

DIRECTORATE GENERAL OF SHIPPING



DISASTER MANAGEMENT PLAN (DMP)

AND

STANDARD OPERATING PROCEDURE (SOP) FOR CASUALTY & CYCLONE

JUNE - 2022

PART A

***DISASTER MANAGEMENT
PLAN (DMP)***

PREFACE

The DMP of DG Shipping is a comprehensive document covering Hazards, Risk, Vulnerability and Capacity assessment for Marine Disasters. The plan outlines the roles, delegation of authority and responsibility of key personnel of the organization.

It is intended that the plan would provide guidance for quick response in case of an emergency and also help in realizing Disaster Risk Reduction (DRR).

This plan has been prepared as per the template issued by National Disaster Management Authority (NDMA), National Disaster Management Plan (NDMP) 2019 and NDMA guidelines.

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ANNEX 6

**FORMAT FOR SEEKING ACTION TAKEN REPORT
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ABBREVIATIONS

AHT	Anchor Handling Tug
AIR	All India Radio
AIS	Automatic Identification System
ARPA	Automatic Radar Plotting Aids
BARC	Bhabha Atomic Research Centre
BCH	Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
BLU	Code of Practice for the Safe Loading and Unloading of Bulk Carriers
CBRN	Chemical, Biological, Radiological and Nuclear
CCA	Central Coordinating Authority
CLC	Civil Liability Convention
CMT	Crisis Management Team
COP	Conference of Parties
COLREG	Collision Regulation
CWC	Cyclone Warning Centers/ Central Water Commission
CWDS	Cyclone Warning Dissemination System
CSO	Company Security Officer
CSS	Code of safe practice for cargo stowage and securing
CTU	Code of practice for packing of cargo transport units
DCA	District Coordinating Authority
DCC	District Contingency Committee
DDMA	District Disaster Management Authority
DGH	Directorate General of Hydrocarbons
DGLL	Directorate General Lighthouses and Lightships
DGS	Directorate General of Shipping
DMP	Disaster Management Plan
DRR	Disaster Risk Reduction
DSC	Dynamically Supported Craft
EEDI	Energy Efficiency Design Index
EOC	Emergency Operation Centre
ETV	Emergency Towing Vessel
FFA	Fire Fighting Appliance
FSI	Flag State Inspection
FSS	Fire Safety Systems
GC	Gas Carrier
GHG	Greenhouse Gas
HNS	Hazardous and Noxious Substance
HRVCA	Hazard Risk Vulnerability and Capacity Assessment
HSC	High- Speed Craft
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

ICCSA	Indian Coastal Conference Shipping Association
ICG	Indian Coast Guard
IDRN	Indian Disaster Resource Network
IGC	International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk
IGF	International Code of Safety for Ships using Gases or other Low-flashpoint Fuels
ILO	International Labor Organization
INCOIS	Indian National Centre for Ocean Information Services
IMD	India Meteorological Department
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
IMSBC	International Maritime Solid Bulk Cargoes
INF	Irradiated Nuclear Fuel
INSA	Indian National Shipowner's Association
INSAT	Indian National Satellite System
IOPC	International Oil Pollution Compensation Funds
ISM	International Safety Management
ISN	International Safety Net
ISPS	International Ship and Port Facility Security
LLMC	Limitation of Liability for Maritime Claims
LSA	Life-Saving Appliance
LRIT	Long Range Tracking and Identification
MARPOL	Marine Pollution
METSAT	Meteorological Satellite
MLC	Maritime Labour Convention
MMD	Mercantile Marine Department
MODU	Mobile Offshore Drilling Units
MoEF & CC	Ministry of Environment, Forest & Climate Change
MoPNG	Ministry of Petroleum and Natural Gas
MoPSW	Ministry of Ports, Shipping & Waterways
MRCC	Maritime Rescue Coordination Centre
MS	Merchant Shipping
MSI	Marine Safety Information
NEC	National Executive Committee
NCMC	National Crisis Management Committee
NDMA	National Disaster Management Authority
NDMP	National Disaster Management Plan
NDRF	National Disaster Response Force
NHO	National Hydrographic Office
NIDM	National Institute of Disaster Management
NOSDCP	National Oil Spill Disaster Contingency Plan
NPDM	National Policy on Disaster Management
NSPC	Navigation Safety in Ports Committee

ODA	Offshore Development Area
ONGC	Oil and Natural Gas Corporation
OPRC	Oil Pollution Preparedness, Response and Cooperation
OSV	Offshore Supply Vessel
PFSO	Port Facility Security Officer
PSC	Port State Control
P&I	Protection & Indemnity
RO	Recognised Organisation
RPSL	Recruitment and Placement Services Licence
RSMC	Regional Specialized Meteorological Centre
RSV	River Sea Vessel
SAR	Search and Rescue
SCMG	State Crisis Management Group
SCO	Ship Security Officer
SDG	Sustainable Development Goal
SDMA	State Disaster Management Authority
SDRF	State Disaster Response Force
SEC	State Executive Committee
SEEMP	Ship Energy Efficiency Management Plan
SFDRR	Sendai Framework for Disaster Risk Reduction
SITREP	Situational Report
SOLAS	Safety of Life at Sea
SOP	Standard Operating Procedure
SPS	Special Purpose Ships
SSO	Ship Security Officer
SSP	Ship Security Plan
STCW	Standards of Training, Certification, and Watchkeeping
TSS	Traffic Separation Scheme
UNECE	United Nations Economic Commission for Europe
VHF	Very High Frequency
VTS	Vessel Traffic System
VTMS	Vessel Traffic Management System

1.0 PRELIMINARIES

1.1 PROFILE OF THE DG SHIPPING

The Directorate General of Shipping (DGS) is an attached office of the Ministry of Ports, Shipping and Waterways (MoPSW), Govt. of India and deals with all executive matters, relating to merchant shipping. The MoPSW encompasses Ports, Shipping and Waterways sectors which include Shipbuilding and Ship-repair, Major Ports, National Waterways, and Inland Water Transport.

The DGS deals with implementation of shipping policy and legislation so as to ensure the safety of life and ships at sea, prevention of marine pollution, promotion of maritime education and training in co-ordination with the International Maritime Organization (IMO), regulation of employment and welfare of seamen, development of coastal shipping, augmentation of shipping tonnage, examination and certification of Merchant Navy Officers, Supervision and Control of the allied offices under its administrative jurisdiction.

Some of the functions carried out by DGS are as follows:

- Matters affecting Merchant Shipping & navigation and administration of the Merchant Shipping Law,
- Measures to ensure safety of life and ships at sea,
- Development of Indian Shipping,
- International Conventions relating to Maritime matters,
- Provision of facilities for training of Officers and ratings for Merchant Navy,
- Regulation of Employment of Seamen and their welfare,
- Regulatory aspect of Sailing Vessel.

1.2 RATIONALE

1.2.1 In accordance with NDMP

The DGS DMP provides a framework in accordance with National Disaster Management Plan and provides direction to the DGS and its departments for all phases of the disaster management cycle.

1.2.2 Contingency Plan for business continuity

DGS deals with contingencies such as Cyclones, Tsunamis, etc. and their affects at sea and coastal areas. Hence, offshore contingencies which are dealt by DGS may not have significant bearing upon the functioning of the DGS.

1.2.3 Legal Mandate

1.2.3.1 Disaster Management Act, 2005;

The Disaster Management Act, 2005 (DM Act 2005) lays down institutional and coordination mechanism for effective Disaster Management (DM) at the national, state, district and local levels. As mandated by this Act, the GoI created a multi-tiered institutional system consisting of the National Disaster Management Authority (NDMA) headed by the Prime Minister, the State Disaster Management Authorities (SDMA) headed by the respective Chief Ministers and the District Disaster Management Authorities (DDMA) headed by the District Collectors/ District Magistrate and co-chaired by Chairpersons of the local bodies.

1.2.3.1.1 The Disaster Management Act 2005, Section 36;

This section of the act lays down the primary responsibility of ministries in the GoI and departments with respect to institutional framework for prevention, mitigation, preparedness and capacity building of disasters, allocating sufficient funds and other resources to the National and State government agencies. Enactments and review of its policies, rules and regulations for prevention of disasters, mitigation or preparedness.

1.2.3.1.2 The Disaster Management Act 2005, Section 37;

This section of the act lay down the primary responsibility of ministries in the GoI and departments with respect to preparation of Disaster Management Plan, their review, updation and its approvals. Measures for financing the activities within the plan are also required to be spelled out in the plan.

1.2.3.2 Merchant Shipping (MS) Act and some of the Rules:

MS (Regulations of Entry of Ships into Ports, Anchorages and offshore facilities) Rules, 2012

MS (Civil Liability for Pollution Damage) Rules, 2008

MS (IOPC for Oil Pollution Damage) Rules, 2008
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MS (Control of Pollution by Noxious Liquid Substances in Bulk) Rules, 2010
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MS (Prevention of Pollution by Oil from Ships) Rules, 2010
--

MS (Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form) Rules, 2010
--

MS (Prevention of Collisions at Sea) Rule, 1975

MS (Safety of Navigation) Rules, 1997

MS (Carriage of Cargo) Rules, 1995 for Ships Carrying Dangerous cargoes

Appointment of receiver of wrecks under Section 391 of the MS Act, 1958, published in the Gazette of India vide S.O. 112 (E) dated 07.01.13 published on 16.01.14.
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MS (Load Line) Rules, 2001

MS (Fire Appliances) Rule, 1994

MS (Life Saving Appliances) Rules, 1995

MS (Maritime Labour) Rules, 2016

MS (Recruitment and Placement of Seafarers) Rules, 2016

MS (Prevention of Pollution by Garbage from Ships) Rules, 2009
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MS (Prevention of Pollution by Sewage from Ships) Rules, 2010

(Source: <https://www.dgshipping.gov.in/Content/MerchantShippingRules.aspx>)

The following rules and regulations are implemented by the DGS to regulate its overall functions in conformation with the international and national best practices:

1.2.3.3 International Conventions:

i.	SOLAS	The International Convention for the Safety of Life at Sea, 1974 (SOLAS 74) and the Protocols of 1978 (SOLAS 78) and 1988 (SOLAS 88);
ii.	SAR 1979	International Convention on Maritime Search and Rescue, 1979 (SAR 1979);
iii.	COLREG 1972	Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended (COLREG 1972);
iv.	MARPOL Convention	Protocol of 1978 Protocol of 1978 relating to The International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Convention) and protocol of 1997;
v.	Intervention Convention 1969	International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties, 1969 (Intervention Convention 1969);
vi.	OPRC Convention	International Convention on Oil Pollution Preparedness, Response and Co-Operation, 1990 (OPRC Convention 1990);
vii.	CLC Convention	International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC Convention 69) and the Protocol of 1992 (CLC 92);
viii.	Load Lines convention	International Convention on Load Lines, 1966;
ix.	LLMC Convention	Convention on Limitation of Liability for Maritime Claims, 1976 (LLMC Convention 1976) and the Protocol of 1996 (LLMC PROT 96);
x.	Nairobi Wreck Removal Convention	Nairobi International Convention on the Removal of Wrecks, 2007 (Nairobi Wreck Removal Convention 2007);
xi.	Salvage Convention	International Convention on Salvage, 1989 (Salvage Convention, 1989);
xii.	STCW Convention	International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW), 1978;
xiii.	Hong Kong Convention	Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (Hong Kong Convention);
xiv.	MLC Convention	International Maritime Labour Convention, 2006;

1.2.3.4 International Codes:

i.	BCH Code:	Code for the construction and equipment of ships carrying dangerous chemicals in bulk
ii.	BLU Code:	Code of practice for the safe loading and unloading of bulk carriers
iii.	Casualty Investigation Code:	Code of the international standards and recommended practices for a safety investigation into a marine casualty or marine incident
iv.	CSS Code:	Code of safe practice for cargo stowage and securing
v.	CTU Code:	IMO/ILO/UNECE code of practice for packing of cargo transport units
vi.	DSC Code:	Code of safety for Dynamically Supported Craft
vii.	GC Code:	Code for the construction and equipment of ships carrying liquefied gases in bulk
viii.	FSS Code:	International code for Fire Safety Systems
ix.	HSC Code:	International code of safety for High-Speed Craft
x.	IMDG Code:	International Maritime Dangerous Goods Code
xi.	IBC Code:	International code for the construction and equipment of ships carrying dangerous chemicals in bulk
xii.	IGC Code:	International code for the construction and equipment of ships carrying liquefied gases in bulk
xiii.	IGF Code:	The international code of safety for ships using gases or other low flashpoint fuels
xiv.	IMSBC Code:	International Maritime Solid Bulk Cargoes Code
xv.	INF Code:	International code for the safe carriage of packaged irradiated nuclear fuel, plutonium and high-level radioactive wastes on board ships
xvi.	ISM Code:	International Safety Management Code
xvii.	ISPS Code:	International Ship and Port Facility Security Code
xviii.	LSA Code:	International Life-Saving Appliance Code
xix.	MODU Code:	Code for the construction and equipment of Mobile Offshore Drilling Units
xx.	OSV Code:	Code of safe practice for carriage of cargoes and persons by Offshore Supply Vessels
xxi.	SPS Code:	Code of safety for Special Purpose Ships

1.2.4 Compliance, conformity and alignment with National Disaster Management Plan (NDMP), 2019:

National Disaster Management Plan (NDMP) provides a framework and direction to the government agencies for all phases of disaster management cycle. The NDMP is a “dynamic document” in the sense that it will be periodically improved keeping up with the emerging global best practices and knowledge base in disaster management. It is in accordance with the provisions of the DM Act 2005, the guidance given in the National Policy on Disaster Management (NPDM) 2009, and the established national practices. This plan has been prepared as per the template issued by National Disaster Management Authority (NDMA), National Disaster Management Plan (NDMP) 2019 and NDMA guidelines.

1.2.5 Conforming to global best practices:

DGS has an operational 24x7 communication center (D.G Comm Center) established in accordance with international best practices, and plays a vital coordinating role amongst various agencies and stakeholders, in case of handling of disasters. In addition, Emergency Towing Vessels (ETV’s) of capacity 60 T Bollard Pull are positioned in Chennai and Mumbai, so as to provide assistance to stricken marine vessels.

1.2.6 Alignment with national priorities, national commitments to international commitments and priorities of NDMP:

1.2.6.1 Post-2015 Global Frameworks: Sendai framework for Disaster Risk Reduction (SFDRR- 2015-2030); SDG; Climate Change:

The Post-2015 goals and agenda are set forth in the three landmark global agreements reached in 2015 – the Sendai Framework for Disaster Risk Reduction (Sendai, Japan, March 2015), Sustainable Development Goals (UN General Assembly, New York, September 2015) and Climate Change Agreement (Conference of Parties, COP21, Paris, December 2015). The three documents set the stage for future global actions on DRR, sustainable development and climate change.

The four priorities for action under the Sendai Framework are:

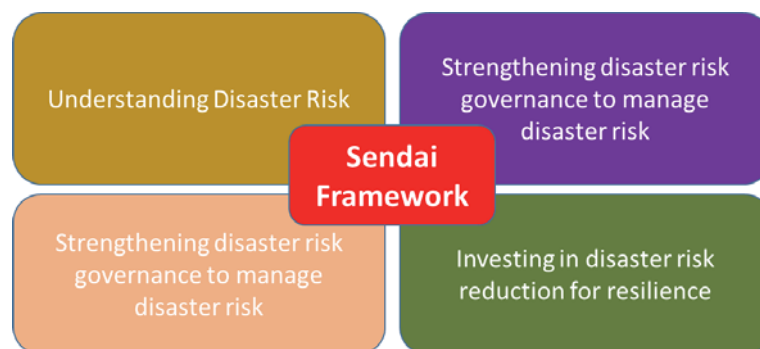


Figure 1.1: Sendai Framework

1.2.6.2 Prime Minister of India – Ten-Point Agenda for Disaster Risk Reduction:

1. All development sectors must imbibe the principles of disaster risk management
2. Risk coverage must include all, starting from poor households to SMEs to multi-national corporations to nation states
3. Women’s leadership and greater involvement should be central to disaster risk management

4. Invest in risk mapping globally to improve global understanding of Nature and disaster risks
5. Leverage technology to enhance the efficiency of disaster risk management efforts
6. Develop a network of universities to work on disaster-related issues
7. Utilize the opportunities provided by social media and mobile technologies for disaster risk reduction
8. Build on local capacity and initiative to enhance disaster risk reduction
9. Make use of every opportunity to learn from disasters and, to achieve that, there must be studies on the lessons after every disaster
10. Bring about greater cohesion in international response to disasters.

