse

Incident Management Organisation, Roles and Responsibilities

A unified command model is used to manage marine oil spills (see IMS Manual). This is in recognition that an effective response requires a co-ordinated structure that brings together the "Incident Commanders" of all major organisations that have authority and responsibility, while carrying out their own agencies' responsibilities. Unified Command links the responding organisations to the incident and provides a forum for these agencies to make consensus decisions. Under a Unified Command, the various agencies with authority and/or organisations, Industry and non-government responders may blend together throughout the organisation to create an integrated response team.

Although the roles within the IM structure may be filled by different departments or organisations depending on the nature of the incident, the responsibilities remain the same.

Incident Management System (IMS) Principles

The following principles apply to the establishment of the Incident Management System (IMS) in South Africa:

1. An IMS requires that one or more individuals maintain authority over all incident activities. This position is known as the Command function. For small incidents a single person, called the Incident Commander, can typically perform the Command function. For large incidents, the positions of Deputy Incident Commander and Command Staff Officers may be assigned to support the Incident Commander.
2. Once command has been established, the IMS standard operating procedures provide clear rules for the transfer of command to another individual or individuals. The IM structure is characterised by an orderly line of authority, termed the chain of command. The IMS is also characterised by the concept of unity of command which means that every individual has one, and only one designated supervisor to whom that individual reports at the incident scene. These principles clarify reporting relationships and eliminate the confusion that might otherwise be caused by multiple, conflicting directives.
3. A member of the Unified Command must have authority and jurisdiction of the mitigation of the incident.
4. The size of the IMS is scalable and will be adapted to suit the incident. The response structure, its size and composition need to be appropriate to the type and scale of the incident. The scale of the incident is directly linked to the tier and coding of the incident.

For any given incident, the command function is notified as the incident warrants, the command function activates other functional areas.

5. The intent is to develop a response organisation that utilises a structured and flexible process to develop an incident action (response) plan that will address and meet the identified response objectives. Each organisation that is part of the IM structure should implement the IM structure with sufficient, suitably trained human resources to manage a significant incident.
6. Noting that accountability cannot be delegated. An organisation may delegate responsibility to other agencies within the specific function of the IM structure, with the approval of the Incident Commander, to fulfil the designated role. This is to be done by means of best practice processes and standard operating procedures.

Note: Refer to the **IMS Manual** for more information.

Organisational overview of IMS		
IM structure Functions	**Shipping Incidents**	**Oil and Gas Incident**
Incident Command Function	DoT/SAMSA	DoT/SAMSA Industry DMR/PASA
Command Support Staff	Appointed Incident Commander • Media Liaison Officer / Public Information Officer (MLO/PIO) • Inter-agency Liaison Officer / Liaison Officer (ILO/LOFR) • Legal Officer • Specialised support: SAPS	Appointed Incident Commander • Media Liaison Officer / Public Information Officer (MLO/PIO) • Inter-agency Liaison Officer / Liaison Officer (ILO/LOFR) • Legal Officer • Specialised support: SAPS
Operations Function	DoT/SAMSA Industry (Vessel owners) Salvors DEA	DoT/SAMSA DEA NDMC Industry
Planning Function	DEA DoT/SAMSA Industry (Vessel owners) Salvors Ship's Agent	DEA NDMC Industry
Logistics Function	NDMC Industry (Vessel owners) Local Government SARS	NDMC Industry SARS
Finance & Administration Function	P&I Club Industry (Ship Owners) Ship's Agent	DMR/PASA NDMC Industry DoT

Span of Control

Maintaining adequate span of control throughout the IM structure is very important, especially at incidents where safety and accountability are a top priority. Span of control pertains to the number of individuals or resources that one supervisor can manage effectively during an incident. Supervisors must be able to adequately supervise and control their subordinates, as well as communicate with and manage all resources under their supervision. Effective span of control on incidents may vary from three to seven, and a ratio of one supervisor to five reporting elements is recommended.

Transfer of Command

Transfer of command moves the responsibility for command from one Incident Commander to another. This must include a transfer of command briefing (which may be oral, written, or both).

Command is transferred when:

- A more qualified Incident Commander arrives;
- A jurisdiction or agency is legally required to take command;
- Incident complexity changes; and
- The current Incident Commander needs to rest.

Shipping Incident Management Structure

The IM structure for a shipping incident response as illustrated in the IMS Manual.

Oil and Gas Incident Management Structure

The IM structure for a large-scale Oil and Gas incident response as illustrated in the IMS Manual.

Standard Operating Procedures

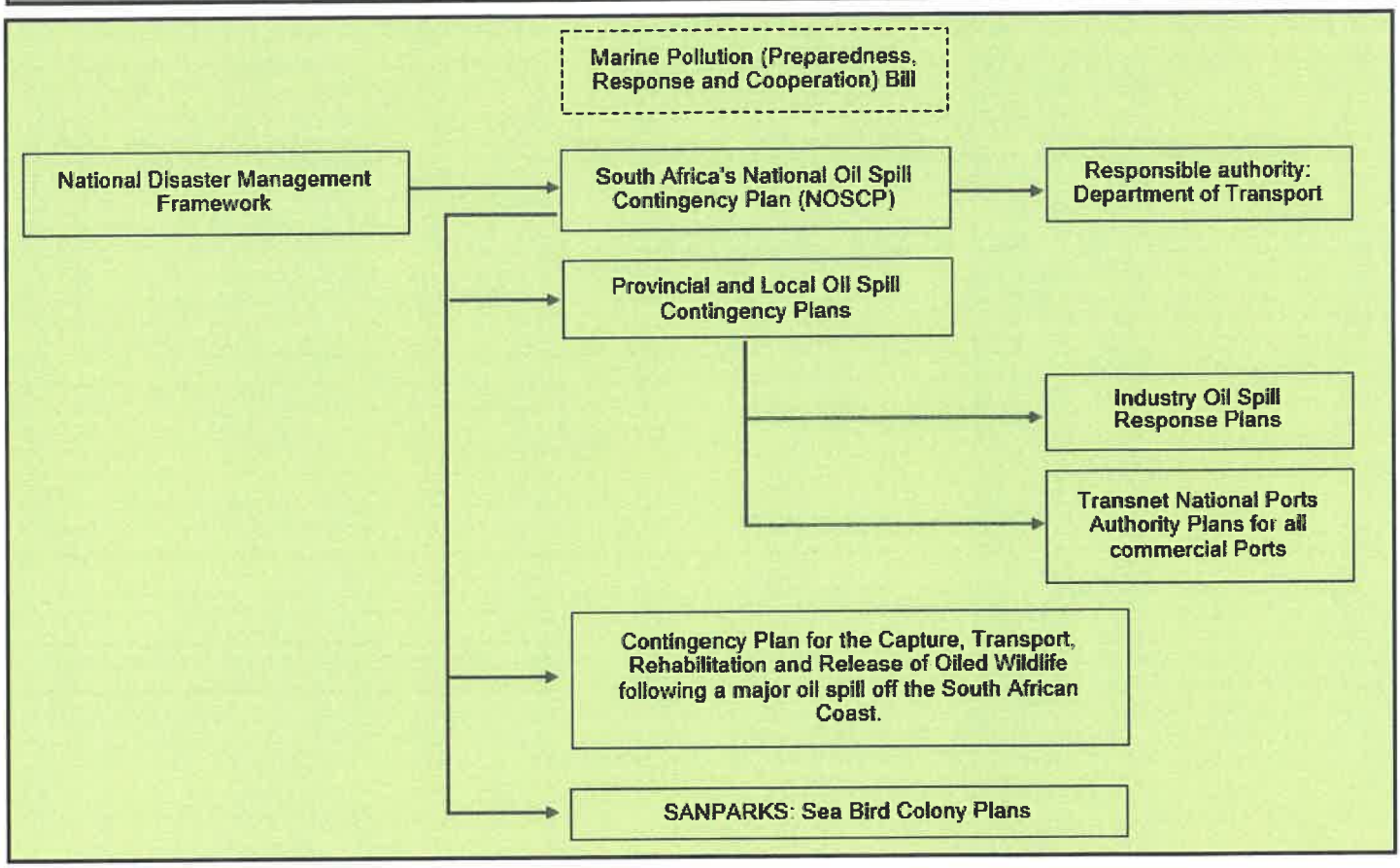
For the relevant Standard Operating Guidelines (SOG), refer to the IMS Manual.