1.2.6.3 Social Inclusion:

Disasters can lead to different outcomes for demographically similar communities, where the most vulnerable groups also suffer disproportionately on multiple counts compared to others. The outcomes of marine disasters especially in relation to spillage of Oil/HNS pollution and fall of IMDG packaged cargoes significantly affect coastal communities and more importantly the fishing, harbour activities and coastal shipping.

1.3 SCOPE OF THE PLAN

This plan reflects the commitment of DGS to the marine safety and it defines the roles and actions necessary to prepare for and coordinate response with various authorities during/impending disaster.

The plan is prepared keeping DGS in the coordinating role with other government agencies and stakeholders, such as Indian Meteorological Department (IMD), Directorate General of Hydrocarbons (DGH), Oil and Natural Gas Corporation (ONGC), Indian Coast Guard (ICG), Indian Navy (IN), Port Authorities, Ship-owners and Ship-owners Associations (INSA, ICCSA), etc.

DMP is intended to provide guidance to all concerned departments within the organization with a general concept of potential emergency assignments before, during and following emergency situations in accordance with the priorities of SENDAI framework.

1.3.1 DISASTER MANAGEMENT CYCLE

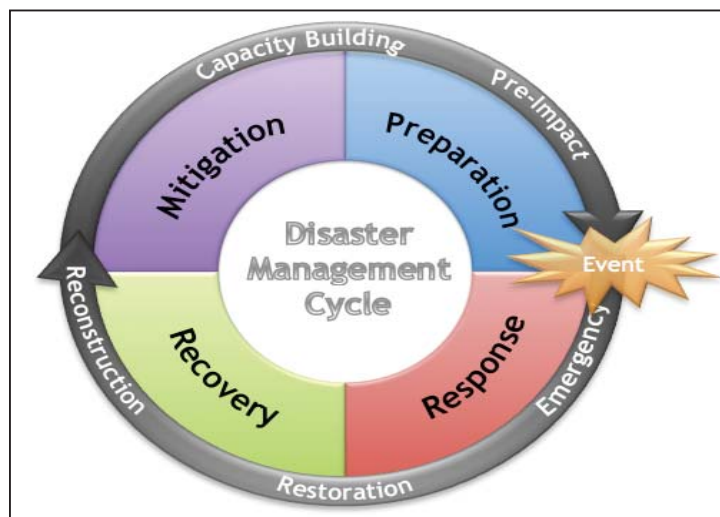


Figure 1.2: Disaster Management Cycle

Based on the culture of prevention and mitigation following a disaster or near disaster event, the capacity building measures are institutionalized by DGS as follows.

Preventive Aspects:

- Policy measures - Legislation enactment and administration of rules and regulations and procedures towards prevention, Verification of their compliance, promotion of maritime education and training,
- Promulgation of Weather-related Safety Information and forewarnings as received from competent agencies (IMD, INCOIS),
- Drawing SOPs.

Mitigative Aspects:

- Coordinate with agencies like ICG, IN, Ports, District Administration, DGH, etc.
- Issue advisories,
- Legal proceedings,
- Facilitation of Claims and Compensation.

Post Incident Aspects:

- Investigation & Root cause analysis,
- Promulgation of information – lessons learned.

1. CONCLUSION

To regulate and maintain a safer and disaster resilient marine environment by a holistic, proactive, technology driven and sustainable development strategy that involves all Stakeholders and fosters a culture of prevention, preparedness and mitigation.

1.2. RECOMMENDATIONS

DG Shipping may endeavor to establish required timeframes for capacity building, introducing research and experienced based steps for prevention and mitigation in accordance with SENDAI framework (2015-2030).

1. INSTITUTIONAL FRAMEWORK
1.6.1 National Level

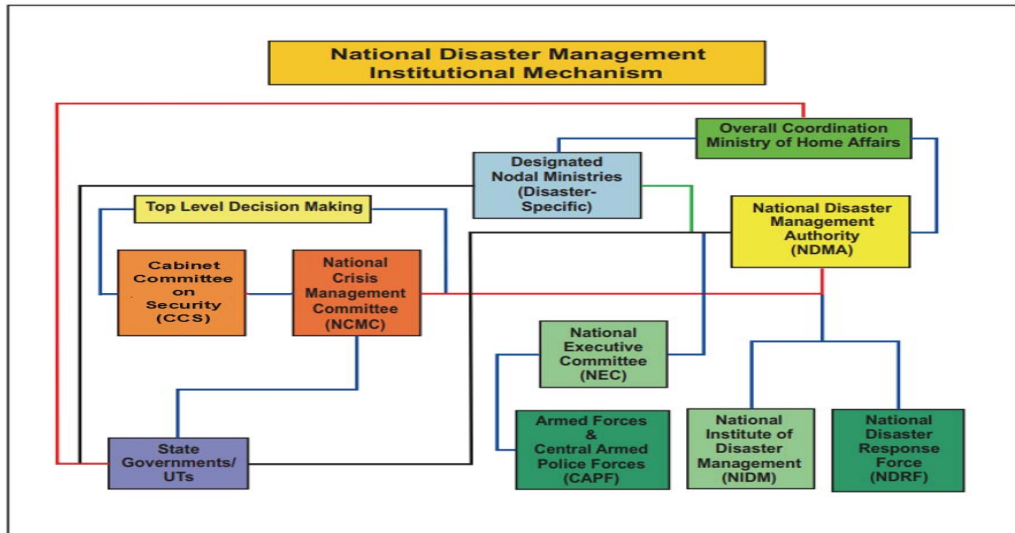


Figure 1.3: National –level disaster management – basic institutional framework

1.6.2 State Level

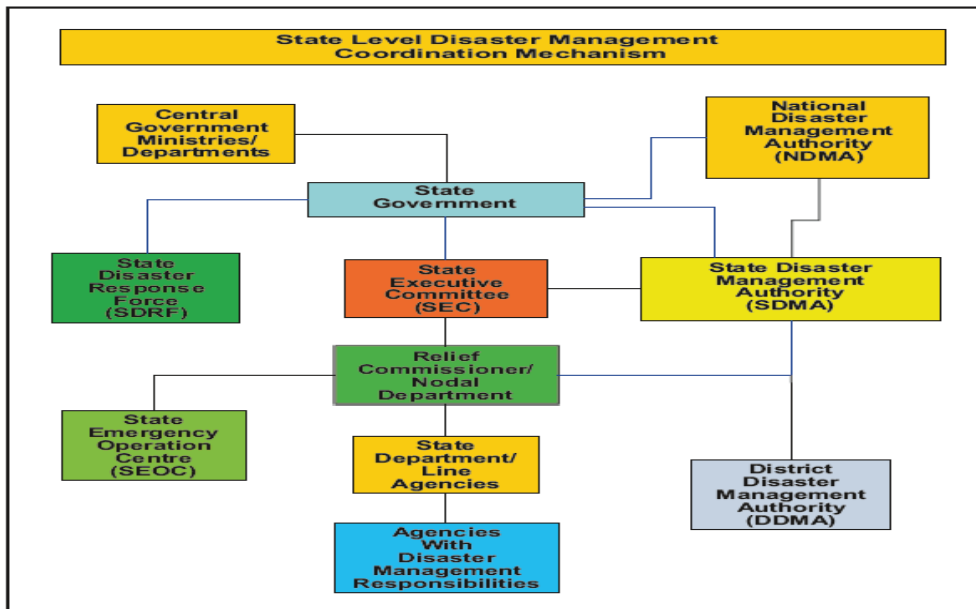


Figure 1.4: State –level disaster management – basic institutional framework

1.6.3 Department Level – Emergency Organisation

Crisis Management Team is headed by D.G(S) and comprises of Nautical Advisor (NA), Chief Surveyor (CS), Additional D.G, Chief Ship Surveyor (CSS), NS (Casualty and Response) and DDG (Crew). Additional resources as deemed necessary by the D.G(S) may be included in the ‘crisis management team’. Such as a suitable member from the IRS and/or any other organization as deemed necessary.

For flow of information amongst various stakeholders and agencies during handling of a marine casualty, refer to **Figure 1.5**

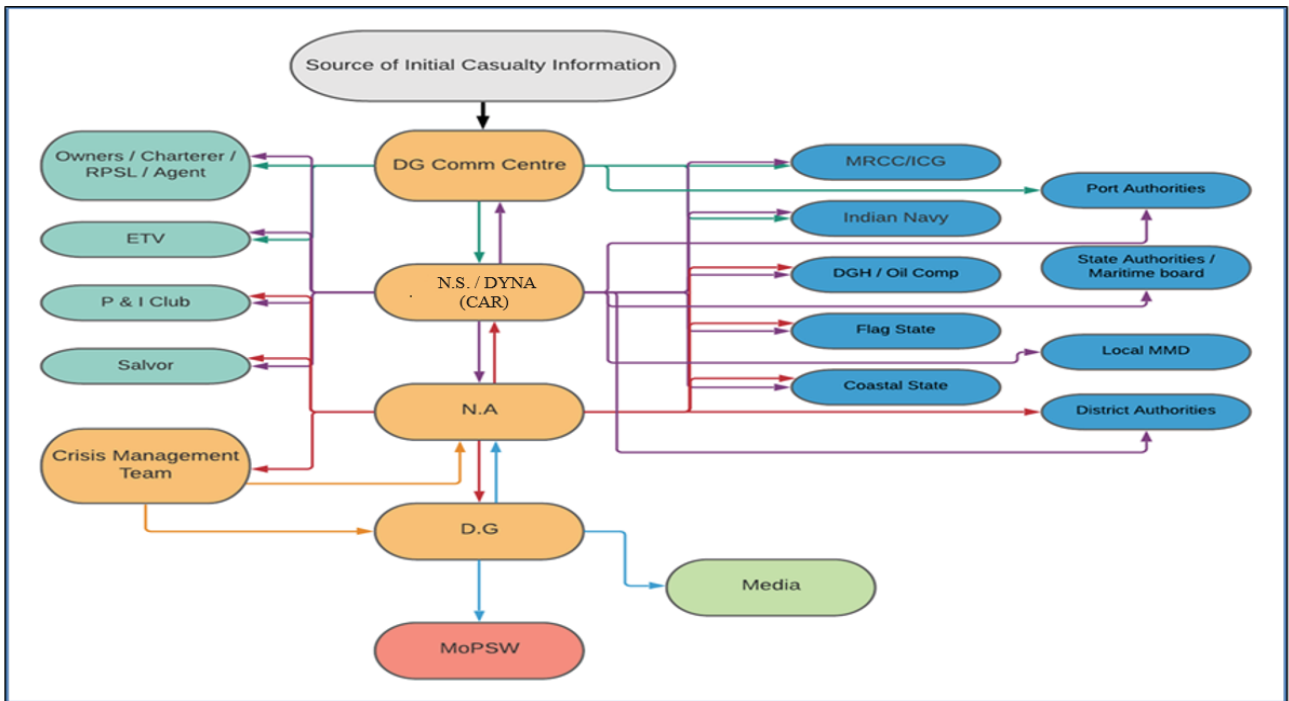


Figure 1.5: Communication Flowchart with authorities and stakeholders

2. HAZARD, RISK, VULNERABILITY & CAPACITY ANALYSIS

2.1 DISASTER RISKS, VULNERABILITIES AND CHALLENGES

Indian waters poses a disaster risk and is vulnerable to various challenges from natural disaster such as Wind and Cyclone/Storm and Tsunami. It also poses risk from human induced marine disasters such as Collision, Grounding, Stranding, Fire incident, Oil pollution, etc.

The vulnerable areas requiring immediate actions for natural disaster have been identified with the help of vulnerability atlas of India maps (refer figures 2.1 and 2.2).

2.2 UNDERSTANDING DISASTER RISKS

2.2.1 Natural Disasters

Certain meteorological phenomenon's viz. Bad weather, Cyclone, Tsunami and Bore Tide are likely to contribute hazardous situations involving shipping.

2.2.1.1 Vulnerability Atlas for Cyclone and Tsunami around Indian Coast

Around 5700 KMs (approximately 76%) out of 7500 KMs of Indian coastline are prone to cyclones and tsunamis (Source: NDMA).

2.2.1.1.1 Wind and Cyclone/Storm

Cyclones can cause significant damage to marine infrastructures and environment.

Following is the wind and cyclone hazard maps of India.

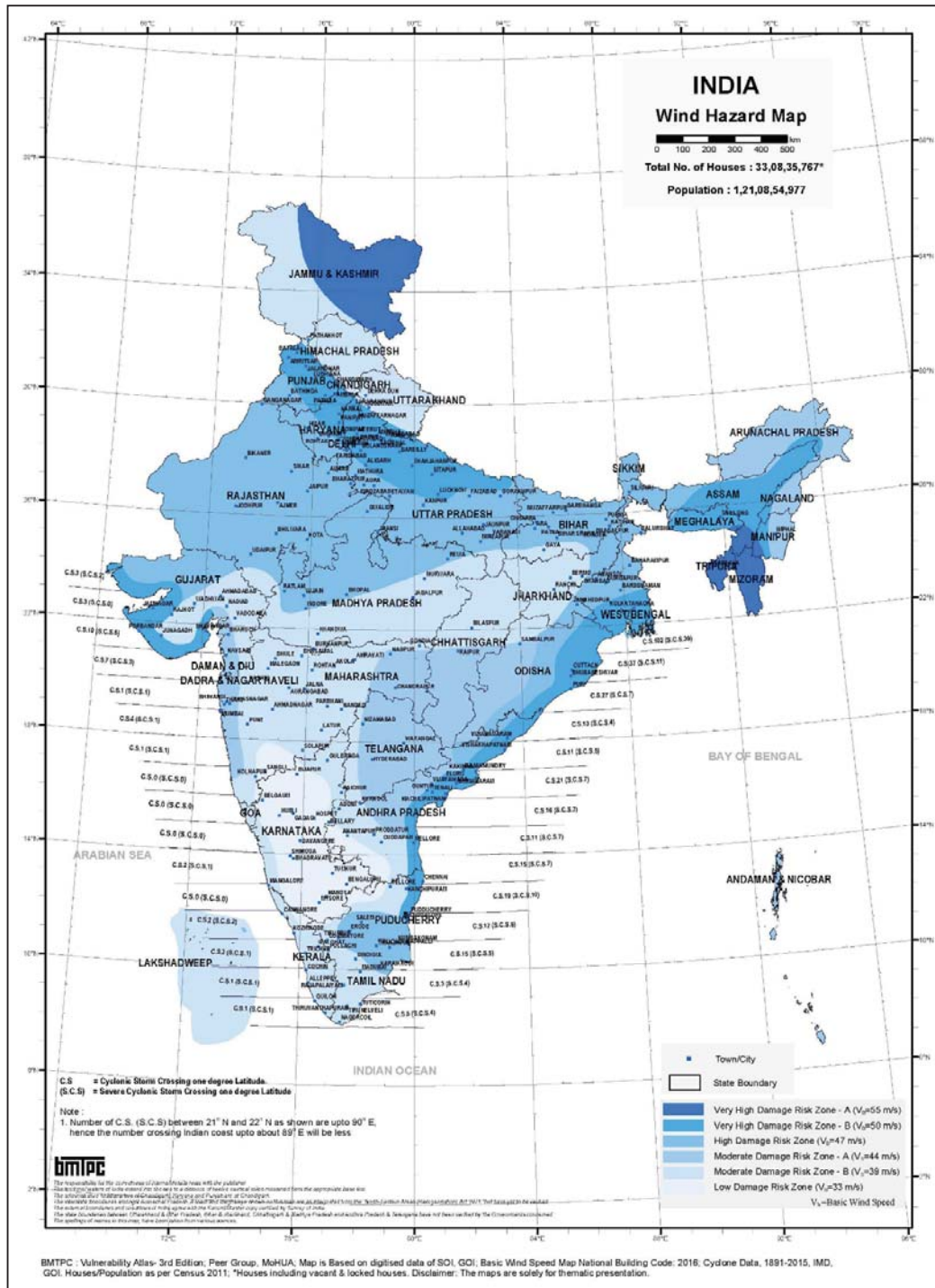


Figure 2.1: Wind Hazard Map (Source: Vulnerability Atlas of India)

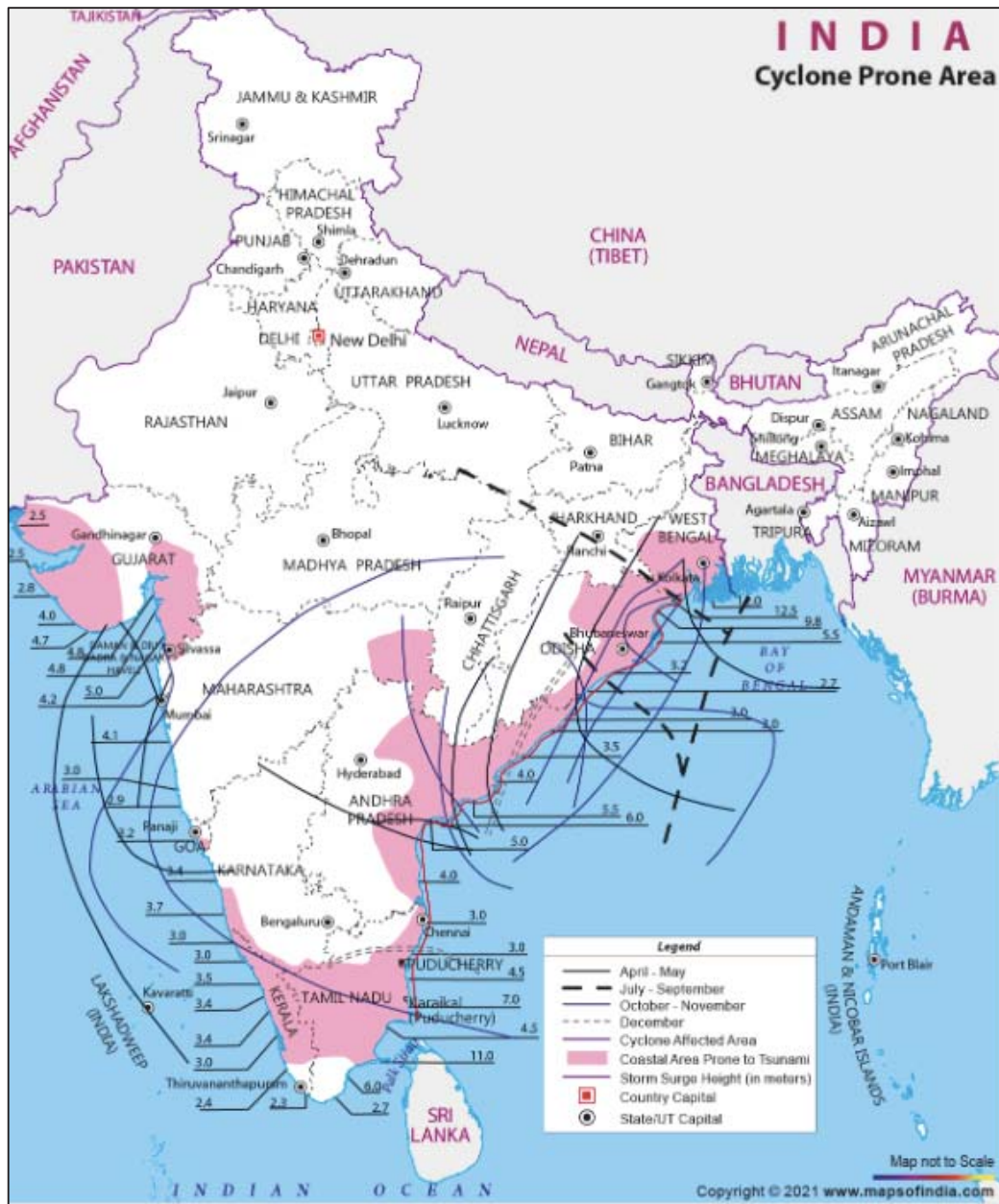


Figure 2.2: Cyclone Hazard Map (Source: Maps of India)

2.2.1.2 Tsunami

An Early Warning System for information related to earthquakes and generation of tsunami has been created under the Ministry of Earth Science, GOI.

A network of tsunami coastal stations has been setup which relay information to the center via satellites.

INCOIS provides early warnings on a regular basis.

2.2.2 Human Induced Disaster

2.2.2.1 Marine Disaster

Indian waters serve as busiest shipping routes (Refer Figure 2.3 below). A large number of vessels, of different types, ages, nationalities, laden with wide range of

cargoes, some of which may be hazardous, traverse close to India every day. The domestic coastal and offshore shipping, fishing and inland vessels activities add to the traffic density.

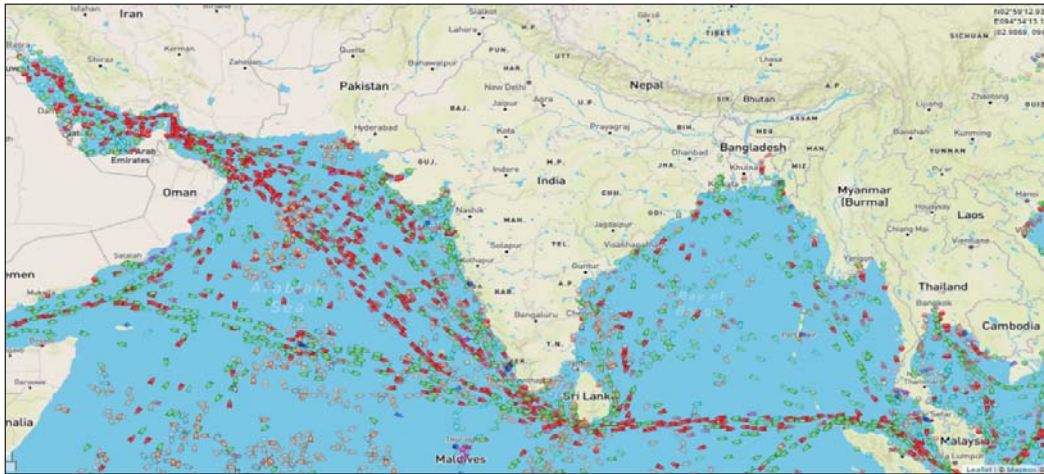


Figure 2.3: Shipping Route (source: www.marinetraffic.com)

An emergency situation may develop into marine disaster due to human error(s), equipment failure(s) and natural disasters. Such disasters may occur during navigation of vessel; during cargo handling; in other operation(s) of a vessel; etc. and may pose threat to safety, security and environment.

Based on published report by DGS, following emergency situations leading to marine disaster are identified:

- Collision,
- Grounding,
- Contact - (i) with fixed object including offshore/jetty structure; (ii) with floating object,
- Fire/explosion,
- Listing/ Capsizing,
- Flooding/Foundering,
- Sinking,
- Pollution or Safety hazard or both, due to Oil/HNS spillage,
- Wreckage.

The potential causes and its impact in general for such emergencies are highlighted in subsequent **Table 2.1**.

Sr. No.	Hazard / Disaster Detail	Possible Causes	Impacts
1	Collision between two vessels	<ul style="list-style-type: none"> • Non-compliance with COLREG, • Human error (fatigue, lack of situational awareness, knowledge, improper watch-keeping, VTS/VTMS- insufficient or incomplete alert etc.), • Vessel equipment failure/ malfunction (navigational, propulsion, steering, auxiliary, tugs), • Local congestion and sandbars, • Communication failure, • Environmental conditions (poor visibility, high current flow, unpredicted current eddies, rough weather, high wind speed), • Planning of passage not done (traffic assessment), • Dragging anchor, if at anchorage, • In-effective use of Radar and ARPA • In-effective resource management by Vessel Master, • Non-utilization of bridge equipment such as AIS for identification of targets. 	<ul style="list-style-type: none"> • Damage to one or both vessels, • Sinking, • Oil / HNS pollution, • Fire and Explosion, • Blockage of the navigational Channel, • Injuries / Loss of life.
2	Vessel - Contact with Jetty/berth/wharf	<ul style="list-style-type: none"> • Vessel equipment failure / malfunction (navigational propulsion, steering or main engine), • Misjudgment/high speed approach/lack of experience by pilot/Master/tug master, • Environmental conditions (poor visibility, high current flow, unpredicted current eddies, rough weather, high wind speed), • Breakdown of tugs, • Parting of tow line, • Inadequate illumination at Berth / Jetty /wharf, • Damaged or missing fenders, • Improper seamanship as anchor was not used to check the swing, • Inadequate ship-shore interface (e.g. vessel not been made aware that such development may occur). 	<ul style="list-style-type: none"> • Damage to vessel, quay moorings or fendering system, • Sinking, • Loss of cargo / containers, • Oil / HNS pollution, • Fire and explosion, • Injuries/loss of life.

Sr. No.	Hazard / Disaster Detail	Possible Causes	Impacts
3	Tug colliding with oil platform	<ul style="list-style-type: none"> • Communication failure, • Inadequacy of Bridge team, • Human Error (casual approach of AHT's staff), • Shortcomings in Navigation, • Engine failure/unavailable, • Lack of awareness of Marine Procedure, • No risk assessment before entering the safety zone (500m) of the platform, • Vessel equipment failure / malfunction (navigational propulsion, steering or main engine), • Environmental conditions (poor visibility, high current flow, unpredicted current eddies, rough weather, high wind speed), • Inadequate illumination. 	<ul style="list-style-type: none"> • Damage to tug/platform, • Sinking, • Oil / HNS pollution, • Fire and explosion, • Injuries/ loss of life.
4	Contact with channel and river marking buoys/ light vessels/ Fishing Nets	<ul style="list-style-type: none"> • Vessel equipment failure/ malfunction (navigational propulsion, steering, auxiliary), • Human error (improper communication, Fatigue), Environmental conditions (poor visibility, • High current flows, unpredicted current eddies, channel size/ depth), • Results of avoiding action (e. g. small craft), navigational failure (markers, lights), • Drifting of Channel Marking Buoy. 	<ul style="list-style-type: none"> • Damage to vessel &/or buoy/light vessel, • Sinking of light vessel or buoy, • Oil/HNS pollution, • Blockage of navigational channel, • Injury to personnel
5	Contact/ Allision with Lock gate	<ul style="list-style-type: none"> • Environmental conditions (poor visibility, high current flows, unpredicted current eddies, channel size/ depth, high wind), • Breakdown of tugs, • Parting of tow line, • Human error (fatigue, lack of knowledge, Misjudgment, High rate of turn etc.), • Vessel equipment failure/malfunction (navigational propulsion, steering, auxiliary). 	<ul style="list-style-type: none"> • Damage to vessel &/or Tug / Lock gate • Injury to Personnel, • Grounding of vessels due to failure to maintain impounding basin water level.

Sr. No.	Hazard / Disaster Detail	Possible Causes	Impacts
6	Grounding of vessel	<ul style="list-style-type: none"> • Misjudgment by pilot / master / tug master, • Environmental conditions (poor visibility, high current flow, unpredicted current eddies, rough weather, high wind speed), • Fishing vessel/small craft impedes passage, • Vessel equipment failure / malfunction (navigational, propulsion, steering, auxiliary), • Outdated electronic chart, • Wrong position fixing, • Failure of navigational aids, • Shifting of sand bars in the approach channel, • Inadequate sounding of the sea bottom, • Flooding of vessel/unexplained ingress of water in the engine room, • Failure to anchor the vessel in safe depths prior to vessel drifting on to shallows. 	<ul style="list-style-type: none"> • Damage to vessel, • Stranding, • Capsizing, • Oil / HNS pollution, • Loss of cargo or containers, • Blockage of Navigational/River channel, • Fire / explosion, • Injuries / loss of life.
7	Fire on vessel	<ul style="list-style-type: none"> • Fire caused by faulty equipment (e.g. engine room fire, electrical fire), • Fire caused by human error (fatigue) e.g. Galley fire, failure to take appropriate precautions with gas bottles and/or inflammable vapour, • Failure to take the appropriate precaution when carrying specific cargoes (Coal/Sulphur etc.), • Fire in containers due to incorrect declaration of the cargo, improper implementation of requirements with respect to stowage, segregation and carriage. 	<ul style="list-style-type: none"> • Damage to vessel, • Injuries / loss of life, • Stranding / Grounding/ sinking of vessel, • Oil / HNS pollution, • Drifting of vessel and collision with another vessel, • Blockage of navigational channel, • Loss of cargo/ containers

Table 2.1: Potential causes and impacts for identified emergencies

2.3 EXISTING CAPACITY MEASURES

- Coordination: DG Shipping has setup at DGCOMM Centre and Data Centre for LRIT and coordination with the MoPSW and relevant stakeholders during marine emergency situations.
- Enforcement and Certification: Field Offices - MMD – Kandla, Jamnagar, Mumbai, Goa, Mangalore, Kochi, Tuticorin, Chennai, Vizag, Paradip, Haldia, Kolkata, Port Blair, which carry out various surveys, inspections, audits, such as PSC, FSI, statutory survey and audits, etc. to ensure enforcement of existing rules and regulations.
- Policy Making: Implementation of ratified IMO conventions and codes by way of MS Act & Rules and various executive orders such as DGS Orders, notices, circulars, guidelines, SOPs etc.,
- Trainings and certifications: DGS monitor effectiveness of Sea-farers trainings e.g., STCW trainings through Maritime Institutes. Additionally, providing training to DGS officers in relation to PSC, FSI and efficient handling of response during casualty.

3. HAZARD SPECIFIC PREVENTION & MITIGATION MEASURES

3.1 SHORT, MEDIUM AND LONG-TERM MEASURES

The Directorate General of Shipping is the Indian Maritime Administration. In case of a maritime emergency or a maritime disaster, it coordinates with various Agencies and Authorities, such as Indian Coast Guard, Indian Navy, India Meteorological Department, State Authorities, etc. which are the Agencies responsible for handling of different aspects during a maritime emergency. Coordinating actions taken in case of maritime disaster is as per the Standard Operating Procedures attached as Part B of this plan, which are reviewed from time to time to incorporate industry best practices and learnings post incidents.

3.2 THEMATIC AREAS FOR DRR

In accordance with the guiding principle of Sendai Framework, Disaster Risk Reduction (DRR) requires responsibilities to be shared by different divisions/departments of DGS and various stakeholders. The effectiveness in disaster risk reduction will depend on coordination mechanisms within and across departments and with relevant stakeholders at all levels. The approach used in DM plan incorporates the four priorities enunciated in the Sendai Framework into the framework for DRR under the six thematic areas for action as follows

1. Understanding Risk
2. Inter-Agency Coordination
3. Investing in DRR – Structural Measures
4. Investing in DRR – Non-Structural Measures
5. Capacity Development
6. Climate change risk management

3.2.1 Understanding Risk

This thematic area focuses on understanding disaster risk, the Priority-1 in the Sendai Framework integrates actions for strengthening disaster resilience. The major themes are: a) Information Systems, Research, b) Zoning / Mapping, c) Monitoring, and d) Hazard Risk, Vulnerability and Capacity Assessment (HRVCA). This thematic area may involve identification of sub-standard vessel through rigorous inspection programs, technical clearance for acquisition of second-hand vessels above 25 years old, etc.

3.2.2 Inter-Agency Coordination

Inter-agency coordination is a key component of strengthening the disaster risk governance - Priority-2 of the Sendai Framework. The major themes required for interagency coordination are a) Overall disaster governance b) Response and c) Providing warnings, information, and data. This thematic area may involve establishing coordination mechanism for investigation of casualties, communication with Flag States, Port State, Shipping Companies, Insurance agencies, Pollution control board, Major ports, State govt. agencies, etc.

3.2.3 Investing in DRR – Structural Measures

Undertaking necessary structural measures e.g., provision of DG COMM Centre, Emergency towing service, etc. is one of the major thematic areas for action for disaster risk reduction and enhancing resilience. These consist of various physical infrastructure and facilities required to help communities cope with disasters. The implementation of these measures is essential to enhance disaster preparedness, a component of Priority-4 of the Sendai Framework. It is also

an important component of investing in disaster risk reduction for resilience, which is Priority-3 of Sendai Framework.

3.2.4 Investing in DRR – Non-Structural Measures

Non-Structural measures mainly consist of set of appropriate laws, mechanisms, and technological regimes are crucial components in strengthening the disaster risk governance to manage disaster risk, which is Priority-2 of the Sendai Framework. These non-structural measures comprising of international regulations, codes, national regulations (MS act and rules), circulars, orders, guidelines, and SOPs which empowers the DGS to mainstream disaster risk reduction and disaster resilience into development activities. Ensuring “risk transfer” through insurance is also important element of the DRR-Nonstructural measures.