Section 5

Interfacing with other plans

MV Phoenix - Durban

Section 5: Interfacing with other plans



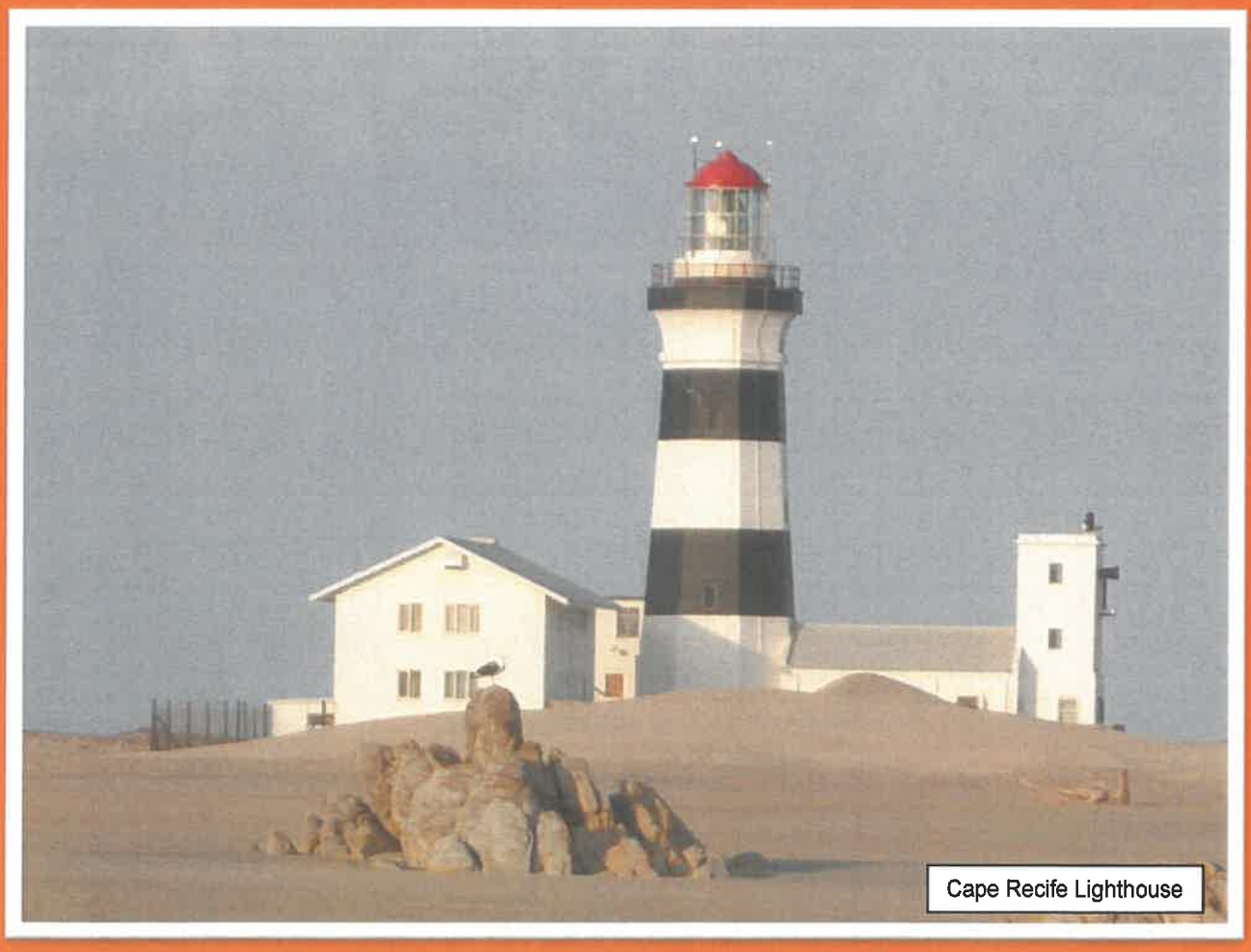
The local and industry oil spill response plans must interface and align with the national response plan and provide detail with regard to specific facility/zonal response. Environmental response plans will interface with the NOSCP. These plans would form a basis for an environmental response.

International and regional preparedness and response co-operation agreements

The DoT shall consider entering into Bilateral or Multilateral Agreements with any country, or countries for the purpose of sharing of pollution response measures and equipment and the combating of oil spills.

Section 6

Maintenance and Review



Cape Recife Lighthouse

Section 6: Maintenance and Review

The DoT is responsible for the implementation and the controlled maintenance and revision of the NOSCP.

The DoT shall establish an Incident Management Organisation (IMOrg) for Preparedness and Response which would be responsible for the implementation and monitoring of this Plan, as well as any other maritime contingency plans, e.g. a Hazardous and Noxious Substance Contingency (HNS) Plan, etc.

After each incident (or drill) in which the IM structure is activated, there shall be a need for a Post-Incident Evaluation which will assess:

- The effectiveness of the measures taken in combating or mitigating the adverse impact of the incident;
- The sufficiency of the human and physical resources in the response system;
- The ease of co-ordination within the system;
- Ease and smoothness of internal and external communications; and
- Performance of follow-up roles by responsible national, bi-lateral and multinational institutions.

The above must be followed by a review of the IM structure and procedure documents to incorporate lessons learnt. These lessons learnt shall form the basis for:

- The review of the NOSCP;
- Proposals on gaps in national legislation and regulations; and
- Input to international conventions.

After each incident, the IM structure shall prepare a report to the IMOrg on lessons learned and challenges encountered. These would then trigger the need to review the NOSCP.

Adjustments would be made after an incident, if required. The major review of the Plan shall be done every five (5) years. Hyperlinks within the plan will be tested and reviewed every 6 months.

Section 7

Reference Material

Section 7: Reference Material

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transport

Department:
Transport
REPUBLIC OF SOUTH AFRICA

SAMSA
SOUTH AFRICAN
MARITIME SAFETY AUTHORITY

South Africa's

National Oil Spill Contingency Plan (NOSCP)

Maritime

Volume 2

Response Strategies

Date	2019
Amendment	0

Incident Reporting

Report any marine oil spill related incident to:
Tel: +27(0)21 938 3300

Privacy Statement

This document was written for the purposes of marine oil spill response. Any information contained in this document, including names, addresses, contact details may not be used for any other purpose, or disclosed to any third party, unless prior written consent from the Department of Transport is obtained.

Volume 1 **Table of Contents**

Definitions

Agency	A division of government with a specific function, or a non-governmental organisation.
Assisting Agency	An agency or organisation providing personnel, services, or other resources to the agency with direct responsibility for incident management.
Blowout	The loss of well control from drilling, completion, production wells, well intervention or work-over.
Coastal Environment	The environment within the coastal zone.
Coastal Waters	(a) any wetland in the coastal zone, and includes- (i) land adjacent to coastal waters that is regularly or periodically inundated by water, salt marshes, mangrove areas, inter-tidal sand and mud flats, marshes, and minor coastal streams regardless of whether they are of a saline, freshwater or brackish nature, and (ii) the water, the subsoil and substrata beneath, and bed and banks of, any such wetland.
Coastal Zone	The area comprising coastal public property, the coastal protection zone, coastal access land and coastal protected areas, the seashore, coastal waters and the exclusive economic zone and includes any aspects of the environment on, in, under and above such area.
Command	The act of directing, ordering, or controlling, by virtue of explicit statutory, regulatory or delegated authority.
Convention	The International Convention of Civil Liability for Oil Pollution Damage, signed in Brussels on 29 November 1969 and published for general information under Gazette Notice No. 58 of 1978 in the Government Gazette No. 5867 of 27 January 1978, and includes any amendments thereof and additions thereto signed, ratified or acceded to by the Republic of South Africa.
Complex Incident	Two or more individual incidents located in the same general area that are assigned to a single Incident Commander or to Unified Command.
Co-operating Agency	An agency supplying assistance other than direct operational or support functions or resources to the incident management effort

Co-ordination	The process of systematically analysing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra- or interagency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc.
DEA local coastal oil spill contingency plans	Plans compiled and maintained by DoT and DEA which set out the actions to be taken when there is a threat of oil impacting on the shoreline, or where an impact has occurred. The coastline from the Orange River mouth to the Mozambique border is divided into zones, each of which has its own specific local coastal contingency plan.
Delegation of Authority	A statement provided to the Incident Commander by the Agency Executive delegating authority and assigning responsibility. The Delegation of Authority can include objectives, priorities, expectations, constraints, and other considerations or guidelines as needed. Many agencies require written Delegation of Authority to be given to Incident Commanders prior to their assuming command on larger incidents.
Disaster	A progressive or sudden, widespread or localised, natural or human-caused occurrence which (a) causes or threatens to cause (i) death, injury or disease; (ii) damage to property, infrastructure or the environment; or (iii) significant disruption of the life of a community; and (b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources;
Disaster Management disaster risk reduction	Either a policy goal or objective, and the strategic and instrumental measures employed for: (a) anticipating future disaster risk; (b) reducing existing exposure, hazard or vulnerability; and (c) improving resilience;
Disaster Management Head	The individual within each political subdivision that has coordination responsibility for jurisdictional disaster management.

District Municipality	A municipality that has municipal executive and legislative authority in an area that includes more than one municipality, and which is described in section 155(1) of the Constitution as a category C municipality.
Ecosystem	A system of relationships between animals and plants and their environment.
EEZ	Means the sea beyond the territorial waters, but within a distance of two hundred nautical miles from the coast or the baselines. The United Nations Convention on the Law of the Sea (1982) and the Maritime Zones Act (No. 15 of 1994) are to indicate the exact outline of the "base line".
Emergency	Means a serious, unexpected, and often dangerous situation requiring immediate action.
Emergency preparedness	a) A state of readiness which enables organs of state and other institutions involved in disaster management, the private sector, communities and individuals to mobilise, organise and provide relief measures to deal with an impending or current disaster or the effects of a disaster; and b) The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current hazard events or conditions.
Environment	The surroundings within which humans exist and that are made up of: (a) the land, water and atmosphere of the earth, (b) micro-organisms, plant and animal life, (c) any part or combination of (i) and (ii) and the interrelationships among and between them, and (d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.
Hazards	Defined as a potential source of human injury, damage to the environment, damage to property, or a combination of these potential sources of harm.
Hazardous event	Defined as an incident which occurs when a hazard is realised.

Incident	An occurrence or event, natural or human-caused that requires an emergency response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, hazardous materials spills, weather-related disasters, medical emergencies, and other occurrences requiring an emergency response.
Likelihood	Chance of something happening.
Local Municipality	A municipality as contemplated in section 2 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000).
Minister	In this document The Minister of Transport unless otherwise defined.
National	Pertaining to the National Government of the Republic of South Africa.
National Disaster Management Centre	The National Disaster Management Centre established by section 8(1) of the Disaster Management Act, 2003 (Act No. 57 of 2003).
National Incident Command System	A system mandated by the Disaster Management Act that provides a consistent nationwide approach for national, provincial, and municipal governments; the private sector; and non-governmental organisations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.
Offshore installation	A facility situated wholly or partly within the prohibited area and which is used for the transfer of harmful substances from a ship or tanker to a point on land or from a point of land to a ship or tanker or from a bunkering vessel to a ship or a tanker, and includes any exploration or production platform situated within the prohibited area and used in prospecting for the mining of natural oil.
Organ of State	A national, provincial or municipal organ of state; any organ of state referred to in section 239 of the Constitution of the Republic of South Africa, 1996.
Owner of a ship	Any person to whom a ship or a share in a ship belongs.
Oil	Petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products.
P&I Club	Representatives of the ship owner's protection and indemnity insurance.
Pollution damage	(a) Loss or damage outside the ship by contamination resulting from the escape or discharge of bunker oil from the ship; (b) Further loss or damage caused by preventive measures.