3.2.5 Capacity Development

Capacity development includes training programs, curriculum development, large-scale awareness creation efforts, and carrying disaster response exercises. It is also strengthening the DRR governance at all levels to better manage risk and to make the governance systems more responsive.

3.2.6 Climate change risk management

Climate change significantly alters the geographic spread, frequency and intensity of hydro metrological extreme events. It can also exacerbate their impacts. Investments in DRR can play an important role in supporting communities to adapt to climate change. This thematic area includes participation in implementation of IMO regulations relating to GHG emissions reduction, IMO 2020 Sulphur Cap on Fuels, NOx technical code, etc.

3.3 HAZARD-WISE RESPONSIBILITY MATRIX FOR DISASTER RISK MITIGATION

The Directorate General of Shipping is the Indian Maritime Administration. In case of an maritime emergency or a maritime disaster, it coordinates with various Agencies and Authorities, such as Indian Coast Guard, Indian Navy, India Meteorological Department, State Authorities, etc. which are the Agencies responsible for handling of different aspects during a maritime emergency. Standard Operating Procedures in this regard are attached as Part B of this plan and may be referred for details.

4 MAINSTREAMING DISASTER RISK REDUCTION

Ship construction, certification and surveys are a part of well-established procedures adopted in accordance with rules of classification societies and as such DRR is built in the process of ship construction and ship operations. However, global nature of shipping pose various challenges in this regard, which has necessitated development, ratification and accession of various conventions at the IMO, by member states through a comprehensive voting process. Adoption of various conventions pertaining to safety of life and property, pollution prevention, security, climate change, etc. are part of such measures, which are implemented. Indian Maritime Administration (DG Shipping) carries out this responsibility on behalf of Govt. of India.

In the context of Indian Maritime Administration, the following measures may lead to mainstreaming DRR:

4.1 Investing in DRR – Structural measures (creating Disaster Resilient infrastructures) e.g., Implementation of provisions of existing Acts, Rules and Executive Orders in construction of ships for enhancing safety, security, pollution prevention in shipping; Implementation of in-force international regulations, such as Long Range Identification and Tracking System (LRIT), Provisions of SAR Convention, including establishment of MRCCs on Indian Coast; Deployment of Emergency Towing Vessels; etc. are some of the steps in this direction.

4.2 Investing in DRR – Non – Structural measures e.g., Implementation of ratified and in-force Conventions (MARPOL, SOLAS, etc.)

Measures instituted by DGS includes Preparation and Promulgation of the following:

- Acts
- Rules,
- DG Orders,
- M.S Notices.
- Circulars,
- SOPs,
- Manuals and Guidelines.

4.3 Strategies for sustainable development practices in accordance with SDG 14 and their implementation viz. prevention of marine pollution.

Consequent to development/expansion of new policies and addition of facilities by stakeholders (Ship owners, ports) etc., sustainability plan involving key issues like economic, environmental (e.g., Carbon Emission and Capture) and social costs of the plans and policies to be followed.

4.4 Disaster Risk Governance – Programmes and policies e.g., Institutionalization of safety measures for Indian Shipping, Navigation, SAR Coordination Committee, Forwarding of weather warnings, etc.

5 INCLUSIVE DRR

- Support and coordination for compensation/claim related matters of crew member's consequent to a marine disaster. The DG Shipping Crew Branch, Nautical Wing and the jurisdictional MMD provides support to ensure due and adequate compensation as per the governing provisions of the statute are addressed. Thus, expediting the process in providing the relief to the affected persons.
- In cases of marine disaster leading to damage of environment, adversely affecting the local population including fishing community, in such cases settlement claims and compensation is paid as per the applicable laws with DG Shipping playing the coordinating role as necessary.

6 COHERENCE OF DISASTER RISK MANAGEMENT ACROSS RESILIENT DEVELOPMENT AND CLIMATE CHANGE ACTION

6.1 SUSTAINABLE DEVELOPMENT GOALS AND DRR:

The SDG Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development) has set targets for significant reduction of marine pollution and also aims to minimize and address the impacts of ocean acidification.

In respect of aspects relating to SDG the following actions by DGS have been identified having bearing on disaster risk reduction and resilience:

- Implementation of IMO regulation for marine pollution prevention.
- Order on Prohibition of use of Single use Plastic.
- Promote utilization of centralized port reception facility portal: Swachh Sagar.

6.2 CLIMATE CHANGE RISK MANAGEMENT AND DRR

In respect of aspects relating to climate change the following plan/procedures by DGS have been identified having bearing on disaster risk reduction and resilience:

- High wind and cyclone – Implementation of DGS-SOPs during an occurrence.
- Implementation of IMO goals on GHG emissions reduction.
 - Monitoring of Exhaust gas emission levels - Effective measures under MARPOL Annex VI regulations to control Green House Gas emissions (GHG).
 - EEDI and SEEMP monitoring for fuel consumption on vessels
 - Sulfur capping on marine fuel
 - Provision of alternate fuels

6.3 ALIGNMENT TO SENDAI FRAMEWORK

In accordance with the Sendai Framework, it is necessary to address existing challenges and prepare for future ones.

- The framework notes that, to cope with disasters, it is “urgent and critical *to anticipate, plan for and reduce disaster risk*”.
- It requires the *strengthening of disaster risk governance and coordination* across various departments.
- It requires the *participation of relevant stakeholders* at different levels.
- It is necessary to *invest in awareness and trainings*.
- It requires *investments in research* and the use of technology to enhance multi-hazard Early Warning Systems (EWS), preparedness and response.

The above points are noted and anticipatory measures presently instituted against each of the above measures in para 2.3 of HRVCA. Lessons learnt through casualty investigation are shared publicly on the website.

In the chapter 3 of Hazard Specific Prevention and Mitigation Measures, the development responsibility in each of the thematic areas is addressed indicating present and planned arrangement and responsibilities to address them.

7 CAPACITY DEVELOPMENT AND COMMUNICATION

7.1 CAPACITY DEVELOPMENT

The capacity development covers all aspects of disaster management. The key aspects and broad list for capacity development applicable are summarized in **Table 7.1**.

Key Aspect	<i>Capacity Development</i>
Prevention or mitigation for disaster risk reduction	<ul style="list-style-type: none"> • Regulatory framework • Preparing DM plan and SOP's • Surveys/inspections • Training and Certifications
Effective preparedness and response	<ul style="list-style-type: none"> • Effective coordination with Government agencies and relevant stakeholders • Adoption and adaptation of emerging best practices • Early warnings effective dissemination of information • Preliminary Inquiry of casualties
Recovery and Build Back Better	<ul style="list-style-type: none"> • Studies on past disasters and recovery to draw useful lessons

Table 7.1: List of Capacity Development

7.1.1 Training

A well-coordinated programme of training exercises includes activities of varying degrees of interaction and complexity.

1. Training is imparted to DGS officers for casualty Investigation and PSC/FSI inspections.
2. Promotion of maritime education and trainings, workshops and seminars e.g. STCW trainings.

7.1.2 Exercises

Emergency exercises have the following objectives.

1. Participation in exercises with regard to security, pollution prevention and response measures, SAR, Casualty;
2. To test the adequacy of the effectiveness, timing, and content of the plan and implementing procedures;
3. To ensure that the emergency organization personnel are familiar with their duties and responsibilities by demonstration;
4. Maintain emergency preparedness.

7.2 COMMUNICATION STRATEGY

DG COMM Centre is the first point of contact in case of any marine disaster and acts as the coordinating office in case of a disaster such as Cyclone / Storm / Tsunami.

The communication strategy will be dealt using available means of communication equipment.

7.2.1 Communication Flowchart

Communication flowcharts between the CMT personnel and key agencies for Cyclone (refer figure 7.1) and Marine disaster (refer figure 1.5) are as follows.

8 COORDINATION – HORIZONTAL AND VERTICAL LINKAGES

Communication is the most important tool for effective coordination during marine disaster. Emergency Operation Centre (EOC) with DG COMM Centre is the enabler of communication and coordination. It will coordinate with all heads of department at the local, state and national level groups for effective implementation of DM Plan.

Coordination with the following government departments, authorities, agencies and stakeholders would be required:

- MoPSW,
- Regional Country in case of pollution,
- Indian Coast Guard, Indian Navy,
- INSA, ICCSA,
- Port Authorities,
- DG of Hydrocarbons, DG of Lighthouses and Lightships,
- Flag State,
- IMD, Regional Meteorological Centre,
- INCOIS,
- District/State Disaster Management Authority,
- Pollution Control Board,
- DD, AIR for media briefing,
- P & I Club and their local correspondent,
- Salvage firms,
- RO,
- Enlist services of GOI/GOO laboratories and expert institutions for Specialized services (contact nos.) e.g., BARC emergency response center in case of radiological emergencies, DRDO for CBRN emergencies.

9 PREPAREDNESS AND RESPONSE

9.1 PREPAREDNESS

9.1.1 Human Resource Planning - Crisis Management Team

Crisis Management Team is headed by DG(S) and comprises of

- Nautical Advisor (NA) (Nautical Wing),
- Chief Surveyor (CS) (Engineering Wing),
- Additional DG (Administration Wing),
- Chief Ship Surveyor (CSS) (Naval Architecture Wing),
- Dy Nautical Advisor (DYNA)/Nautical Surveyor (Casualty and Response) (Nautical Wing),
- DDG (Crew),
- Local MMD Principal Officer,
- Additional resources as deemed necessary by the DGS may be included in the CMT. Such as a suitable member from the IRS and/or other RO whose classed vessel is involved in the casualty any other organization as deemed necessary.

9.1.2 Roles and Responsibilities of CMT

- To provide technical assistance and information as necessary during the Marine casualty,
- To provide advice relating to the ship safety, structural integrity, strength and stability of the vessel/s involved in Marine casualties,
- Co-ordinate and Advise regarding the extent of the damages and any necessary steps to prevent further impact to the ship, its crew and the marine environment,
- Coordinating with external agencies/authorities for disseminating and receipt of information from IMD, INCOIS, ICG, MRCC, IN, DGH, ONGC, Port Authorities, Maritime Boards or State Authorities and stakeholders,
- Giving regular updates and instructions (if any) to/from DGS,
- Coordinating and giving regular updates to the MoPSW,
- Coordinating with foreign flag state involving marine casualty in Indian waters. Coordinate with port state / coastal state in case of Indian flag vessel involved in foreign waters,
- To interact with media.

9.1.2.1 Roles and Responsibility of Key personnel

9.1.2.1.1 DGS:

- Keeping the MoPSW posted of all developments at periodical intervals,
- To interact with media.

9.1.2.1.2 Nautical Advisor:

- To activate the CMT, as required,
- Obtain details of incident and of any Mitigative actions taken,
- To disseminate the information of the incident to all the key members of the CMT,
- To act as a contact source of information for further regular updates to the CMT,
- To advise the DGS on Matters of reporting to MoPSW and Media.

9.1.2.1.3 DYNA/ Nautical Surveyor (Casualty and Response):

- Analyze Preliminary Inquiry Reports and prescribed preventive and corrective measures,
- To disseminate the information of the incident to NA & CMT,
- To act as a contact source of information for further regular updates to the NA & CMT
- Interaction with SAR Agencies and shipping companies during the occurrences of casualties,
- Dealing with the matters relating to oil / chemical pollution such as Civil Liability, IOPC, Oil cess and investigation into pollution incidents.

9.1.2.1.4 Chief Surveyor:

- To provide expert technical advice in the matter.

9.1.2.1.5 Chief Ship Surveyor:

- To provide expert technical advice in the matter.

9.1.2.1.6 Additional DG:

- To provide administrative and financial advice in the matters.

9.1.2.1.7 Local MMD Principal Officer (P.O.):

- Inform DGCOMM Centre details of any casualty received in their jurisdiction,
- Verify the information of casualty and do the site inspection as required,
- Carry out Preliminary Inquiry as per the Section 359 of the M.S Act.
- Liaise with the DYNA or NS in-charge of Marine casualty and also with the CMT formed at the DGS,
- To advice the Indian Coast Guard MRCC on pollution related matters in consultation with the DGS,
- To co-ordinate with state authorities like Collector's office and Local Disaster Management Units, if required,
- Act as a contact source of information for regular updates to the CMT.
- To take instructions from the DGS in the matter.

9.1.3 Strategies and activities for preparedness and response phases

Strategies for natural disasters (Cyclone, Tsunami) planning are formulated at state and national level in accordance with NDMP 2019 and NDMA guidelines.

However, strategic activities for preparedness and response phases for DGS are as follows:

9.1.3.1 Early warning/alarm

Warning in case of Cyclones and Tsunamis shall be received from Government weather forecasting agencies such as IMD, INCOIS, etc.

In regard to occurrence of incidents at sea, information may come from a various sources such as ship owner, ship manager, agent, master, crew, port authority, foreign flag admin, and other public authorities – Indian Navy, ICG, Customs and families of crews. In all cases the source reporting shall report on the DGS online casualty reporting module, maximum information shall be gathered and reported. In addition, the person shall also contact DG Comm Center and intimate about the incident

9.1.3.2 Coordination

- Dissemination of information received from IMD for Cyclone/Storm,

- Issuance of Advisories in case Cyclone is predicted.
- Coordination with governmental agencies and relevant stakeholders,
- Coordination with Insurance companies and ship owners for the salvage or wreck removal,
- Coordination with Insurance companies and ship owners for Claims and compensation matters.

9.1.3.3 Search and Rescue (SAR)

Nodal Agency for SAR operations is the ICG. However, DGS / DG Comm Centre coordinates with ICG, IN and other stakeholders during SAR operation.

9.1.4 Flow chart of activities with timeline

Refer Figure 1.5 and 7.1 for activities. Timelines for these activities will be recorded by the concerned personnel of the DGCOMM center.

9.2 EARLY WARNING/ ALERT SYSTEM

9.2.1 Internal and External

The information received from the competent agencies (para 9.2.1.1) shall be disseminated to the DGS-internal departments and its stakeholders in periodic manner.

9.2.1.1 Central Agencies

These agencies shall be responsible for keeping track of developments in respect of specific hazard assigned to them and inform the designated authorities/agencies at National, State and District levels about the impending disasters. All these agencies have developed guidelines for early warning of disasters.

Hazard	Agency
Cyclone	India Meteorological Department (IMD)
Tsunami	India National Centre for Oceanic Information Services (INCOIS)
Flood	Central Water Commission (CWC)

Table 9.1: Central agencies for issuing warnings (Source: NDMP 2019)

9.2.2 Control Room- Emergency Operation Centre (EOC)

DG Comm Centre is manned 24x7 and acts as the emergency control room.

9.2.3 Procedures for receiving and disseminating warnings

9.2.3.1 Cyclone

The DG Comm Centre upon receipt of the cyclone warning / information from IMD, to disseminate the received information to Ship owners (through owners associations), Ports, DGH, OISD, ICG, IN and other stakeholders.

Indian Meteorological Department (IMD) has a developed detailed procedure for Four Stage Warning of Cyclone

- 1. Pre-Cyclone Watch:** Pre-cyclone watch is an early warning issued about 72 hours in advance of the commencement of bad weather.

2. **Cyclone Alert:** Cyclone Alert is issued by IMD and depending upon various factors may be about 5 days prior to the expected commencement of adverse weather.
3. **Cyclone Warning:** After formation of Cyclone, cyclone warning is issued twice a day by high priority telegrams based on 0830 IST and 1730 IST charts till the weather improves. Depending upon the severity the frequency is increased and may be issued every 3 hours also.
4. **Post Landfall Outlook:** Post landfall outlook is issued at least 12 hours in advance of the landfall by concerned CWCs. On the basis of this outlook, the concerned Meteorological Centre will also issue cyclone warnings for the interior areas.

9.2.3.1.1 Cyclone Warning Dissemination System (CWDS)

Cyclone Warning Dissemination System (CWDS) receivers have been established in vulnerable coastal areas using INSAT/METSAT.

In addition, Cyclone Warning is disseminated through the following means:

- a. Warnings through All India Radio (AIR) Bulletins
- b. Television
- c. Press Bulletins
- d. Aviation Warning.

9.2.3.2 Tsunami

The DG Comm Centre upon receipt of the Tsunami warning / information from INCOIS, to disseminate the received information to Ship owners (through owners associations), Ports, DGH, OISD, ICG, IN and other stakeholders.

INCOIS provides advance warnings on Tsunami likely to affect coastline.