Port	A place, whether proclaimed a public harbour or not, and whether natural or artificial, to which ships may resort for shelter or to load or discharge goods or persons.
Prohibited area	Internal waters, the territorial waters and the EEZ and, in relation to an offshore installation, includes the sea within the limits of the continental shelf.
Response	The activities that address the short-term, direct effects of an incident. (a) Response includes immediate actions to save lives, protect property, and meet basic human needs. (b) Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavourable outcomes. (c) As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; on-going public health and agricultural surveillance and testing processes; immunisations, isolation, or quarantine.
Risk	A combination of the likelihood of the occurrence of harm and the severity of that harm.
Responsible Party	Any person or organisation who has a responsibility for taking any action in the event of an incident.
Role players	Persons and/or organisations who are considered to have a role to play in preventing and combating oil pollution of the sea and coast.
Stakeholders	Persons who may have an interest in any of the activities being undertaken in relation to the incident or who may in any way be impacted by the incident.

Sea	(a) The high seas (b) All coastal waters, and (c) Land regularly or permanently submerged by sea water, including- **(i)** The bed, subsoil and substrata beneath those waters and land flooded by sea water which subsequently becomes part of the bed of coastal waters, including the substrata beneath such land.
Territorial sea"	The sea up to a limit not exceeding 12 nautical miles, measured from the baselines of the country as determined in accordance with The Convention on the Law of the Sea (UNCLOS) and Maritime Zone Act, 1994 (Act no. 15 of 1994).
Tanker	Any seagoing vessel whatsoever, actually carrying oil in bulk as cargo and in respect of which the provisions of the Convention are applicable.
Terminal	Any shore-based facility which is used for the transfer of liquid substances from ship to shore or from shore to ship and includes the associated bulk storage tanks.
Tiers 1, 2 and 3	Categories of response to an incident which require a local, national or international response, with Tier 1 being the lowest category of response.
Vessel	In the context of this Plan, means any ship, tanker or offshore installation that could in the event of an incident, cause or threaten to cause pollution of the marine environment by a harmful substance.
Wreck	Includes any flotsam, jetsam, lagan or derelict, any portion of a ship or aircraft lost, abandoned, stranded or in distress, any portion of the cargo, stores or equipment of any such ship or aircraft and any portion of the personal property on board such ship or aircraft when it was lost, abandoned, stranded or in distress.

Abbreviations

DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DoT	Department of Transport
GCIS	Government Communication and Information System
IC	Incident Commander
ICASA	Independent Communications Authority of South Africa
ICP	Incident Command Post
ICS	Incident Command System
ILO/LOF	Inter-agency Liaison Officer/Liaison Officer
IMS	Incident Management System
JIC	Joint Information Centre
MDDA	Media Development and Diversity Agency
MLO/PIO	Media Liaison Officer /Public Information Officer
Morg	Incident Management Organisation
MOUs	Memoranda of Understanding (
NDMC	National Disaster Management Centre
OPASA	Offshore Petroleum Association of South Africa
OPRC	Oil Pollution Preparedness, Response and Co-operation
OSRL	Oil Spill Response Limited
PASA	Petroleum Agency South Africa
PO	Principal Officer, SAMSA
PPE	Personal Protective Equipment
SAMSA	South African Maritime Safety Authority
SANCCOB	South African National Foundation for the Conservation of Coastal Birds
SANHO	South African Hydrographic Office
SAPIA	South African Petroleum Industry Association
SAPS	South African Police Service
SARS	South African Revenue Service
SAWS	South African Weather Service
SSDI	Subsea Dispersant Injection
TNPA	Transnet National Ports Authority
VIP	Very Important Person

Section 2.1

Preparedness

2.1 Preparedness

Places of Refuge

A Place of Refuge is a place where a ship in need of assistance can take action to enable it to stabilize its condition (including the status of cargo), thereby protecting human life and the environment and reduce the hazards to navigation in line with the priorities advocated in this plan.

A place of refuge shall be provided by the South African Maritime Safety Authority (SAMSA) when available, necessary and appropriate to protect:

(a) The safety of the ship's crew, passengers and salvage crews;

(b) The safety of human life and health within the immediate vicinity of the distressed vessel;

(c) Marine, coastal and ecological resources and environments (including sensitive installations) for pollution prevention; and

(d) The safety of the ship and its cargo.

Since no two incidents are similar, each request is considered on its merits. SAMSA will consider the IMO Resolution A. 929 (23) and the following policy principles, namely:

(a) The preferred place of refuge is alongside a quay in a South African port. This is subject to the approval of the Transnet National Ports Authority (TNPA). Consultation between SAMSA, the Department of Environmental Affairs (DEA) and the Harbour Master of the relevant port is a requirement for a ship that seeks refuge in a port;

alternatively, practice has shown that places of refuge may be limited to Algoa Bay, False Bay and on occasion, St Helena Bay and Saldanha Bay;

(b) There will be consultation between SAMSA, the Department of Transport (DoT), DEA and TNPA as to the best place to moor the ship taking into account the environmental impact that might result from her sinking or grounding if outside of the port;

(c) Disclosure of all the relevant facts is expected from the owner/operator. Failure by the owner/operator to disclose all the facts or to participate in an open manner with SAMSA and any other relevant authority may produce a negative response to the request for a place of refuge;

(d) Insurance cover is a prerequisite and a guarantee to cover losses and costs in the event of a pollution incident or for a wreck removal may be required, or as determined by DoT should a vessel not be suitably insured;

(e) If the vessel has suffered structural damage or failure, SAMSA shall require the owner to enter into a salvage agreement with a local salvor to deliver the vessel to a safe place as determined by the Incident Command. The owner/operator will be expected to place on standby a suitably powered salvage tug with the appropriate towing gear and expertise; and

(f) DoT has the authority to order the removal of the distressed ship at any time it considers necessary.

Tiered Preparedness

The evolving model and approach to tiering has been incorporated into the NOSCP. The Tier "wheel" diagram reflects the current capability within South Africa commensurate with the activity level and the risk. It shall be used as a guide to:

- Industry in the development of individual specific response plans;
- The IMS structure for the development of Action Plans during an incident.

The descriptions of the Tier 1, 2 and 3 provisions for a response are tabulated below.

The tiering is an indication of the resource capability to mitigate the impacts of the spill. This should ideally be linked to the frequency and impact of the identified scenarios which form the basis for this plan and for local /site-based plans. In all cases, if the response is deemed insufficient, the IMS structure shall mobilise resources at the expense of the responsible party, using the wheel to guide the expectations in terms of response preparedness. The information reflected on the wheel is an indication only and must be verified by any party preparing their own plans.

The detailed information for each of the 15 capabilities, can be found on the Inventory of Assets and the National Oil Spill Response Dashboard.

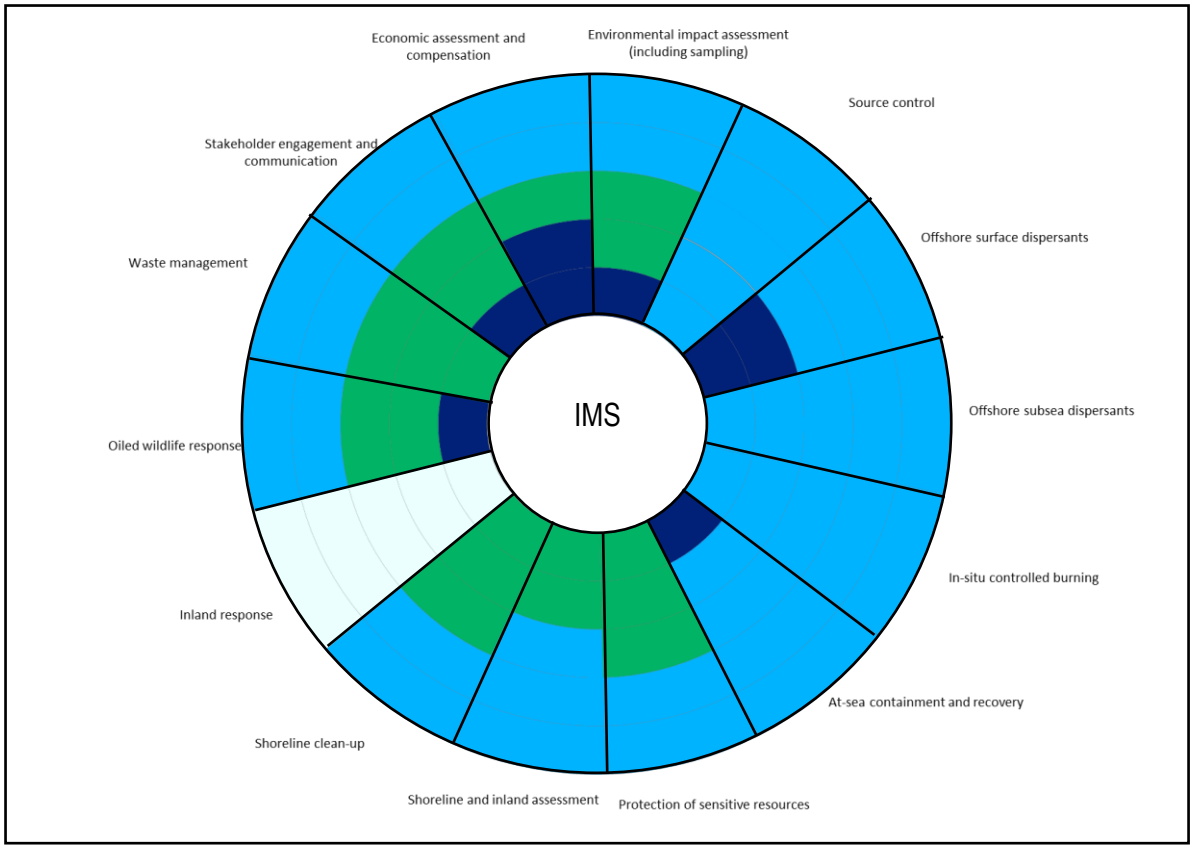


Table 1. Tiered provisions for response

Tier 1 Means: Own resources	Tier 2 Means: Access to 3rd party resources	Tier 3 Means: Access to international resources
Tier 1 expectations	**Tier 2 expectations**	**Tier 3 expectations**
Local authorities, Operators, Ports and Oil Facilities shall ensure they have suitable Tier 1 response resources commensurate with the risk of environmental or economic impact of their activities and sufficiently extend for a period until either Tier 2 or Tier 3 resources and support can be mobilised.	The available Tier 2 response equipment can be found here Inventory of Assets and the National Oil Spill Response Dashboard.	Operators engaged in oil exploration and production activities shall demonstrate access to a Tier 3 provider in terms of their specific oil spill contingency plan.