Tsunami warnings and alerts are as follows

Tsunami Warning (RED) contains information about the earthquake and a tsunami evaluation message indicating that tsunami is expected. This is the highest level wherein immediate actions are required to move public to higher grounds. Message also contains information on the travel times and tsunami grade (based on run-up estimates) at various coastal locations.

Tsunami Alert (ORANGE) contains information about the earthquake and a tsunami evaluation message indicating that tsunami is expected. This is the second highest level wherein immediate public evacuation is not required. Local officials should be prepared for evacuation if it is upgraded to warning status. Message also contains information on the travel times and tsunami grade at various coastal locations.

Tsunami Watch (YELLOW) contains information about the earthquake and a tsunami evaluation message indicating that tsunami is expected. This is the third highest level wherein immediate public evacuation is not required, Local officials should be prepared for evacuation if it is upgraded to warning status. Message also contains information on the travel times and tsunami grade at various coastal locations.

Tsunami cancellation (GREEN) will be issued if the tsunami warning was issued on the basis of erroneous data or if the warning center determines from subsequent information that only an insignificant wave has been generated. In addition, tsunami warning may be cancelled on a

selective basis when a significant wave that has been generated clearly poses no threat to one or more of the areas the warning center warns, either because of intervening continents or islands which screen them or because the orientation of the generating area causes the tsunami to be directed away from these areas.

Tsunami All Clear (GREEN) bulletin indicates that the ‘Tsunami Threat’ is passed and no more dangerous waves are expected.

9.2.3.3 Flood

Central Water Commission has developed a network of flood forecasting stations and issues Daily Flood Bulletins to all designated Authorities/Agencies of the Central Government and State Governments/ district Administration. In case of riverine ports for e.g., Syama Prasad Mookerjee Port, Kolkata, warnings/information (bore-tide) can also be available from state level hydrographic departments.

9.3 HAZARD SPECIFIC RESPONSE PLAN

The following disasters are considered for drawing up of response plan and these are given at succeeding paragraphs.

Sr. No.	Scenarios	Page No.
1.	Marine Disaster	41
2.	Natural Disasters (Cyclone/Storm)	47

9.3.1 Scenario 1

Part A:

1. Marine Disaster

Due to international nature of shipping DGS being the Indian Maritime Administration, in regards to marine casualty, it not only deals with Indian Flag vessels in Indian waters, but also foreign flag vessels in Indian waters and Indian flag vessels in foreign waters. A representative diagram in such cases is shown below in Figure 9.1.

2. **Precautions in place:** Compliances to Marine Rules and Regulations, MS Notices, DGS orders, Circulars, SOPs (DGS-SOP for Marine Casualty), and Guidelines.

3. **Impact Zone:** Indian and Foreign waters.

4. **Resources:** CMT, EOC, DG COMM Center and Communication and tracking equipment.

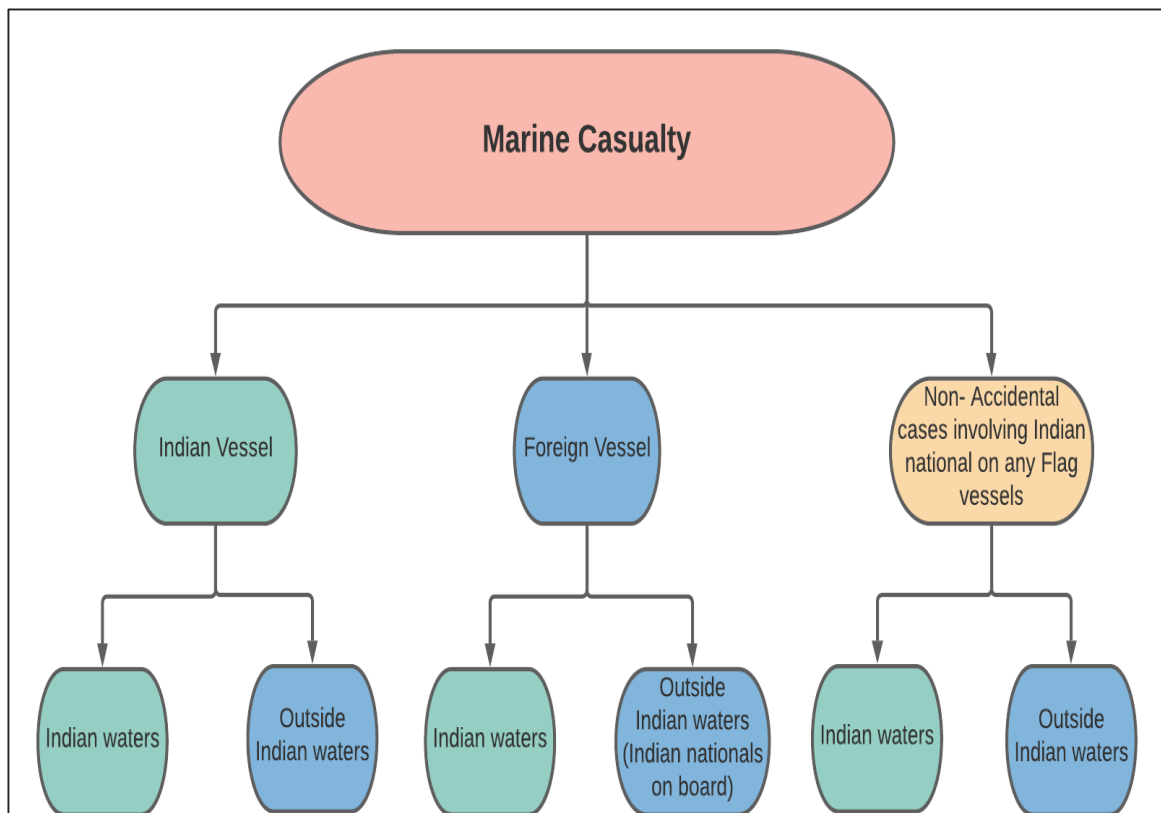


Figure 9.1: Marine Casualties – Categories

Part B: Action Plan

1. Role of DGS:

Response Action
a. To exercise overall control. He will be kept posted of all developments at periodical intervals.
b. To keep MoPSW and other concerned authorities posted on action taken, progress report on combat action and follow-up.

2. Role of Nautical Advisor (NA)

Response Action
a. To activate the CMT, as required.
b. To act as a contact source of Information for regular updates to the CMT.
c. To ensure necessary and required actions is taken by DYNA/NS.
d. In case of casualty involving ‘Indian Flag vessel(s) in Indian waters and ‘Foreign Flag vessel in Indian waters’ to undertake the following: <ol style="list-style-type: none"> i. In case of a shipping casualty as per MS Act, ensure that Principal officer of jurisdictional MMD is instructed for nominating a suitable Surveyor for carrying out the PI (Preliminary Inquiry). ii. Coordinating with neighboring states, if necessary and especially in case of casualty involving pollution, as may be required.
e. In case of casualty involving ‘Indian Flag vessel outside Indian waters or Foreign Flag vessel with Indian national(s) outside Indian waters’ to undertake the following: <ol style="list-style-type: none"> i. As required, flag state is to be requested to share the inquiry report, as the case may be, and informing them to reserve the right to participate in the inquiry as the substantially interested state, if deemed necessary. ii. If required, request coastal state / port state to share the inquiry report, as the case may be, and informing them about reserving the right to participate in the inquiry as the substantially interested state, if deemed necessary. iii. In case of a shipping casualty as per MS Act, ensure that Principal officer of a MMD is instructed for nominating a suitable Surveyor for carrying out the PI (Preliminary Inquiry). iv. Communication to the Indian Embassy/Mission in the country, for providing assistance to Indian nationals as required and for any other assistance if required.

3. Role of DGCOMM Centre:

Response Action	Contact
a. Inform NA and DYNA/NS (Casualty & Response) by phone.	<ul style="list-style-type: none"> • NA • DYNA/NS (Casualty & Response)
b. Send ‘first information report’ for marine casualty (attached as Annexure 2) to owner/ manager/ agent/ master or other concerned, asking them to update all the required information in the ‘online casualty module’	<ul style="list-style-type: none"> • Owner • Manager • Agent • Master
c. Intimate the nearest MRCC.	<ul style="list-style-type: none"> • MRCC

d. Under the directions of DYNA/NS (Casualty and Response), mobilize ETV as required.	
e. Port Authority (if nearby or within Port limits) to be informed to mobilize resources for rendering assistance.	<ul style="list-style-type: none"> • Port Authority
f. Using RPSL (Recruitment and Placement Services License) Module of DGS e-governance, ascertain if there are any Indian nationals on board vessel.	
g. Identify vessels nearby the casualty and forward to the MRCC for rendering assistance.	
h. Owners, Charterers, RPSL and agents to be informed of the status and ask them to mobilize resources for rendering assistance.	<ul style="list-style-type: none"> • Owners • Charterers • RPSL • Shipping Agents
i. Under the directions of DYNA/NS (Casualty and Response), contact the Coastal State as applicable to render assistance as required.	<ul style="list-style-type: none"> • Coastal State
j. Under the directions of DYNA/NS (Casualty and Response), contact the Indian High Commission/ Indian Embassy/ Indian Consulate as applicable to render assistance as required.	
k. In case of Foreign Flag vessel with Indian nationals on board, under the directions of DYNA/NS (Casualty and Response), contact the Flag State, requesting to mobilize resources for providing necessary assistance and coordinating with other stakeholders.	
l. Under the directions of DYNA/NS (Casualty and Response), as applicable contact the Flag State and/or Coastal State informing them that India being the substantially interested state, reserves its right to be part of the safety investigation and request for the draft report.	<ul style="list-style-type: none"> • Flag State/Coastal State
m. Inform maritime board/ state authorities regarding the incident and request them to provide assistance.	<ul style="list-style-type: none"> • Maritime board • State authorities
n. To confirm with MRCC, Navigation Warning through NHO or ISN (International Safety Net) through Coast Guard has been issued.	
o. Govt. Authorities concerned to be notified of the developing situation as per Escalation matrix, Annex 1.	<ul style="list-style-type: none"> • Govt. Authorities
p. To coordinate with jurisdictional MMD's to obtain regular updates and status of the casualty.	<ul style="list-style-type: none"> • Jurisdictional MMD's
q. To gather all relevant details from the Owners / Charterers / Agents / RPSL etc.	
r. Draft SITREP and forward to DYNA/NS (Casualty and Response).	

s. In case of Oil/Chemical pollution coordinate with relevant authorities including ICG, Port Authorities.	<ul style="list-style-type: none"> • ICG • Port Authorities
t. Under directions of DYNA/NS (Casualty and Response), issue Notice to all concerned (owner, charterers, agents, master, etc.) - Refer to Annex 3 and 4.	
u. Under directions of DYNA/NS (Casualty and Response), as applicable issue instructions to P.O. of the jurisdictional MMD to conduct 'Preliminary Inquiry' (P.I).	
v. To contact Collectorate's office or the S.P's office in case any help is needed from local administration.	<ul style="list-style-type: none"> • Collectorate's office • S.P's office
w. To keep log of all activities including transmission and receipt of messages in chronological order with time stamps.	
x. To ensure the companies update the incident status on the 'online casualty reporting module'.	

Note: Log of events and reporting timing should be noted by concerned duty personnel

4. Role of DYNA/Nautical Surveyor (NS) In-charge of Marine Casualties

Response Action	
a. To disseminate the information of the incident to all the key members of the CMT.	
b. In case of shipping casualty as per MS Act, to communicate to the jurisdictional MMD Principal Officer, for nomination of Surveyor for conduct the Preliminary Inquiry (PI).	
c. To Communication to the Indian Embassy/Mission in the country, for providing assistance to Indian nationals if required and other assistance as required.	
d. To request flag state to share the inquiry report, as the case may be, and informing them about reserving the right to participate in the inquiry as the substantially interested state, if deemed necessary.	
e. Request coastal state / port state to share the inquiry report, as the case may be, and informing them about reserving the right to participate in the inquiry as the substantially interested state, if deemed necessary.	
In case of Grounding / Stranding/ Collision:	
f. To Mobilize Emergency Towing Vessel (ETV) in case company is not able to arrange Salvage (if required).	
g. To instruct DGCOMM to have ISN issued through ICG / MRCC to warn other ships navigating in the area about the site of Wreck due to Grounding / Stranding / Collision.	
h. To co-ordinate with ICG/MRCC, Port Authorities, DGLL and other agencies.	
i. To Co-ordinate with RO for assessing the structural integrity, strength and stability of the vessel/s involved.	
In case of Oil /Chemical pollution:	
j. To issue notice as per Section 356(J) and (k) of the MS Act.	

- k. Invoke relevant provisions of the Merchant Shipping Act 1958 in case the polluting ship fails to take action.
- l. Co-ordinate with Ship Owners to arrange vessels for transfer of Oil/Chemical.
- m. Reporting of Oil/Chemical spill Incidents to the Flag state of the Ship and the neighboring coastal State which is likely to get affected by the pollution.
- n. To advise ICG/MRCC on Pollution related matters.
- o. To take Administrative and Legal action for processing the Claims against damages/cost incurred by Coast Guard, Persons, Ports, State Governments and other agencies.
- p. To coordinate with ICG for pollution response.

In case of Flooding or Breach of Hull:

- q. To coordinate with owners, insurers and agent to have Salvage vessel(s) deployed to assist the vessel to take it to a safe place.
- r. To inform vessel crew to check the cargo holds/ tanks for water leaks and inform these figures from Ship to CMT.
- s. If necessary, to instruct DGCOMM to have ISN issued through ICG / MRCC to warn other ships navigating in the area.
- t. To co-ordinate with RO for assessing the structural integrity, strength and stability of the vessel/s involved.

In Case of Fire Onboard:

- u. To coordinate with owners and agent to have vessels with firefighting capabilities deployed to assist the vessel.
- v. To coordinate with owners and agents to ascertain present condition and steps taken at the site to control or extinguish the fire.
- w. If necessary, to instruct DGCOMM to have ISN issued through ICG / MRCC to warn other ships navigating in the area.

5. Role of Chief Surveyor (Engg. Wing):

Response Action

- a. Coordinate with the CMT.
- b. To provide expert technical advice.

6. Role of Chief Ship Surveyor (Naval Architecture Wing):

Response Action

- a. Coordinate with the CMT.
- b. To provide expert technical advice.

7. Role of Additional DG:

Response Action

- a. To provide administrative and financial advice in the matters.

8. Role of DDG (Crew) (In case of death):

Response Action
a. Issue a letter to the concerned shipping master to conduct an inquiry in accordance with section 452 of the MS act, 1958 as amended;
b. Issue a letter to the concerned flag administration to conduct a casualty as per their national laws;
c. Issue a letter for conducting a fact-finding inquiry to the concerned Indian Embassy/Mission in the country where the accident has taken place or to the Indian Embassy/Mission at the next port of call of the vessel, in cases where the accident has taken place at high seas and preliminary inquiry has not been ordered.

9. Role of MMD Principal Officer

Response Action
a. Inform DGCOMM Centre details of any casualty received in their jurisdiction.
b. Verify the information of casualty and do a preliminary inspection of vessel, or site and assess extent of damage.
c. Ensure liaisoning is done with the DYNA or NS in-charge of Marine casualty by officer of the MMD.
d. To Co-ordinate with other state authorities like Collector's office and Local Disaster Management Units, if required.
e. To provide a technical advice to local group if requested.
f. To assist for pollution response if requested.
g. Act as a contact source of Information for regular updates to the CMT.

10. Role of RO:

Response Action
a. When requested for, to provide advice relating to ship safety, structural integrity and stability of marine casualties.
b. When requested for, to depute representatives to attend to a casualty and salvage at the SMCU (Salvage Monitoring and Control Unit) when established.

9.3.2 Scenario 2

Part A:

1. Cyclone/Storm

2. **Precautions:** IMD weather warnings, INCOIS warnings & other sources, DGS-SOP for Cyclone.
3. **Impact Zone:** Indian and foreign waters.
4. **Resources required:** CMT, DG COMM Center and Communication and tracking equipment.

Part B: Action Plan

1. Role of DGS:

To exercise overall control. He will be kept posted of all developments at periodical intervals by NA.