Table 2. Tiered response based on responsibility and resources required

Tier 1 resources		
Responders	**Equipment**	**Additional support**
Trained response staff on-site and available for emergencies in addition to their normal duties. Local contractors trained in oil spill response	On-site or locally available arrangements in place for rapid and effective mobilization. Amount and type are commensurate with risk, including location factors (e.g. weather, seasonality or logistical constraints due to remote geographies).	Some elements of Tier 1 capability may not be kept permanently onsite, but are readily available at the time of need, such as: • Non-specialized equipment such as waste skips, storage trucks, personnel transport, etc.

Responders	Equipment	Additional support
	Deployment times and methodologies are often predetermined. Supporting logistics provided.	• Support/infrastructure elements such as additional security, accommodations, etc. Technical advice and/or specialised resources.

Tier 2 resources		
Responders	**Equipment**	**Additional support**
Dedicated response staff and additional responders. Locally-sourced workforce may be supervised by the Tier 2 provider.	Tier 1 resources used to mount initial response and industry's response toolbox, including: • Dispersant capabilities • Offshore containment and recovery equipment • Protection booms • Shoreline and inland clean-up equipment • Recovered oil storage capabilities. Amount and type appropriate for potential scenarios.	Designated oil spill response cooperatives. Specialised Tier 3 services. Cooperation at the local/regional government level. Network of additional responders.

Tier 3 resources		
Responders	**Equipment**	**Additional support**
Dedicated response staff equipped with specialised skills.	Tier 1 and Tier 2 resources used to mount an initial response and industry's response toolbox, including:	Dedicated industry Tier 3 response centres. Governmental or cooperative Tier 3 capabilities.

Responders	Equipment	Additional support
Tier 3 responders integrate with local and Tier 2 responders at all levels, including the incident management structure.	• High-volume aerial and subsea dispersant capabilities • Large-scale containment and recovery equipment • Protection booms • In-situ burning capabilities • Specialised shoreline and inland clean-up equipment • Logistics capabilities. Amount and type appropriate for potential scenarios	Network of additional expert responders. International cooperation

Training

Each organisation with specific responsibilities in terms of this Plan shall ensure that personnel are trained to mount a credible and effective response to a pollution incident.

IMS Training

All role players must be Incident Management System (IMS) (or equivalent) competent. The extent of competence is dependent on the role to be assigned in the IMS structure.

Training Course	**Personnel to be trained**
IMS 100: Introduction	Every person that would be playing a role in any of the response functions, including the Command- and General staff, shall undergo this training. IMS 100 is a pre-requisite for all continued IMS training courses
IMS 200: Initial Actions	Command and General staff shall undergo this training, including Functional Heads, Deputies and Heads
Advanced: IMS 300-400	The Incident Commander, Functional Heads, Deputies and Heads Role shall undergo role specific training

Handling of oil spill training

Competence in the handling of oil spills in particular is also required. The three levels of such training are:

Level 1 & 2: The focus is on the requirements of IMS structure personnel designated sub division Operations heads, e.g. shore logistics officers and area controllers responsible for the preparation of contingency and response plans and the management and conduct of effective spill response operations and associated logistics, administrative and financial tasks.

Level 3: The focus of training is on the requirements for members of the IMS structure in the Head Functional Head for Planning and Operations roles responsible for high level decision making.

Note:

1. Shipping and Operators stakeholders shall ensure adequate investment in the training and exercising of their personnel as prescribed
2. Each organisation shall carry its own training cost

Refer to the relevant South African National Authority for further information.

Exercises

Exercises are used to test the competence of role players and validate the effectiveness of the plan. Real incidents are not a substitute for exercises.

For the purposes of the plan, exercises can take different forms which assist in developing readiness through learning, developing relationships between role players and identifying improvements to the plan where necessary.

Table 3. Recommended exercise frequency

	Tier 1	Tier 2	Tier 3
Drills	12 months	24 months	36 months
Table Top exercises	12 months	24 months	36 months
Functional exercises	24 months	36 months	48 months
Full-scale exercises	N/A	N/A	60 months[1]

[1] Exercise to escalate from Tier 1, Tier 2 and then Tier 3

The colour yellow indicates the maximum permissible time within which at least one drill of the listed exercises should have taken place. However, depending on available resources the exercises may follow the average or lower scale which is green and orange fields respectively.

Note: Local contingency and site-specific contingency plan shall follow a similar minimum exercise frequency.

Drills	A drill is a coordinated, supervised activity usually employed to validate a specific function or capability in a single organisation or agency. Drills are commonly used to provide training on new equipment, validate procedures, or practice and maintain current skills. For example, a drill may be used to test the notification and alert procedures within an oil spill contingency plan. A drill is useful as a stand-alone tool, such as to test or verify a tactical booming plan to protect a sensitive shoreline resource. However, a series of drills can be used as building blocks to prepare several organisations to collaborate in a full-scale exercise.
Tabletop exercises	Tabletop exercises involve discussion of simulated scenarios by key personnel in an informal setting. They are facilitated activities, used to build competence and confidence in the implementation of oil spill contingency plans and procedures. Tabletop exercises can range from basic to complex. In a basic tabletop exercise, the scenario is presented and remains constant. Players apply their knowledge and skills to a list of problems presented by the facilitator; problems are discussed as a group; and resolution is reached and documented for later analysis. In more advanced tabletop exercises, the scenario advances as players receive pre-scripted messages. A facilitator usually introduces problems one at a time in the form of a written message, simulated telephone call, multimedia presentation or other means. Players discuss the issues raised by each problem, referencing established authorities, plans and procedures for guidance. Player decisions are incorporated as the scenario continues to unfold.

Functional exercises	Functional exercises are designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions. They are typically focused on exercising plans, policies, procedures, and staff members involved in management, direction, command and control functions. An exercise scenario with event updates drives activity, typically at the management level. A functional exercise is conducted in a realistic, real-time environment; movement of personnel and equipment is usually simulated. Functional exercise controllers typically ensure participant activity remains within predefined boundaries and that exercise objectives are accomplished. Simulators (i.e. role-players) can inject scenario updates and developments to mimic real events.
Full-scale exercises	Full-scale exercises are typically the most complex and resource-intensive type of exercise. They may involve multiple agencies, organisations and jurisdictions, and can validate many facets of preparedness. These exercises may be held to test plans and procedures across the breadth of an organisation's crisis, emergency response and oil spill contingency arrangements. They can involve national capability and regional or international support, i.e. trans-boundary response issues. They often include many players operating under cooperative incident management systems. In a full-scale exercise, an exercise scenario with injects (event updates) drives activity at the operational level. Full-scale exercises are usually conducted in a real-time, stressful environment that is intended to mirror a real incident. Personnel and resources may be mobilized and deployed. The full-scale exercise simulates reality by presenting complex and realistic problems that require critical thinking, rapid problem solving and effective responses by trained personnel. The level of support needed to prepare for, and conduct, a full-scale exercise is greater than that needed for other types of exercise. The exercise site is usually large and site logistics requires close monitoring. Safety issues, particularly regarding the use of oil spill combating equipment, must be monitored.

	Throughout the duration of the exercise, a number of activities can occur simultaneously. The guiding principles introduced in this document must be borne in mind when considering the inclusion of a full-scale exercise within a programme. Care should be taken not to tackle complex exercises until personnel are sufficiently experienced and competent. Furthermore, too many activities, locations and participants can over-complicate an exercise and may be detrimental. A full-scale exercise is usually considered as suitable for the culmination of an exercise programme's cycle or a tool for mature organisations to periodically verify overall response capability.

Monitoring of Completed Exercises

The Incident Management Organisation (IMOrg) on Preparedness and Response would ensure that there is an updated database of all relevant exercises in place**.** DEA is thus assigned this function in terms of this Plan to maintain a database /dashboard of all relevant exercises in the oil and gas maritime sectors in partnership with DoT and:

- DoT / SAMSA
- Offshore Petroleum Association of South Africa (OPASA)
- South African Police Service (SAPS)
- South African Petroleum Industry Association (SAPIA)
- Petroleum Agency South Africa (PASA)
- Disaster Management

The exercises for this Plan shall be rotated among the different coastal provinces to test the capabilities of the different local/regional role players.

The IMOrg shall determine the minimum number of drills and exercises required to be undertaken within a particular financial year.

Memoranda of understanding between Government Departments

Any Department is able to conclude any memorandum of understanding with any institution or organisation with regard to oil spill response or any other related service. However, any memoranda of understanding (MOUs) to be entered into by the DoT, DEA, SAMSA, the Department of Mineral Resources (DMR), PASA, OPASA, PetroSA, South African National Foundation for the Conservation of Coastal Birds (SANCCOB), SAPIA, the South African Revenue Service (SARS), Oil Spill Response Limited (OSRL), or any other organisation for the importing of oil spill combating resources during an incidents shall be considered for the purposes of expediency and double taxation avoidance. In this case, the Marine Pollution (Preparedness, Response and Cooperation) Bill maybe essential to support this initiatives and mechanisms.

International Memoranda of Understanding

The Marine Pollution (Preparedness, Response and Cooperation) Bill would provide for the development of draft bilateral or multilateral agreements with neighbouring countries on preparedness and response and mutual aid assistance in line with the OPRC Convention. The DoT, on the recommendation of the IMOrg, or on its own initiative will consider the conclusion of these agreements.

When South Africa requires external support from other countries or territories in response to a marine pollution incident, such assistance shall be requested in accordance with the procedures contained in any relevant bilateral or multilateral agreement, memorandum of understanding, bilateral or multilateral marine pollution contingency plan or related arrangements in place at the time.

Agreement on the Regional Contingency Plan for Preparedness for and Response to Major Marine Pollution Incidents in the Western Indian Ocean

As part of the deliverables of the Western Indian Ocean GEF-Marine Highway and Coastal Contamination Prevention (WIOMHCCP) Project, agreement was considered in the past, however there has not been any developments since. The 8 Countries are:

- Comoros
- Kenya
- Madagascar
- Mauritius
- Mozambique
- Seychelles
- South Africa
- Tanzania

The agreement makes provision for the countries to adopt, within the framework of the OPRC 90 Convention and of the Nairobi Convention and its Emergency Protocol, a REGIONAL CONTINGENCY PLAN FOR PREPAREDNESS FOR AND RESPONSE TO MAJOR MARINE POLLUTION INCIDENTS IN THE WESTERN INDIAN OCEAN (hereinafter referred to as "the Plan", for preparedness for and response to major marine oil pollution incidents affecting or likely to affect their respective marine and coastal environment and related interests. The Plan may be amended as and when required by the Signatories.

To use, in accordance with the OPRC 90 Convention and with their respective national laws, and subject to their capabilities and availability of resources, the Plan as a basis for regional co-operation in preparedness for and response to major marine oil pollution emergencies and to promote its implementation.

To use their best endeavours to render assistance to any Signatory of this Agreement which might request assistance in case of emergency, bearing in mind that nothing in the Plan precludes the right of a Signatory, whose marine and coastal environment and related interests are likely to be affected, to request assistance from other States or Organisations:

To designate, in accordance with Article 6 of the OPRC 90 Convention:

(a) the competent national authority or authorities with responsibility for oil pollution preparedness and response, as their respective national authorities responsible for the implementation of the Plan, its amendment and revision, as well as for ensuring compatibility of the Plan with their respective National Contingency Plans:
(b) the national operational contact point or points, which shall be responsible for the receipt and transmission of oil pollution reports; and
(c) an authority which shall be entitled to act on behalf of the State to request assistance or to decide to render the assistance when so requested.

These national authorities and contact points shall be listed in Appendix 1 of the Plan.

1. That other coastal States in the Western Indian Ocean region, Parties to the OPRC 90 Convention as well as to Nairobi Convention and its Emergency Protocol, may join this Agreement subject to the consent of the Signatories of the Agreement;

2. The present Agreement and the Plan shall enter into force after being signed by at least 6 of the States concerned, and for each of the other Signatories, thirty days after the signing of this Agreement.

3. The present Agreement is without prejudice to rights and obligations of the Signatories under any other international instrument.

4. The present Agreement may be amended by mutual consent of the Signatories, at any time, upon the request of any of the Signatories.

9. Any disagreement resulting from the interpretation or application of the present Agreement shall be resolved by negotiations amongst the Signatories.

10. The Agreement may be denounced by any Signatory at any time after the expiry of four years from the date on which the Agreement enters into force for that Signatory. Denunciation shall be effected by notification in writing to the Depository (the Government of the Republic of Kenya being the depository of the Nairobi Convention).

South Africa is signatory to the “Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1981 (Abidjan Convention) – Protocol concerning Co-operation in Combating Pollution in Cases of Emergency” and the “Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the Eastern African Region , 1985 (Nairobi Convention) – Protocol concerning Co-operation in Combating Pollution in Cases of Emergency in the Eastern African Region (Emergency Protocol)”.

Note: South Africa will not, to its own the detriment, compromise its own capabilities to respond to international incidents

Section 2.2

Environmental Response and Impact Monitoring

2.2 Environmental Response and Impact Monitoring

Environmental response

The potential impacts of an oil spill on the environment can be wide spread. For the purposes of this plan, the response is divided into the following response strategies:

1) Wildlife response
2) Adaptive Environmental Monitoring and mitigation
3) Post Recovery Monitoring

Wildlife Response

When a marine pollution incident occurs, it is highly likely that marine wildlife will become oiled. The severity and impact of the spill on wildlife and biodiversity depends on a number of factors such as the environmental sensitivity of the area, the type and quantity of oil spilled, and the location of the spill. The effectiveness of an oil spill response is often measured against the success of the wildlife rescue and rehabilitation component. The National Oiled Wildlife Preparedness and Response Contingency Plan (NOWPRCP) provides a framework for oiled wildlife preparedness and response strategies. The NOWPRCP can be found at Annexure 2D of Volume 2.

Adaptive Environmental Monitoring and mitigation

This section will be completed in the near future and will form part of the NOSCP Volume 2.

Post Recovery Monitoring

This section will be completed in the near future and will form part of the NOSCP Volume 2.

Section 2.3

Oil Spill Mitigation Response Strategy

2.3 Oil Spill Mitigation Response Strategy

Decision making: Net environmental benefit analysis (NEBA)

NEBA is a process used by the response community for making the best choices to minimize impacts of oil spills on people and the environment. It involves consideration and judgement to compare the likely outcomes of using different oil spill response methods in order to provide and recommend the preferred tactics from an environmental sensitivity point of view. It must be used in preference to making simple 'trade-off' decisions about dispersant use.

NEBA typically involves the following steps:

1. NEBA considers the most appropriate response by considering relevant information available. Information can be sourced through modelling of a spill, to identify where the spilled oil is and the drift direction under the influence of currents and wind; various oil spill computer models exist to support this. It is also useful to know how the oil will 'weather' as it drifts.

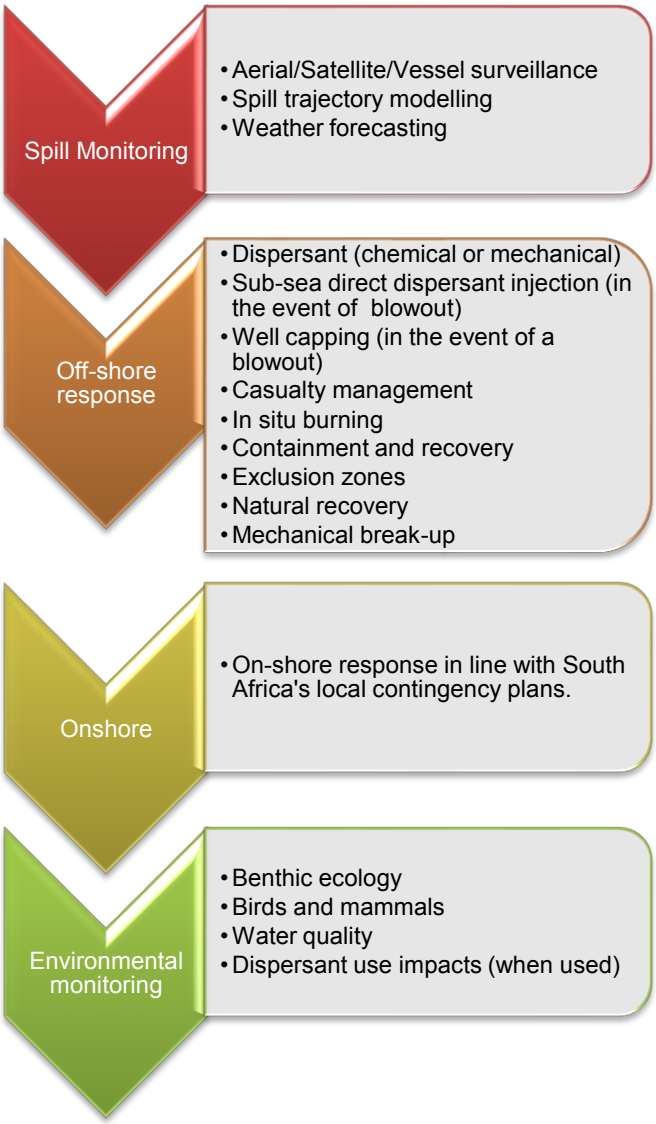
2. NEBA would assess the natural resources likely to be affected by the spilled oil. This may include ecological resources offshore, near shore and on shorelines, alongside economic resources. The detail of this step includes the identification of selected environmental receptors (e.g. key species or habitats) and an assessment of the temporal and spatial extent of potential consequences and recovery rates.

3. The efficiency and feasibility of the response toolkit must be reviewed. This covers the response techniques, the practicalities of their utilization and how much oil each technique would impact the environment. If areas under threat include oil-sensitive

coastal habitats, the role of oil spill response at sea is to try to prevent the spilled oil from reaching these habitats. Previous experience can help to assess which oil spill response methods are likely to be effective. Pragmatic, operational considerations shall form an important part of the NEBA process applied to all feasible response methods.

Response Strategy

Spill mitigation options are generally limited due to South Africa's high energy offshore coastal environment. First response will be initiated at a local level as prescribed in the site or local contingency plan and in line with the tiered response model.



This will be informed by inter alia:

- Sea state
- Type of hydrocarbon spill (hazardous event),
- Capabilities of the operator (which would include response time), and
- Proximity to sensitive areas.