2. Action of D.G COMM Centre in case of Cyclone warning:

Response Action	Contact
a. Receipt of initial warning from IMD (by email) e.g., this warning may be that of a ‘depression’ which is likely to develop into a Cyclone on a given date and time.	
b. Inform NA and DYNA/NS (Casualty & Response) by phone.	<ul style="list-style-type: none"> • NA • DYNA/NS (Casualty & Response)
c. Upon receipt of such warning from IMD, forward same to Indian shipping companies, Charterers (approved by the DGS), and Indian ship-owners association such as ICCSA, INSA.	<ul style="list-style-type: none"> • Indian Shipping Companies • Charterers • INSA
d. The weather warning received from IMD to be forwarded to all Ports in the area, Maritime boards or State Authorities, Directorate General of Hydrocarbons (DGH), and ONGC.	<ul style="list-style-type: none"> • Port Authorities • Maritime Boards • State Authorities • DGH • ONGC
e. The weather warning received from IMD to be forwarded to Authorities, such as Indian Coast Guard, MRCC, and Indian Navy.	<ul style="list-style-type: none"> • ICG • MRCC • Indian Navy
f. Weather warnings to be forwarded till the Cyclone makes the land fall and weather conditions subside in the coastal areas.	

<p>g. Weather system to be monitored using weather information from IMD website, INCOIS website, Marine Traffic, and other websites such as: windy.com, zoom.earth, cyclocane.com, etc.</p>	
<p>h. Prior formation of Cyclone SITREP to be prepared approximately every 12 hours, as per format and have it approved from DYNA/NS (Casualty & Response).</p>	
<p>i. Under the directions of DYNA/NS (Casualty & Response), SITREPs are to be posted to CMT, and are to be shared with MoPSW, MoPNG, Port Authorities, ICG/MRCC, IN, DGH and ONGC.</p>	<ul style="list-style-type: none"> • MoPSW • MoPNG • Port Authorities • ICG/MRCC • Indian Navy • DGH • ONGC
<p>j. Under the directions of DYNA/NS (Casualty and Response) mobilize the ETV to a strategic location. Location of ETV may be shared with ICG / MRCC.</p>	
<p>k. Once the Cyclone is formed, forward all affected ports the checklist requesting status of action taken by the respective Port Authority in view of the forecasted Cyclone. Collate responses from each port and inform DYNA/NS (Casualty and Response) in case of any issue raised by the port</p>	
<p>l. Under the direction of DYNA/NS (Casualty & Response) convene a meeting under the chairmanship of D.G(S) to be attended by NA, DGH, ONGC, affected Oil Companies and DYNA/NS (Casualty and Response) to discuss the weather conditions and action taken by the oil companies for safety of life, environment, and offshore assets.</p>	
<p>m. Under the direction of DYNA/NS (Casualty & Response) convene a meeting under the chairmanship of D.G(S) to be attended by NA, representative from ICCSA, representatives from INSA, and DYNA/NS (Casualty and Response) to discuss the weather conditions and actions required to be taken by ship owners to move their ships to safe zones especially the high-risk vessel.</p>	
<p>n. Under the direction of DYNA/NS (Casualty & Response) convene a meeting with all Major and Minor port which would fall in the line of the Cyclone projected path or be adversely affected due to the Cyclone. The meeting would be chaired by D.G(S) and attended by NA, Deputy Chairman of the port, any other representative of the port, and DYNA/NS (Casualty and Response) to discuss the weather conditions and actions required to be taken by the ports especially regarding high-risk vessel and port operations.</p>	
<p>o. Monitor closure of action items identified from both the above Meetings i.e. with Oil Companies and with Ship Owners. Advise status of same to DYNA/NS (Casualty and Response).</p>	
<p>p. Standing Orders to be opened under instructions of DYNA/NS (Casualty and Response) every 6 hours to warn vessels in danger zone of the Cyclone.</p>	

q. Include status of action items of aforesaid meetings i.e. with Oil Companies, Ports, and Ship Owners in the SITREP.	
r. After formation of Cyclone SITREP to be prepared approximately every 8 hours, coinciding with the weather reports being received. Under the directions of DYNA/NS (Casualty & Response), SITREPs are to be posted on the casualty group, and are to be shared with MoPSW, MoPNG, Port Authorities, ICG/MRCC, IN, DGH and ONGC.	
s. Progress of the cyclone to be monitored by all available means, especially in respect to the traffic in the area. This may be done by Marine Traffic, LRIT, Exact Earth, etc. Under the directions of DYNA/NS (Casualty and Response) any vessel in the danger zone to be identified and warned by any means available i.e. direct contact with the vessel, and/or contact through the company, and/or through ICG / MRCC. Danger zone would depend upon the type of vessel, however any vessel within 50 to 70 NM of the forward semi-circle of the Cyclone may need to be warned of the weather conditions.	
t. Warnings issued to specific vessel if required, are to be enforced by ICG and/or Indian Navy. In case of any problem, IGC/IN to contact the concerned agency for alternate solutions.	
u. Check the affected ports i.e. the ones which would be affected by the landfall and ensure the following from the Port Authority, and through DGH for Oil Companies: <ul style="list-style-type: none"> • The date and time all the vessels at anchorage would be instructed to move out to safe areas • No. of high-risk vessel which would remain in the harbour and provided shelter by the Port Authority. • Date and time when Port Authority would cease port operations. 	
v. Once Cyclone is categorized as ‘Severe Cyclone’ SITREP to be prepared every 6 hours. Under the directions of DYNA/NS (Casualty & Response), SITREPs are to be posted on the casualty group, and are to be shared with MoPSW, MoPNG, Port Authorities, ICG/MRCC, IN, DGH and ONGC.	
w. Once the Cyclone makes the landfall, report to be taken from all affected ports regarding damage or casualty if any.	
x. In consultation with the P.O. MMD, of the affected region a lead surveyor may be designated for coordination and monitoring with the local authorities.	
y. Contact points and escalation levels are as per details in Annex 1	

3. Role of Nautical Advisor (NA)

a. To order the formation of CMT.
b. To ensure the dissemination of the information received of developing Cyclone to all the stakeholders.
c. To act as a contact source of Information for regular updates with CMT and Local MMD Principal Officer and other agencies.

4. Role of Principal Officer - MMD

- | |
|--|
| a. Nominate the lead surveyor of the affected region for coordination and monitoring with the local authorities. |
| b. Ensure MMD has continuous liaison with the DG COMM Center and local authorities. |

***Note 1:** In case of Marine Disaster due to Cyclone/Storm response action to be followed as per Action Plan 9.3.1.*

***Note 2:** In case of Tsunami warnings shall be issued by INCOIS and Ministry of Earth Sciences. Actions will be similar to Cyclone warning and progression.*

9.4 Activation of Response Plan

- In case of Cyclone/Storm, the SoP for Cyclone will be followed for response.
- In case of Marine Disaster, the SoP for Marine Casualty will be followed for response.

9.5 Logistics / Service Delivery Mechanism during Disasters

DGS will coordinate with ship owners to arrange for required delivery of services for their stricken vessel.

10 RECOVERY AND RECONSTRUCTION

10.1 RECOVERY AND RECONSTRUCTION

The DGS will request the preparation of a SITREP as per format given in Annex 5. Conduct the Preliminary Inquiry (PI) and undertake the casualty investigation through local MMD.

10.2 DAMAGE, LOSS AND NEED ASSESSMENT

Immediately following a disaster and as soon as it is safe to do so, the designated team will conduct a preliminary damage and environmental assessment.

10.3 EARLY, MID AND LONG-TERM RECOVERY

A post-incident debriefing should address the following:

- Incident causes (if known) and future prevention methods.
- Advice concerned agencies to collect the evidences for the purpose of claims against the Polluting ships.
- To take Administrative and Legal action for processing the Claims against damages/cost incurred by Coast Guard, Persons (e.g., fishing community), Ports, State Governments and other agencies relating to any oil/chemical Pollution incidents.
- To conduct examination of Marine Casualty reports related to capsizing, sinking due to defective hulls etc. and subsequent follow up actions.
- In case of Oil/Chemical pollution during the marine casualty to advise concerned affected ports or other entities
 - To deal with the evidences for the purpose of raising claims on account of damages caused by the pollution and initiating legal action against the Polluter.
 - To mitigate the Pollution and its effects.
 - To inform intergovernmental agencies such as IOPC fund etc.
- Lesson learned and any other issues.

DGS is not directly involved in recovery measures post disaster. However, based upon its mandate and the directives received from MoPSW, it will facilitate / coordinate recovery measures for any incident. Claim settlement is long drawn process and sometimes needs follow up and evidence collection in a systematic manner. DGS will coordinate with insurers and other stakeholders to expedite same.

10.4 BUILD BACK BETTER APPROACH

DG Shipping will coordinate in recovery, rehabilitation and reconstruction phases consequent to disaster to increase the resilience of maritime through integrating DRR measures into the restoration of maritime industry.

11BUDGETARY PROVISIONS

11.1DM Budget

The DGS will utilize funds provided by the GoI towards disaster management and provisions such as Hiring of ETV's.

12 PLAN MANAGEMENT

12.1 DEVELOPMENT, APPROVAL, IMPLEMENTATION, REVIEW AND REVISION

- This plan is developed in accordance with the template issued by NDMA, NDMP-2019 and NDMA guidelines and structured to suit the DGS operations.
- Review and updating of the plan would be carried out annually as per Disaster Management Act, 2005 Section 37.
- Consequent to any change/modification, the DGS will undertake review for updating and maintaining the DMP.
- Exercises would be conducted to test the efficacy of the plan and check the level of preparedness whenever required.

12.2 DOCUMENTATION OF INCIDENTS/BEST PRACTICES/ LESSONS LEARNED

- Casualty investigation reports / Preliminary Inquiry reports, encompasses requirements in accordance with IMO, wherein lessons learnt are identified and disseminated to avoid reoccurrence. The dissemination will be done through DGS website.

REFERENCES

1. DGS documents.
2. Merchant Shipping Acts and Rules.
3. IMO Regulations.
4. 'National Disaster Management Guidelines' issued by National Disaster Management Authority (NDMA), Govt. of India.
5. Disaster Management Act, 2005.
6. National Disaster Management Plan, 2019.
7. Post 2015- Global Framework (SEDAI).
8. PM of India outline- Ten Point agenda for Disaster Risk Reduction.
9. National Oil Spill Disaster Contingency Plan issued by Indian Coastguard, 2015.
10. Vulnerability Atlas of India, BMTPC, 3rd Edition, 2019.

ANNEX 1: EMERGENCY CONTACT NUMBERS

Sr. No.	Name	Designation	Email ID	Land Line/ Mobile
1	Shri Amitabh Kumar	Director General of Shipping	amitabh.kumar63@nic.in	/9899494566
2	Capt. K. P. Jayakumar	Nautical Advisor (In-charge)	na-dgs@nic.in	/9518788735
3	Capt. Vikram Singh Manhas	Nautical Surveyor-cum-DDG (tech)	vikram.manhas@gov.in	/9888890826

*Updated contact list may also be verified from DGS website.

CONTACT POINTS AND ESCALATION LEVELS:

1. Directorate General of Shipping –

1.	Control Room	D.G Comm Center	022 – 22614646 8657549760 8657549752	dgcommcentre-dgs@nic.in
2.	First Escalation	Capt. Vikram Singh Manhas	9888890826	vikram.manhas@gov.in
3.	Second Escalation	Capt. K.P Jayakumar	9518788735	na-dgs@nic.in

2. Indian Navy –

2.1 Head Quarters:

1.	Control Room	MoC Delhi	011 - 21411563	dno@navy.gov.in
2.	First Escalation	Capt. M.B Dongre	9930640873	muralidhardongre@gmail.com
3.	Second Escalation	Cmde Alok Ananda	8527088900 011 – 23010100 011 – 23010198 011 – 23011253	dno@navy.gov.in

3. Indian Coast Guard

3.1 Head Quarters

1.	Control Room	Ops Centre	011 - 23384934 011 - 23383999	dte-ops@indiancoastguard.nic.in
2.	First Escalation	Duty Staff Officer	011-23384934	dte-ops@indiancoastguard.nic.in
3.	Second Escalation	Comdt Ashok K Bhamra	9444409160	dte-ops@indiancoastguard.nic.in

3.2 MRCC Mumbai

1.	Control Room	MRCC	022-24383592	mrcc-west@indiancoastguard.nic.in
2.	First Escalation	Comdt S Samale	9497034845	mrcc-west@indiancoastguard.nic.in
3.	Second Escalation	DIG T Ashish	8900922220	ops-west@indiancoastguard.nic.in

3.3 MRCC Chennai

1.	Control Room	MRCC Chennai	044-25395018	mrcc-east@indiancoastguard.nic.in
2.	First Escalation	Comdt BS Kothari, TM	9625557132	mrcc-east@indiancoastguard.nic.in
3.	Second Escalation	DIG CD Mohapatra	9650960285	ops-east@indiancoastguard.nic.in

3.4 MRCC Port Blair

1.	Control Room	MRCC Port Blair	03192-245530 03192-235612	mrcc-ptb@indiancoastguard.nic.in
2.	First Escalation	Comdt Vivek Sharma	8500635385	mrcc-ptb@indiancoastguard.nic.in
3.	Second Escalation	DIG Ashish Sinha	9437007536	ops-an@indiancoastguard.nic.in

4. Directorate General of Hydrocarbons –

1.	Control Room	DGH Control Room	0120-2472000 9821233677	cto.dg@dghindia.gov.in
2.	First Escalation	Mr. D D Roy	9711596835	deo.roy@dghindia.gov.in
3.	Second Escalation	Mr. Anand Gupta	9428331098	adgdevelopment@dghindia.gov.in

5. ONGC –

5.1 West Coast -

1.	Control Room	Vasudhara Control Room	022-26275900 022-26562710 022-26599700 022-26599710 022-26599659	vasudhara_vcr@ongc.co.in
2.	First Escalation	R Sundar Iyer Head Offshore Safety	8332996910	iyer_sundarr@ongc.co.in
3.	Second Escalation	K S Pandey	9868282232 9324398026	pandey_ks@ongc.co.in

5.2 East Coast -

1.	Control Room	Radio Room Kakinada	0884 -2373004 / 2373006	radiokkd@ongc.co.in
2.	First Escalation	P Suresh Babu	9490168104	babu_polisetty@ongc.co.in
3.	Second Escalation	Arvind Morbale	9491069007	morbale_a@ongc.co.in

ANNEX 2: FIRST REPORT OF MARINE CASUALTY/INCIDENT

FIRST REPORT OF MARINE CASUALTY/ INCIDENT	
To be completed and faxed/ e-mailed to DG Commcentre at the earliest but within 24 hrs. positively dgcommcentre-dgs@nic.in Tel: +91 22 2261 0606, 2261 4646, Fax: +91 22 2261 3636.	
SHIP/ OWNERS/CREW DATA	
Name of ship & call-sign	
IMO no.	
Flag	
Official no.	
Registration no. (MSV/ SV)	
Year built/rebuilt/conversion	
Classification Society, if applicable	
Type of ship	
GRT	
Summer deadweight	
Loaded/ light condition	
Draft F & A in metres	
Freeboard in metres	
Cargo type & quantity (serious/ very serious casualty)	
Bunkers: (HFO/ DO/ LO) in metric tonnes	
Name & full style of owners	
Name & full style of Hull & Machinery Underwriters	
Name & full style of P & I Club (IG or Non IG Group)	
Whether owned/ leased/ chartered	
Recruitment agents full style & RPS Licence no.	
Master's name & Nationality	
Total crew with nationality (Attach crew list)	
In service/last voyage/ laid up	
SHIPPING CASUALTY DATA	
Last port/ departure date, Next port/ ETA	
Place of casualty: Indian Coast/ EEZ/ Overseas	
Date & time of Casualty	
Location (Latitude Longitude), from nearest landmark	
Port/Sea/ Ocean name	
Nature of casualty/ incident & brief details*	
If SAR / Salvage services required, if applicable	
Extent of oil pollution, if applicable	
Weather conditions prevailing (sea, swell, wind, temp, ice etc)	
Tidal current prevailing (LT,HT,drift rate, +ve/-ve surges etc)	
DETAILS OF SEAFARERS/ PASSENGERS/ SUPERNUMERARIES/ INVOLVED	
No. of deaths/ injuries	
Name/ Nationality of persons involved**	
Date of birth and age	
Rank & date of joining	
P & I other insurance cover for persons applicable	
CDC/ Passport no.	
COC no. & date of issue (if applicable)	
Type of CBA/ Articles of agreement	
Name & full style of next of kin**	
Name of appointed Investigation Officer (if applicable)	
Name & designation of person reporting casualty	
COC no. & date of issue (if applicable)	
Type of CBA/ Articles of agreement	
Name & full style of next of kin**	
Name of appointed Investigation Officer (if applicable)	
Name & designation of person reporting casualty	
Note: * Additional sheet may be used for detailed information	
** If Indian persons involved, full details of persons & next of Kin to be furnished.	