Generically the response to a hydrocarbon spill shall follow the steps below with options within each of these depending on the spill scenario:

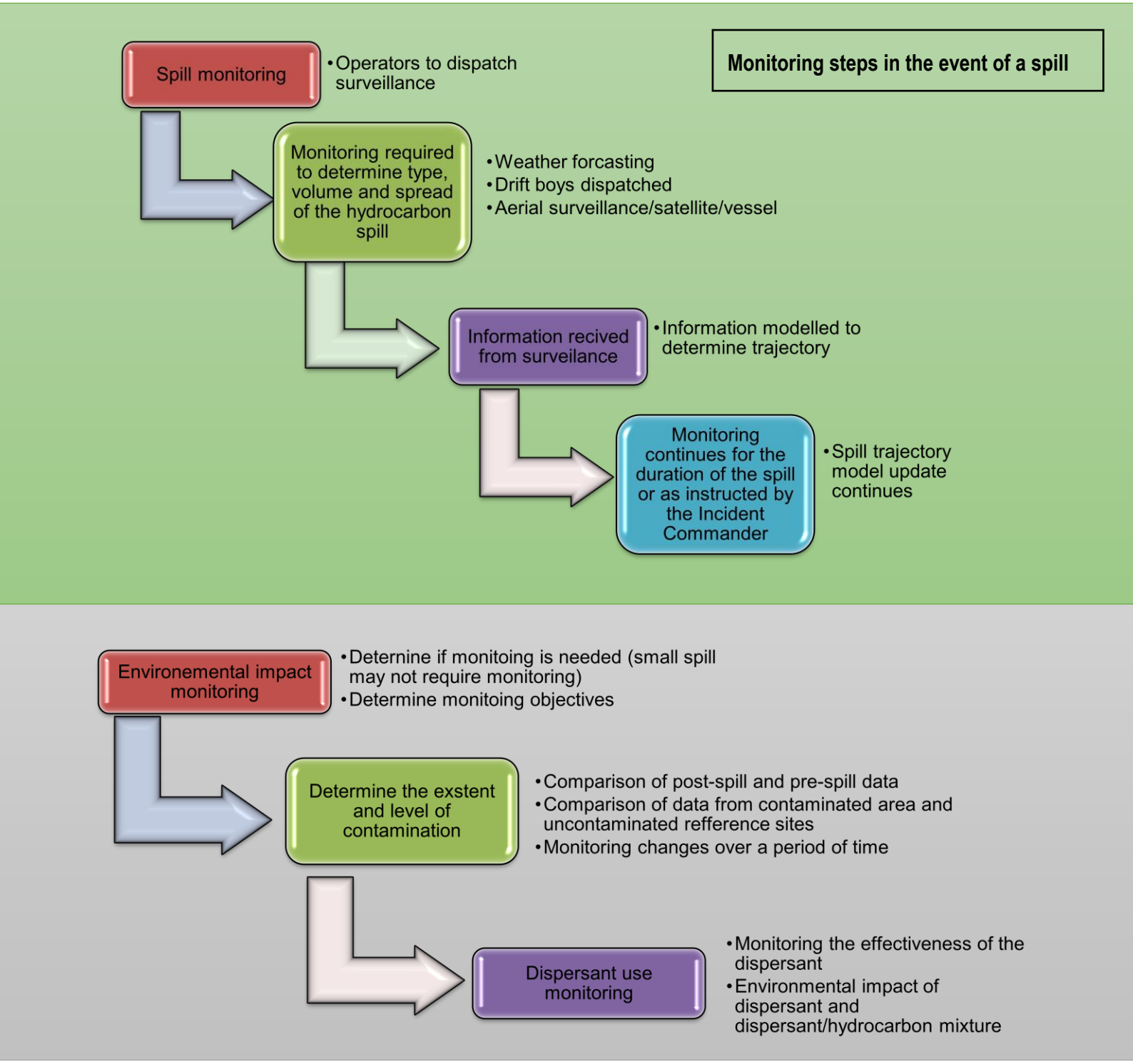
(a) Spill response monitoring,

(b) Offshore response strategies,

(c) Onshore response strategies, and

(d) Environmental monitoring.

Figure 1 Response and monitoring consideration to be taken into account during a spill using the principles of the Net Environmental Benefit Analysis (NEBA).



Oil Spill Response Monitoring

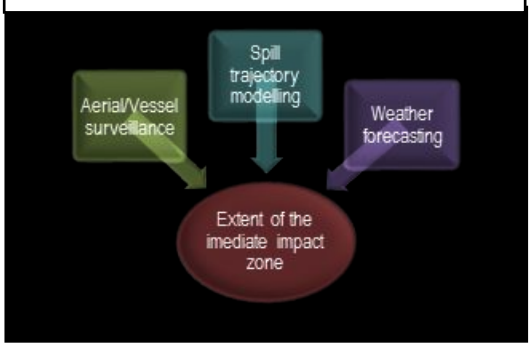
The figure above provides an overview of the monitoring required in the event of a spill. Spill monitoring is the primary response to any spill so that information related to the behaviour of the specific hydrocarbons in water is available to determine the type and extent of the response required. The information will provide a real time assessment of the current and future movements of the spill as it relates to the ambient environmental

influence. Monitoring of a spill is a critical component of a response and is continuous from the detection/notification of the spill until the conclusion of the clean-up operations.

The monitoring is scalable and shall allow for escalation as the spill worsens and would include the monitoring of the response as well. Response monitoring will be covered later in the section.

Although there are various options in monitoring spills at sea, aerial surveillance is regarded as the most reliable method used internationally. The recommended guidelines that shall be used when conducting aerial surveillance can be found in the good practice guidelines published by IPIECA-OGP, or alternatively the technical information paper aerial observation of marine oil spills published by the International Tanker Owners Pollution Federation (ITOPF).

The Existent of the spill requires information three basic sources of information depicted in the figure above.



Monitoring of the spill by aerial surveillance is the first step in the response to the hydrocarbon spill. The monitoring of a spill is continuous throughout the incident. Subsequent monitoring of the impact of the spill would generally follow.

The monitoring of a spill can include:

I. Aerial/vessel or satellite surveillance

Aerial observation is the visual observation of an oil spill, carried out from an aircraft by a human observer. Vessel surveillance is not as effective as aerial surveillance since its useful surveyable area is limited to a short distance from the vessel, and therefore shall not be seen as the preferred method and only employed where aerial surveillance is not possible. The use of satellite surveillance can provide more information than most other options, but the cost of its use may not be feasible. Aerial surveillance is the preferred tool to assist decision-makers in the event of a hydrocarbon spill. Therefore, aerial surveillance aircraft must be dispatched as soon as reasonably possible.

Visual observations inform on the quantity and direction of the spill and will assist in determining what appropriate action/response is to be taken. In the absence of aerial surveillance, aerial (aircraft or drones)/vessel, or satellite could be utilised.

II. Weather forecasting

Coastal oceanographic conditions in South Africa are variable and certain types of spill response measures would depend on what these conditions are at the time of the spill or predict the effects it would have on the spill later on.

As previously indicated, the weather conditions play an important role in the operational activities related to spill combating and protection and the South African Weather Service (SAWS) plays a critical role in providing reliable weather forecasting. Choice of suitable mitigation options will also depend on the prevailing weather conditions at the time of a spill and during the response.

It is well understood that hydrocarbon emulsification is associated with the sea conditions and the physical-chemical characteristics of the spilled oil. Depending on these characteristics, rough sea conditions tend to facilitate the natural break up of hydrocarbons or promote its emulsification. Reliable weather forecasting is critical to assist decision-making and predicting the behaviour of the spill when modelling spill trajectory. The South African Weather Service shall be used as an officially recognised source for all up-to-date weather data (in accordance with the South African Weather Service Act). Furthermore, accurate and real time weather prediction would inform on the response strategies deployed during the time of a spill and predict how such strategies would need to be adapted with the changing weather conditions.

The three major coastal areas of South Africa have all been proposed for the exploration and possible exploitation of the oil and gas industry. Each of the coastal areas (south, west, and east) is associated with very unique climatic conditions and consequently the mitigation response methods may further be tailored to these areas. The South Coast is known for its strong winds and unpredictable sea state. Whereas the east coast is associated with strong currents (Agulhas current) and eddies.

III. Spill trajectory modelling

A computational model of the hydrocarbon spill fate and trajectory will provide valuable insight into areas that may be at risk of contamination. Spill models take into considerations environmental influences that determine where the hydrocarbons spread will be over time. Spill modelling can be sourced locally through the following organisations and entities:

- CSIR, and
- South African Weather Service, etc.

Environmental monitoring can be initiated during and after the spill. The objectives and methods for environmental monitoring will be discussed later in this document. It is mandatory that monitoring of all types and volumes of hydrocarbon spills release take place to inform on response options.

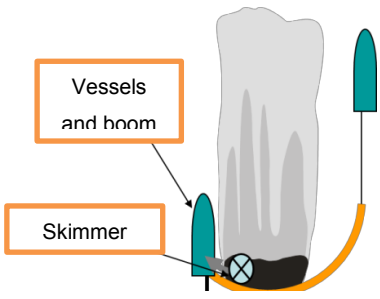
Response Strategies

Coastal oceanographic conditions in South Africa are variable and certain types of spill response measures would depend on what these conditions are at the time of the spill or predict the effects it would have on the spill later on. Natural dispersion is effectively allowing natural processes to break down the hydrocarbons into the sea. Natural dispersion of a spill is likely to be the more effective solution if environmental monitoring concludes no immediate threat. The aforementioned option of chemical dispersant use would enhance the process of natural dispersion however the NEBA shall be considered prior to its use.

Exclusion zones

Designating certain areas as public, private, or government exclusion zones may be necessary for conducting effective on-water operations. These zones may include national marine sanctuaries, archaeological sites, military operations areas, or may be pre-designated chemical dispersant operations or in-situ burning areas. Some exclusion zones may have special activity or time requirements. Exclusion zones for the South African Coastline can be sources from the South African Navy Hydrographic Office or SAMSA.

Off-shore containment & recovery



(a) Skimmers
(b) Booms
(c) Floating storage tanks
(d) Vessels

Oceanographic conditions around the coast of South Africa allows for limited offshore response types to address the spill scenario. Containment and recovery of the spill may not be possible when rough sea conditions prevail. While containment and recovery of the spill would be considered when sea condition allow, the likelihood that such conditions would occur are low. Therefore, a response of this type shall only be used after a real time feasibility assessment. Some

basic equipment required for the use of this method is listed below and represented below:

Oil is contained using floating booms. The surface oil is recovered with the use of skimmers. The recovered oil is collected in floating stage tanks or on-board a vessel. Other configurations can be found here: *IPIECA*

Containment and recovery at source (source control)

Source control refers to efforts to stop the source of the discharge. The containment and recovery of a hydrocarbon spill at source or source control is always desirable. The technical aspects of source control are beyond the scope of this plan and must be addressed in a separate plan by the operator. Such a plan shall include all identified sources of discharge, the likely estimated volume of discharge and controls in place.

Booming and the use of skimmers near the source to limit the spread of the spill shall be considered where practical. It is recognised that failure to control small spills may lead to escalation of the spill and requiring alternative spill combatting measures and an increase in spill response resources.

Chemical dispersants

Dispersants can be a fast and effective response provided that they are applied timeously, correctly and in a controlled manner to enhance the rate of natural dispersion. Dispersants are a valuable response tool and, if used correctly, can greatly facilitate the protection of sensitive shorelines and other resources. However, when used inappropriately, the dispersants have the potential to cause long term deleterious effect to the environment and cannot be used for all hydrocarbons types. Accurate information on the exact type of hydrocarbon involved in the spill is therefore critical for decision-making on chemical dispersant use. The monitoring of the dispersant's effectiveness is critical and will inform on its further application.