ANNEX 3

F. No. _____

Dated: _____

NOTICE UNDER SECTION 356(J) OF MERCHANT SHIPPING ACT, 1958

Sub.:

Whereas, the vessel _____, Official No. _____, IMO No. _____, Flag _____, Owned by _____, Address _____, which is _____, in position Lat _____ long _____, and is approximately bearing _____ deg X _____ nm from the _____.

And whereas, there is possibility of the escape of oil from the grounded vessel which may cause pollution to Indian waters and Coastline;

Now therefore, under provisions of Section 356(J) of Merchant Shipping Act, 1958, I am directed to inform that the Master, Owner, Agent, Charterer, Managers, and Operator of the vessel are required to take all necessary steps required to prevent pollution of the Indian waters and coastline due to _____ of the vessel. The action should include steps for the following:

1. Action for preventing the escape of oil from the vessel;
2. Action for removal of oil from the vessel;
3. Action for removal of the vessel;
4. Action for removal of oil slicks on the surface of sea, if it were to occur; and
5. Action to disperse the oil slicks on the surface of sea, if it were to occur.

This Directorate and the jurisdictional MMD needs to be informed of the actions taken in the matter immediately and regular updates needs to be provided to all concerned Authorities.

This is issued with approval of the _____.

Name and Designation,

(_____)

To,
Master, Owner, Charterer, Agent, Manager, and Operator of the vessel _____

Copy to:
All concerned Authorities

ANNEX 4

F. No. _____

Dated: _____

NOTICE UNDER SECTION 356(K) OF MERCHANT SHIPPING ACT, 1958

Sub.:

Whereas, on _____, notice under section 356(J) of Merchant Shipping Act (MSA), 1958 was issued to the Master, Owner, Agent, Charterer, Managers, and Operator of the vessel _____, Official No. _____, IMO No. _____, Flag _____, Owned by _____, Address _____, which is _____, in position Lat _____ long _____, and is approximately bearing _____ deg X _____ nm from the _____.

And whereas, it is noted that the aforesaid parties have failed to comply with the above-mentioned order issued under 356(J) of Merchant Shipping Act, 1958.

Now therefore, any expenditure or liability incurred by the Government, for carrying out of directives issued under abovementioned notices issued on _____ under 356(J) of Merchant Shipping Act, 1958, shall be a debt due to the Central Government by the person or persons on whom the notice was served and may be recovered from that person, or as the case may be, from all or any of those persons and shall be a charge upon all or any tanker, ship other than a tanker, mobile off-shore installation or off-shore installation of any other type owned by that person or persons which may be detained by the Government until the amount is paid.

This is issued with approval of the _____

Name and Designation,

(_____)

To,
Master, Owner, Charterer, Agent, Manager, and Operator of the vessel _____

Copy to:
All concerned Authorities

ANNEX 5 - SITREP FORMAT
Directorate General of Shipping
DG COMM CENTER (MM-DAC)

SITREP

1. General

1.	SITREP No.	
2.	Date/ Time of SITREP (IST)	
3.	Detailed Weather Report	IMD Bulletin No. x, dated xx @ xx is attached below for detailed weather report.
4.	Loss of Life/ Injury?	
5.	Any security breaches?	
6.	Environmental damage?	
7.	Property damage?	
8.	Any other untoward incident?	

2. Contingency Measures Deployed

1.	DG Comm Center:
2.	Status of vessels and action taken:
3.	Status of Port's preparation for the Cyclone
	Summary for action taken report by the high-risk ports is as follows:
4.	Status from Ports after / during Cyclone:
5.	Action Points after meeting with DGH and Ship Owners:
6.	Reported Incidents:
7.	Status of Emergency Towing Vessels (ETVs):

3. Other information

1.	Latest Tack of the Depression / Cyclone:
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2.	Forecasted wind speeds of the Cyclone in its path:
3.	Snapshot of Marine traffic screen – Small scale chart showing traffic
4.	Snapshot of Marine traffic screen – Large scale chart showing traffic close to the Cyclone

ANNEX 6 - FORMAT FOR SEEKING ACTION TAKEN REPORT FROM PORTS & DGH

Action taken report from Ports in the specified format

Port Name	Activities / Information Particulars	Reponses	Any other preventive measures	Remark
	A. GENERAL INFORMATION			
	1. CURRENT WIND SPEED AT PORT WATERS (KM/HR) AND /VEATHER			
	2. ANTICIPATED DATE AND TIME OF IMPACT			
	3. LIKELY STORM SURGE (M)			
	4. FORECASTED WND SPEED (KM/HR) TILL NEXT REPORT			
	5. PRESENT PORT STORM SIGNAL			
	6. CRISIS MANAGEMENT PROCEDURE ACTIVATED			
	B. MARINE AREAS			
	7. INITIATION OF SHIFTING OUT OF VESSELS (EXPECTED DT. & TIME IF, NOT STARTED)			
	8. COMPLETION OF SHIFTING OUT OF VESSELS (EXPECTED DT. & TIME IF, NOT STARTED)			
	9. STATUS OF SECURING OF PORT CMFTS/ LAUNCHES ETC.			
	10. STATUS OF SECURING OF PVT CMFTS/ LAUNCHES ETC.			
	11. INFORMATION ON DERELICT VESSEL IN PORT LIMIT, IF ANY. STEPS TAKEN TO SAFEGUARD / PREVENT ACCIDENT.			
	12. TOTAL NUMBER OF HARBOUR CRAFTS, LAUNCHES, TOURIST :ERRIES ETC REMAINED INSIDE HARBOUR AND ACTION TAKEN FOR THEIR SAFETY			
	13. TOTAL NO OF VESSELS AVAIALBLE IN OUTER HARBOURY PORT CREAS (EXCULDING INSIDE)			
	C. LAND AREAS			
	14. PRUNING OF TREES ON ROADS			
	15. HAZARD REDUCTION STEPS TAKEN / PROPOSED FOR VULNERABLE ARIEL STRUCTURES			
	16. PLAN OF SECURING ROOFS OF GODOWNS AND SHEDS.			

	17. SHORE CRANES – SECURED (NOS / TOTAL NOS)			
	18. PVT CARGO HANDLING EQUIPMENTS – SECURED (NOS)			
	19. ACTION PLAN FOR UNSECURED EQUIPMENTS / MACHINERIES FOR THEIR SAFETY.			
	20. PROJECT SITES – SECURING OF ITEMS.			
	21. LOWERING OF HIGH MAST LIGHTS			
	22. SUSPENSION OF RAIL TRANSPORT 7 ISOLATION OF OVERHEAD POWER LINES.			
	23. SUSPENSION OF ROAD TRANSPORT / INCOMING OF TRUCKS.			
	24. SECURING OF LOCOMOTIVES & RACKES.			
	25. SECURING OF MISCELLANEOUS FLYABLE OBJECTS / MATERIALS.			
	26. AVAILIBILTY OF PORTABLE GENSETS FITTED WITH FLOOD LIGHTS FOR GENERAL LIGHTING AT STRETEGIC LOCATIONS.			
	27. CLEANING OF FLOOD DRAINS.			
	28. CONSIDERING TIDE LEVEL, IF WATER LOGGING EXPECTED DURING THE IMPACT – COUNTER MEASURES.			
	D. PEOPLE			
	29. NUMBER OF PUBLIC ADDRESSAL SYSTEMS DEPLOYED FOR MAKING ANNOUNCEMENTS FOR THE PUBLIC WITHIN PORT AREAS.			
	30. TOTAL POPULATION REQUIRING EVACUATION FROM PORT AREAS.			
	31. TOTAL NO OF TEAMS DEPLOYED FOR EVACUATION.			
	32. TOTAL NUMBER OF VEHICLES DEPLOYED FOR EVACUATION.			
	33. NUMBER OF CYCLONE SHELTERS PROVIDED WITH ESSENTIAL ITEMS (WATER, DRY EATABLES, DRINKING WATER, PORTABLE GENSET/ ETC)			
	34. TOTAL CAPACITY OF CYCLONE SHELTERS.			
	35. EVACUATION – INITIATION AND COMPLETION (DATE & TIME)			
	36. MEDICAL – AMBULANCES AT STRETIGIC LOCATIONS.			
	37. MEDICAL – TRAUMA & EMERGENCY SERVICES.			
	38. WHETHER ENTIRE PORT OPERATIONAL AREA CLEARED OF PORT USERS AND WORKERS			

	(EXCEPT FOR EMERGENCY DEPLOYMENT)			
	39. CO-ORDINATION WITH DISTRICT / STATE DMA			

NOTE-1: the port shall be expected to start sending this information on daily / more frequent intervals to the Ministry of Shipping from the time of hoisting storm warning signal 5.

2. Relevant information may be provided in short, specifying date, time, numbers etc.

PART B

***STANDARD OPERATING
PROCEDURES (SOP) FOR
MARINE CASUALTY AND
CYCLONE***



भारत सरकार/ GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
नौवहन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI

DIRECTORATE GENERAL OF SHIPPING
STANDARD OPERATING PROCEDURES IN
CASE OF A CASUALTY
2021

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1. Introduction

Indian waters, including the EEZ serves as one of the busiest shipping routes in the world. A large number of vessels, of different types, ages, nationalities, laden with wide range of cargoes, some of which are hazardous in nature, traverse the area 24x7 daily. In addition, the domestic coastal ships, offshore vessels, fishing vessels, inland vessels, etc. add to the existing global traffic in the area. It may also be noted that around 95% of India's foreign trade by volume and about 70% by value is sea-borne. All this poses a multi-fold risk in Indian waters, which is not only due to high traffic density but also due to the increasingly complex nature of ships and the cargoes in the area. Hence it becomes imperative, that in case of any marine casualty swift and appropriate action is taken to ensure damage and/or loss to life, property and environment due to the casualty is minimised.

The plan entails below concise and clear instructions which need to be followed under the circumstances to ensure that all stakeholders are informed in due time and loss due to the casualty is minimised.

2. Background

Section 358 of Merchant Shipping Act, 1958 as amended, defines a 'shipping casualty' as, when on or near the coasts of India, any ship is lost, abandoned, stranded or materially damaged; or on or near the coasts of India, any ship causes loss or material damage to any other ship; or any loss of life ensues by reason of any casualty happening to or on board any ship on or near the coasts of India; or in any place, any such loss, abandonment, stranding, material damage or casualty as above mentioned occurs to or on board any Indian ship, and any competent witness thereof is found in India; or any Indian ship is lost or is supposed to have been lost, and any evidence is obtainable in India as to the circumstances under which she proceeded to sea or was last heard of.

The casualty investigation code defines 'marine casualty' as an event, or a sequence of events, that has resulted in any of the following which has occurred directly in connection with the operations of a ship i.e death of, or serious injury to, a person; or loss of a person from a ship; or loss, presumed loss or abandonment of a ship; or material damage to a ship; or stranding or disabling of a ship, or the involvement of a ship in a collision; or material damage to marine

infrastructure external to a ship, that could seriously endanger the safety of the ship, another ship or an individual; or severe damage to the environment, or the potential for severe damage to the environment, brought about by the damage of a ship or ships. However, a marine casualty does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

Hence, one of the most important aspect in any marine casualty is the place of occurrence of the marine casualty, as action required would vary depending upon the place of occurrence of the casualty. This plan identifies different jurisdictions under difference circumstances depending upon the place of occurrence of the casualty, and identifies specific actions which are required to be taken under those circumstances.

This plan identifies ‘marine casualty’ basis if it has happened on ‘Indian Flag vessels’ or ‘Foreign Flag vessel’; and if it was in ‘Indian waters’ or ‘Outside Indian water’; and if the casualty was accidental or non-accidental. For ease of understanding, Please refer to Section 4 for the flow charts.

Section 5 of the plan lists the action required to be taken at ‘DG Comm Centre’ under different conditions and also entails officer responsible for specific actions where necessary. There after sections lists actions required to be taken by the specific officers.

3. Receipt of information regarding Casualty

‘DG Comm Centre’ is manned 24x7 and is the first point of contact in case of any marine casualty involving ‘Indian vessel’ or ‘any vessel in Indian waters’ or ‘any Indian national’. Casualty information may be received from different sources such as Ship owner, Ship Manager, RPSL, Agent, Master, Crew, Port Authorities, Foreign Flag Administration, Families of crew, and other Public Authorities such as Navy, Coast Guard, Customs.

4. Flow Charts



Below flow chart represents action to be taken in case of a casualty under different circumstances such as flag of the vessel, place where the casualty has occurred and the type of the casualty.

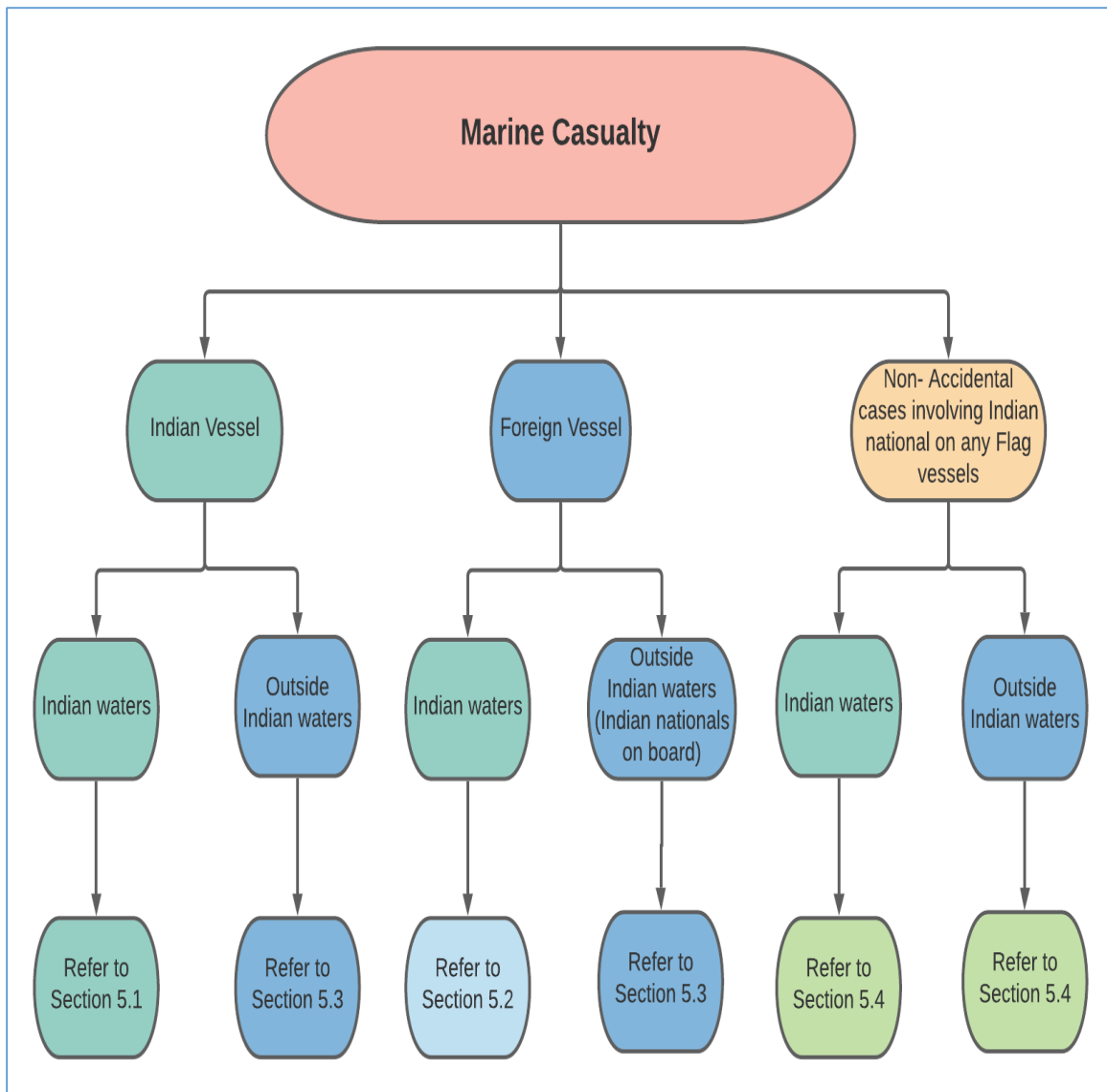


Figure 1 - Flow chart to determine action required



The flow chart shows the different stakeholders who need to be communicated with under different circumstances of the casualty. Actual contact would be determined as per the applicable section of this plan.