The conditions for use of chemical dispersants, is described in the National Policy for Dispersant Use and is subject to approval by DEA.

In situ burning

Because of the potential logistical difficulties of picking up oil from the sea surface and storing it prior to final treatment, an alternative approach involves concentrating the oil in special fireproof booms and setting it alight. In practice, this technique is unlikely to be viable in most spills, due to the difficulty of collecting and maintaining sufficient thickness of oil to burn. As the most flammable components of the spilled oil evaporate quickly,

ignition can also be difficult. Currently South Africa does not endorse the use of in situ burning due to its environmental implications. However, in the event of a blowout the method may be found feasible.

Mechanical Break-up or Dispersion

Mechanical break-up using vessels may be used to facilitate the natural dispersion of hydrocarbons in the water. This can be an effective response which can be quickly employed as offshore oil and gas activities normally have workboats that can be used for this purpose. However, this method may be ineffective in larger spills and its use as a response is subject to the type of oil spilled.

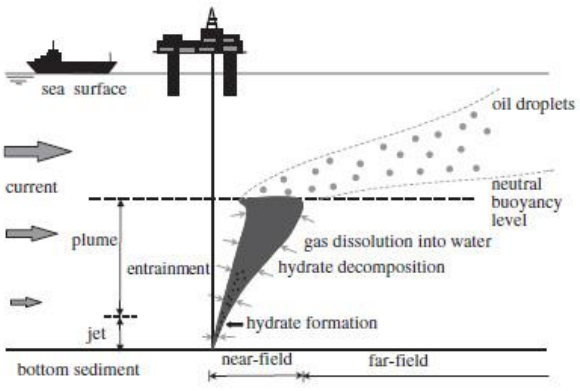
Sub-sea spill response

Well head capping (only in the event of a blowout) or Blowout response

A blowout is essentially an uncontrolled release of hydrocarbons from the well head. A blowout scenario has been identified as having the most impact and if not controlled as soon as possible could result in potential high levels of damage. It is therefore desirable that control of the hydrocarbon source be employed in as short a time as possible. Capping or drilling a relief well in close proximity of the leaking well can be done to mitigate the release of hydrocarbons from a well blowout. Given that time is a critical factor capping stacks or capping devices must be kept in close proximity to the well, to be available when the need arises for its use. Therefore, the greatest risk to blowout mitigation is the availability of capping stacks and its proximity to the well where it is needed.

Visual observations inform on the quantity and direction of the spill and will assist in determining what appropriate action/response is to be taken.

Sub-sea direct dispersant injection (only in the event of a blowout)



Spraying underwater oil spill dispersant changes the diameter distribution of oil droplets and further influence the behavioural process and incidence of underwater spilled oil. The use of Subsea Dispersant Injection (SSDI) greatly reduces the risk for further contamination by oil in the event of a well blowout.

A recent publication by IPIECA lists the following benefits in the use of SSDI:

- Treats the oil at the point of release,
- Uses less dispersant compared to surface application,
- Reduces the potential exposure of responders to volatile organic compounds and oil,
- Can be conducted continuously, day and night and in practically any weather conditions.

SSDI requires highly specialised equipment and shall only be used by trained personnel stages of deep-water underwater blowout oil spill.

Section 2.4

Waste Management

2.4 Waste Management

The cost of waste treatment can represent a significant proportion of the overall cost of the response operations. The issue of waste management can be one of the most significant aspects in terms of both the operational and environmental impact and financial burdens. It is essential therefore that the issues are well understood in advance so that they can be lanned for and ultimately mitigated.

Waste hierarchy

The Waste Hierarchy shall be employed in the consideration of oil spill response methods and in dealing with a waste stream originating from an oil spill event to minimize the amount of waste produced, reducing the environmental and economic costs and ensuring a consistent approach.

A site / local contingency plan shall include a waste management plan. This proactive approach will:

- Prevent a hurried decision being made.
- Ensure that waste streams are identified and appropriate management options considered
- Ensure transport/reception facilities are in place and approved.
- Ensure treatment processes are identified and approved.
- Ensure service providers have relevant waste management licences

Waste Sources

Waste will be generated by a multiple of sources throughout a response, including:

(a) Recovered Liquid Waste

(b) Oil with a low water and debris content can be sent for reprocessing.

(c) Heavily contaminated liquid/semi-solid waste will need to be separated into the various components of oil, water and sediment.

(d) Oiled Sediment

Sediments will mix with the oil. This sediment/oil material has the potential to sink to the seabed, it is very difficult to recover sunken material.

(e) Oiled personal protective equipment (PPE)

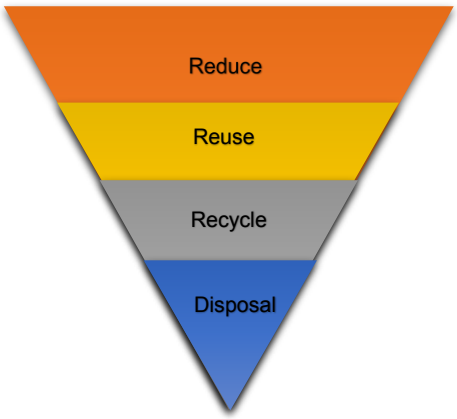
(f) Oiled Debris

Natural debris will mix with the oil making it difficult to recover with skimming systems.

(g) Oil Spill Equipment/Materials

Materials can vastly add to the volume of waste if utilized excessively.

The principles of the waste hierarchy as illustrated above can be effectively demonstrated through consideration of the following strategies:



Principles of the waste hierarchy

Reduction strategies

Minimising the amount of waste entering the waste stream can be achieved by considering the following:

Precaution and Methodology

- Pre-clean beaches by removing onshore clean solid waste before grounding of oil
- Prefer in-situ cleaning of sand/pebble (low pressure washing and surf washing)
- Consideration of different removal methods to minimize the volume of oiled sediments

Waste Segregation

An important process in the first stages of an oil spill response is to classify and segregate waste streams at source (e.g. oil, sediment, vegetation, PPE, sorbents, plastic bags, lining, etc.). This will facilitate the disposal of oiled waste and can reduce considerably the amount of waste to be discarded in landfills.

- Waste types must be stored in different areas.
- Oil must be separated from soil, sand, seaweed, plastics and sorbents.

Prevention of secondary contamination

The spread of oil via people, transport and equipment to other unpolluted areas shall be avoided to control the overall impact of the spill.

- Control access to clean-up sites by establishing a traffic circulation plan for vehicles.
- Create clean and dirty areas to avoid cross contamination. People and equipment transiting from a dirty zone to a clean zone shall go through cleaning procedures while in the dirty zone before entering the clean zone.
- Locating waste storage sites close to recovery equipment – dirty/decontamination zone
- Storage sites shall be designated and preferably fenced off – dirty/decontamination zone
- Prevent soil contamination by using liners under storage – dirty/decontamination zone
- Regularly checking pumps and hose connections for leaks – dirty/decontamination zone
- Ensuring all storage is water and oil-proof to prevent leakage to prevent infiltration and substrate contamination – dirty/decontamination zone
- Cover storage to prevent rainwater infiltration – dirty/decontamination zone

Treatment

Waste may be treated to reduce the amount of oil to enable reuse of the material for other purposes e.g. road building.

Transport

Selection and identification of suitable and fit for purpose transport methods can reduce secondary contamination through spillage or multiple waste transfers

Reuse strategies

This is the reuse of an item for its original purpose, i.e. clean-up equipment should be cleaned and reused in place of disposable items while ensuring that no additional impact is caused by cleaning

- Cleaning of PPE so that it can be reused e.g. rubber boots, hardhats, goggles etc.
- Clean and reuse inflatable booms
- Re-use lightly oiled sorbent

Recycling strategies

Recycling is directly affected by the quality of the recovered product, i.e. highly contaminated material is less likely to be suitable for recycling.

- Taking waste oil to a refinery for conversion into other usable products.
- Burning of waste oils to make burner fuel (as an alternative fuel to diesel).

Disposal

Disposal is the final option considered in the planning process. It may be the only option for highly mixed wastes of oil, plastics, organic debris, water, sediments which cannot be separated. A list of permitted waste sites can be found on the following online directory: http://sawic.environment.gov.za/?menu=88

When waste is disposed of at designated disposal sites, evidence of such disposal must be presented to the relevant Authority; these may include;

The exact quantity of dumped waste needs to be monitored

Certificates for dumping of waste within the disposal site

Decide on waste disposal sites before commencing clean-up:

Landfill

As a general rule if waste contains approximately 5% oil, it is able to be disposed of with general waste. However local and national regulations shall always be adhered to.

Incineration

Waste may be incinerated in specialised facilities used for industrial and domestic waste and incinerated in cement works or lime kilns.

Waste can also be incinerated on site, using smaller portable incinerators.

Section 2.5

Financial Arrangements

2.5 Financial Arrangements

This section describes the financial resources that are available in the event of an oil spill and the process by which these resources may be accessed.

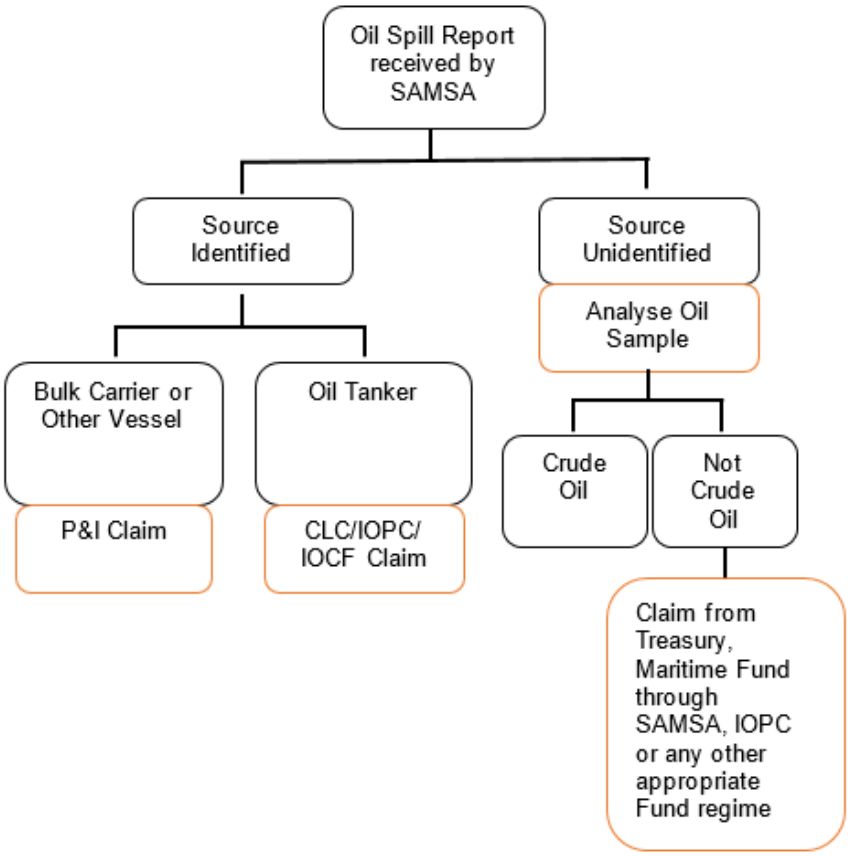


Figure 2 Financial process flow

Sampling

Sampling shall be done as soon as possible after a spill and before dispersants are applied. This is critical for purposes of evidence, cost recovery, validation and possible prosecution. The SAMSA is the responsible authority in such instances.

National Resources

1. South Africa is signatory to several international conventions which provide for compensation of oil spills from ships. Compensation for damage caused by spills of persistent oil originating from tankers is now based on three international agreements:

   - The 1992 Civil Liability Convention,
   - The 1992 Fund Convention, and
   - The 2003 Protocol to the 1992 Fund Convention

   This regime can cover reasonable expenses related to oil spill, maritime causalities involving oil-carrying ships. To support claims under these Conventions, data on oil quantities must be recorded and kept. The DoT has put in place national legislation relating to compensation of oil spills related claims.

   These are the Merchant Shipping (Civil Liability Convention) Act, 2013 (Act No. 25 of 2013), Merchant Shipping (International Oil Pollution Compensation Fund) Act, 2013 (Act No. 24 of 2013), and Merchant Shipping (International Oil Pollution Compensation Fund) Contributions Act, 2013 (Act No. 36 of 2013) was enacted. This seeks in its Schedule to effect the amendments which are required in the Marine Pollution (Control and Civil Liability) Act, 1981.

   The Department of National Treasury is responsible for the provisions relating to contributions (financing) of funds in terms of the South African Constitution as it's a money bill.

2. The Maritime Fund has been established under the control of the Minister of Transport. SAMSA administers the Fund in the prescribed manner and the accounts relating to the Fund are audited annually by the Auditor-General.

   In achieving the objectives in terms of Section 3 of the SAMSA Act of 1998, SAMSA shall administer the Maritime Fund as prescribed in Section 38 of the SAMSA Act.

Cost Recovery and Compensation

1. Any response arising from a shipping casualty, whether an intervention of sorts, or an actual clean-up exercise, can be very costly and the Republic has no dedicated state pollution contingency fund in place.

   Where possible, all reasonable costs associated with responding to and cleaning up any marine pollution incident, including payment of compensation for economic loss and pollution damage resulting from the incident, is to be recovered from the polluter in accordance with the Merchant Shipping (Civil Liability Convention) Act 25 of 2013. In the event that the polluter is not, or cannot be identified, or for other reasons, costs and compensation for economic loss and pollution damage shall be claimed from the International Oil Pollution Compensation Funds, within the limitations and provisions of such Fund.

2. Cost Recovery for Upstream Oil and Gas operators will be managed in accordance with the requirements of section 28 of the National Environmental Management Act 107 of 1998.

Claim procedures

The Claims Manual produced by the International Oil Pollution Compensation Fund (IOPC) provides specific information on claiming procedures. The main points are summarised below. The DoT and SAMSA shall be notified of any claims.

Operator Resources

1. In accordance with sections 28 and 30 of the National Environmental Management Act 107 of 1998 (NEMA) which outline the requirements for Duty of Care, Remediation of Environmental Damage and Control of Emergency Incidents, Upstream Oil and Gas and Shipping Operators must maintain financial provision/securities appropriate for the risks presented by their activities.

2. The financial provision for upstream oil and gas operations must be provided for and maintained in line with the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations.

3. Financial securities for shipping must be in accordance to section 13 of the Marine Pollution Civil Liabilities Act 6 of 1981 (as amended. It is these funds that will be used to ensure that adequate resources are available to facilitate the response strategies to respond to any oil spills that result from shipping or upstream oil and gas activities.

Loss or Damage

All claims for loss or damage shall be submitted to DEA On-Scene Co-ordinator, who will take the necessary steps to establish that the claim is adequately substantiated and reasonable. Once the details of each claim have been verified, it will be forwarded to the SAMSA Administration Officer for processing.

These claims could include loss or damage to property, grazing lands, livestock, fishing nets, loss of livelihood etc., in the area of the Republic, resulting from the discharge of oil from a ship, tanker or offshore installation and also damage or loss caused by methods used to clean up polluted areas. All claims made must be submitted according to the requirements and using the relevant documentation, e.g. an expenditure log sheet.

Depending on the nature of the claim, the following information may be required:

- Nature of loss, including evidence that the alleged loss resulted from the contamination.
- Monthly breakdown of income for the period of the loss and over the previous three years. Where possible, monthly breakdown of units (e.g. kilograms of fish caught and sold, or number of hotel rooms let, etc.) for the period of the loss and over the previous three years.
- Saved overheads or other normal variable expenses.
- Method of calculation of loss.

Measures Taken

Claims for costs of measures taken in respect of protection from, and clean-up of oil pollution are to be submitted to the DEA On-Scene Co-ordinator and are to be fully substantiated by detailed time sheets for labour and machinery, and invoices for material and equipment purchased. Justification for the action taken must be included. It is essential that costs are well documented and that stringent records of expenditure are maintained. Claims should answer the questions: **Who? What? Where? When? and**

Why? A brief summary report outlining the nature of the incident and the associated activities should be provided with the claims.

The following information shall be provided:

- Delineation of area affected, describing the extent of the pollution and identifying those areas most heavily contaminated (maps, charts, photographs and video tapes).
- Analytical or other evidence linking the oil pollution with the ship (chemical analysis, relevant wind, tide and current data, observation and plotting of oil movement).
- Summary of events, including description and justification of work carried out at sea, in coastal waters and on shore, together with an explanation of why the various methods were selected.
- Dates on which work was carried out at each site.
- Labour costs at each site (number and categories of response personnel, name of employer, hours or days worked, regular or overtime rates, and other costs).
- Travel, accommodation and living costs for response personnel.
- Equipment costs at each site (types of equipment used, by whom supplied, rate of hire or cost of purchase, method of calculation of hire rates, quantity used, period of use).
- Cost of replacing damaged equipment beyond reasonable repair (type and age of equipment, original purchase price, and circumstances of damage, supported by photographs etc.).
- Consumable materials (description, by whom supplied, quantity, unit cost and where used).
- Any remaining value at the end of the operations, of equipment and materials purchased specifically for the incident.
- Transport costs (number and types of vehicles, vessels or aircraft, number of hours or days operated, rate of hire or operating cost, method of calculating rates).
- Cost of temporary storage and of final disposal of recovered oil and oily material, including quantities disposed, unit cost and method of calculating the claimed rate.

Claims for environmental reinstatement measures and post spill studies

In some instances, it is possible to enhance the speed of natural recovery after a spill, through reasonable re-instatement measures. The cost of such measures may be accepted for compensation by the IOPC under certain conditions.

Such measures should:

- accelerate significantly the natural process of recovery
- seek to prevent further damage as a result of the incident
- not result in degradation of other habitats or adversely affect other natural or economic resources
- be technically feasible
- not result in costs being out of proportion to the extent and duration of the damage and the benefits likely to be achieved

The IOPC Fund may contribute to the cost of studies to determine the nature and extent of environmental damage caused by an oil spill or to determine whether reinstatement measures are necessary. Usually this would be appropriate for major incidents only, and if the studies are likely to provide reliable and useful information. Strict conditions apply; the IOPC should be consulted at an early stage, and a scientific committee shall be established to co-ordinate such studies.

Checklist for oil spill claims procedure

Item	Responsibility	Check
1. Identification of vessel owner/insurer	SAMSA	
2. Determine level and details of insurance	SAMSA	
3. Analysis of spilled oil. Crude oil / bunker oil?	SAMSA, DEA	
4. Owner/Insurer guarantee secured	SAMSA	
5. SA Treasury funding request (if no insurance cover)	SAMSA/DEA	
6. Owner/Insurer requested to attend Unified Command	SAMSA	

Item	Responsibility	Check
7. Response activities agreed at Unified Command	SAMSA, DEA, Owner/Insurer, Stakeholders (local authorities)	
8. Record of decision signed (template in Appendix V)	SAMSA, DEA (Insurer can be asked to sign, but not essential)	
9. Keep strict records of all activities undertaken. "Who? What? Where? When? Why?"	Each Claimant: SAMSA, DEA, Stakeholders (local authorities and individuals)	
10. Maintain file of all invoices and receipts	Each Claimant: SAMSA, DEA, Stakeholders (local authorities and individuals)	
11. Compile summary claim report	All Claimants: SAMSA, DEA, Stakeholders (local authorities and individuals)	
12. Submit claim to DEA for verification (to include summary report, record of activities and copies of invoices and receipts)	All claimants: Stakeholders (local authorities and individuals)	
13. Verification of all local authority and individual claims	DEA	
14. Compilation of summary claim report for environmental response.	DEA	
15. Approved claims submitted to SAMSA	DEA	
16. Claims submitted to Owner/Insurer or Treasury	SAMSA	
17. Negotiations and discussions of claims with Owner/Insurer or Treasury	SAMSA, DEA, Owner/Insurer, Treasury	
18. Payment of claims	Owner/Insurer, Treasury	