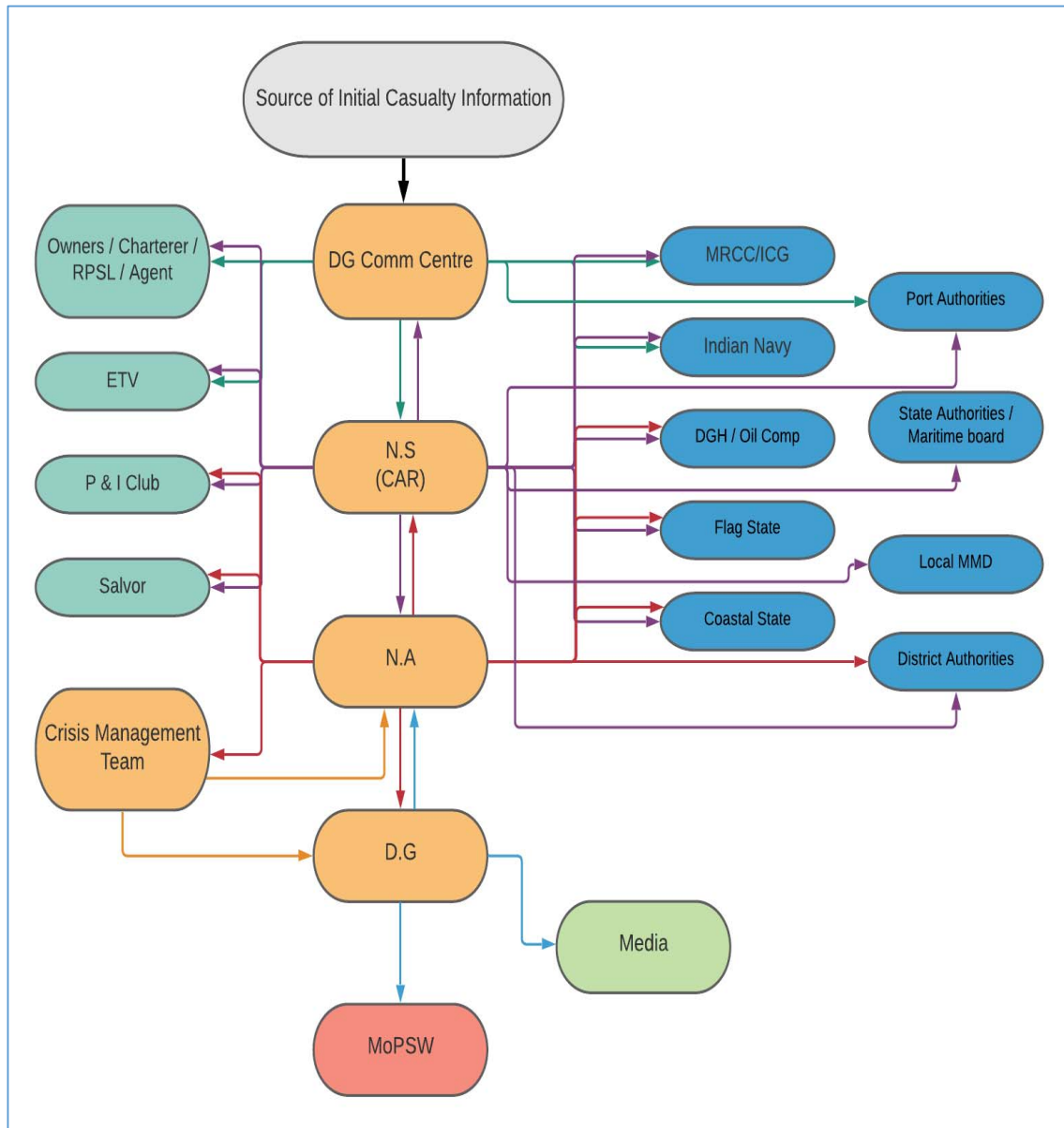


Figure 2 - Flow chart to show communication flow

5. Action of D.G Comm Centre and/or L.R.I.T

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- 5.1.1 Inform N.A and N.S (Casualty & Response) by phone.
- 5.1.2 Send ‘first information report’ for marine casualty (attached as Annexure 2) to owner/ manager/ agent/ master or other concerned, asking them to update all the required information in the ‘**online casualty module**’ and also to complete the details of the incident, and sent back the dully completed form to ‘DG Comm Centre’ by email.
[email ID – dgcommcentre-dgs@nic.in]
- 5.1.3 Intimate the nearest MRCC.
- 5.1.4 Under the directions of N.S (Casualty and Response), mobilise ETV and/or keep at strategic location as required by the circumstances.
- 5.1.5 Port Authority (if nearby or within Port limits) to be informed to mobilise resources for rendering assistance if possible.
- 5.1.6 Identify vessels nearby the casualty and forward to the MRCC, for requesting the vessels to render assistance as required.
- 5.1.7 Owners and Charterers to be informed of the status and ask them to mobilise resources for rendering assistance.
- 5.1.8 Inform maritime board/ state authorities regarding the incident and request then to provide assistance if possible.
- 5.1.9 To confirm with MRCC as applicable, Navigation Warning through NHO or ISN (International Safety Net) through Coast Guard has been issued.
- 5.1.10 Govt. Authorities (as applicable) to be notified of the developing situation as per Contact and Escalation matrix, which is attached as Annex 1.
- 5.1.11 To coordinate with jurisdictional MMD’s and all concerned sources to obtain regular updates and status of the casualty.

- 5.1.12 To gather all relevant details from the Owners / Charterers / Agents etc.
- 5.1.13 Draft SITREP and forward to N.S (Casualty and Response) for further processing.
- 5.1.14 In case of Oil/Chemical pollution coordinate with relevant Authorities including ICG, Port Authorities and all concerned to take immediate action to minimise pollution.
- 5.1.15 Under directions of N.S (Casualty and Response), issue Notice under Sections 356(J) and/or 356(K) of the Merchant Shipping Act 1958 as amended, to all concerned (owner, charterers, agents, master, etc). Refer to Annex 3 and 4 for the format of the notice.
- 5.1.16 In case of oil pollution incident, which is likely to impact neighbouring countries, under the directions of N.S (Casualty and Response) and with approval of Director General of Shipping, inform the authorities of the neighbouring countries regarding the incident.
- 5.1.17 Under directions of N.S (Casualty and Response), as applicable issue instructions to P.O of the jurisdictional MMD to conduct 'Preliminary Inquiry' (P.I) into the incident as per section 359 of the Merchant Shipping Act 1958 as amended.
- 5.1.18 To contact Collectorate's office or the S.P's office in case any help is needed from local administration for performing required functions at the site.
- 5.1.19 To keep log of all activities including transmission and receipt of messages in chronological order with time stamps, so as to be able to re-create incident using the data logged.
- 5.1.20 To have the companies update the incident status / information on the 'online casualty reporting module' including the subsequent updates.
- 5.1.21 Update and close the incident in 'online casualty reporting module'
- 5.1.22 All message pertaining to incident to be forwarded to N.S (Casualty and Response) and N.A
- 5.1.23 To report to and take instructions from N.S (Casualty and Response) at all times

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- 5.2.1 Inform N.A and N.S (Casualty & Response) by phone.
- 5.2.2 Send ‘first information report’ for marine casualty (attached as Annexure 2) to owner/ manager/ agent/ master or other concerned, asking them to update all the required information in the ‘**online casualty module**’ and also to complete the details of the incident, and sent back the dully completed form to ‘DG Comm Centre’ by email. [email ID – dgcommcentre-dgs@nic.in]
- 5.2.3 Intimate the nearest MRCC.
- 5.2.4 Under the directions of N.S (Casualty and Response), mobilise ETV and/or keep at strategic location as required by the circumstances.
- 5.2.5 Port Authority (if nearby or within Port limits) to be informed to mobilise resources for rendering assistance if possible.
- 5.2.6 Using RPSL Module of DGS e-governance, ascertain if there are any Indian nationals on board vessel.
- 5.2.7 Identify vessels nearby the casualty and forward to the MRCC, for requesting the vessels to render assistance as required.
- 5.2.8 Owners, Charterers, RPSL, Agents to be informed of the status and ask them to mobilise resources for rendering assistance.
- 5.2.9 Inform maritime board/ state authorities regarding the incident and request then to provide assistance if possible.
- 5.2.10 To confirm with MRCC as applicable, Navigation Warning through NHO or ISN (International Safety Net) through Coast Guard has been issued.
- 5.2.11 Govt. Authorities (as applicable) to be notified of the developing situation as per Contact and Escalation matrix, which is attached as Annex 1.

- 5.2.12 To coordinate with jurisdictional MMD's and all concerned sources to obtain regular updates and status of the casualty
- 5.2.13 To gather all relevant details from the Owners / Charterers / Agents, RPSL, etc.
- 5.2.14 Draft SITREP and forward to N.S (Casualty and Response) for further processing.
- 5.2.15 In case of Oil/Chemical pollution coordinate with relevant Authorities including ICG, Port Authorities and all concerned to take immediate action to minimise pollution.
- 5.2.16 Under directions of N.S (Casualty and Response), intimate Flag State of the vessel regarding the casualty.
- 5.2.17 Under directions of N.S (Casualty and Response), issue Notice under Sections 356(J) and/or 356(K) of the Merchant Shipping Act 1958 as amended, to all concerned (owner, charterers, agents, master, etc). Refer to Annex 3 and 4 for the format of the notice.
- 5.2.18 In case of oil pollution incident, which is likely to impact neighbouring countries, under the directions of N.S (Casualty and Response) and with approval of Director General of Shipping, inform the authorities of the neighbouring countries regarding the incident.
- 5.2.19 Under directions of N.S (Casualty and Response), as applicable issue instructions to P.O of the jurisdictional MMD to conduct 'Preliminary Inquiry' (P.I) into the incident as per section 359 of the Merchant Shipping Act 1958 as amended.
- 5.2.20 To contact Collectorate's office or the S.P's office in case any help is needed from local administration for performing required functions at the site.
- 5.2.21 To keep log of all activities including transmission and receipt of messages in chronological order with time stamps, so as to be able to re-create incident using the data logged.
- 5.2.22 To have the companies update the incident status / information on the 'online casualty reporting module' including the subsequent updates.
- 5.2.23 Update and close the incident in 'online casualty reporting module'
- 5.2.24 All message pertaining to incident to be forwarded to N.S (Casualty and Response) and N.A

5.2.25 To report to and take instructions from N.S (Casualty and Response) at all times.

☐☐☐ In case of casualty of Indian Flag vessel outside Indian waters or Foreign Flag vessel with Indian national(s) outside Indian waters

5.3.1 Inform N.A and N.S (Casualty & Response) by phone.

5.3.2 Send ‘first information report’ for marine casualty (attached as Annexure 2) to owner/ manager/ agent/ master or other concerned, asking them to update all the required information in the ‘**online casualty module**’ and also to complete the details of the incident, and sent back the dully completed form to ‘DG Comm Centre’ by email. [email ID – dgcommcentre-dgs@nic.in]

5.3.3 Using RPSL Module of DGS e-governance, ascertain if there are any Indian nationals on board vessel.

5.3.4 To gather all relevant details from the Owners / Charterers / Agents/ RPSL, etc.

5.3.5 Under the directions of N.S (Casualty and Response), contact the Coastal State as applicable, informing regarding the incident and requesting to render assistance as required.

5.3.6 Under the directions of N.S (Casualty and Response), contact the Indian High Commission/ Indian Embassy/ Indian Consulate as applicable, informing regarding the incident and requesting to render assistance as required.

5.3.7 In case of Foreign Flag vessel with Indian nationals on board, under the directions of N.S (Casualty and Response), contact the Flag State, informing regarding the incident and requesting to mobilise resources for providing necessary assistance and coordinating with other stakeholders in this regard.

5.3.8 Under the directions of N.S (Casualty and Response), as applicable contact the Flag State and/or Coastal State informing them that India being the substantially interested state, as per the IMO’s Casualty Investigation Code, reserves its right to be part of the safety investigation, and also request for the final draft of the investigation report for comments.

- 5.3.9 To keep log of all activities including transmission and receipt of messages in chronological order with time stamps, so as to be able to re-create incident using the logged data.
- 5.3.10 To have the companies update the incident status / information on the 'online casualty reporting module' including the subsequent updates.
- 5.3.11 Update and close the incident in 'online casualty reporting module'
- 5.3.12 All message pertaining to incident to be forwarded to N.S (Casualty and Response) and N.A
- 5.3.13 To report to and take instructions from N.S (Casualty and Response) at all time

☐☐☐ In case of death of an Indian national due to sickness or other non ☐ accidental causes

- 5.4.1 Send 'first information report' for marine casualty (attached as Annexure 2) to owner/ manager/ agent/ master or other concerned, asking them to update all the required information in the '**online casualty module**' and also to complete the details of the incident, and sent back the dully completed form to 'DG Comm Centre' by email. [email ID – dgcommcentre-dgs@nic.in]
- 5.4.2 Inform DDG (Crew), about the incident by Phone.
- 5.4.3 In case of a foreign flag vessel, confirm from the DGS e-governance module the name of the RPSL.
- 5.4.4 In case of occurrence happening on Indian Flag vessels, to confirm instructions from DDG (Crew), and issue notice to the concerned Shipping Master to conduct an inquiry as per Section 452 of the Merchant Shipping Act, 1958, as amended.
- 5.4.5 In case of occurrence happening on foreign flag vessel, to confirm instructions from DDG (Crew), and issue a letter to the concerned Flag State to conduct investigation into the incident.
- 5.4.6 In case of the occurrence happening in Indian waters, inform the local Authorities as applicable for necessary assistance and for the required formalities.
- 5.4.7 In case of occurrence happening in foreign waters, contact the Indian High Commission/ Indian Embassy/ Indian Consulate as applicable, informing regarding the incident and requesting to render assistance as required, and also request to conduct a fact- finding inquiry into the incident.
- 5.4.8 Send all correspondence received to DDG (Crew) and copy same to N.A and N.S (Casualty and Response)

6. Crisis Management Team

Crisis Management Team is headed by D.G(S) and comprises of Nautical Advisor (NA), Chief Surveyor (CS), additional D.G, Chief Ship Surveyor (CSS), NS (Casualty and Response) and DDG (Crew).

- 6.1 Additional resources as deemed necessary by the D.G(S) may be included in the 'crisis management team'. Such as a suitable member from the IRS and/or any other organization as deemed necessary.
- 6.2 To provide technical assistance
- 6.3 To provide advise in regard to the casualty for minimising the damage to life, property and environment.
- 6.4 Assist in coordinating with Authorities and External parties as required
- 6.5 To provide regular updated to MoPSW
- 6.6 To interact with Media

7. Annex 1:

CONTACT POINTS AND ESCALATION LEVELS:

1. **Directorate General of Shipping –**

1.	Control Room	D.G Comm Center	022 – 22614646 8657549760 8657549752	dgcommcentre-dgs@nic.in
2.	First Escalation	Capt. Vikram Singh Manhas	9888890826	vikram.manhas@gov.in
3.	Second Escalation	Capt. K.P Jayakumar	9518788735	na-dgs@nic.in

2. **Indian Navy –**

2.1 Head Quarters:

1.	Control Room	MoC Delhi	011 - 21411563	dno@navy.gov.in
2.	First Escalation	Capt. M.B Dongre	9930640873	muralidhardongre@gmail.com
3.	Second Escalation	Cmde Alok Ananda	8527088900 011 – 23010100 011 – 23010198 011 – 23011253	dno@navy.gov.in

3. Indian Coast Guard –

3.1 Head Quarters:

1.	Control Room	Ops Centre	011 - 23384934 011 - 23383999	dte-ops@indiancoastguard.nic.in
2.	First Escalation	Duty Staff Officer	011-23384934	dte-ops@indiancoastguard.nic.in
3.	Second Escalation	Comdt Ashok K Bhama	9444409160	dte-ops@indiancoastguard.nic.in

3.2 MRCC Mumbai

1.	Control Room	MRCC	022-24383592	mrc-west@indiancoastguard.nic.in
2.	First Escalation	Comdt S Samale	9497034845	mrc-west@indiancoastguard.nic.in
3.	Second Escalation	DIG T Ashish	8900922220	ops-west@indiancoastguard.nic.in

3.3 MRCC Chennai

1.	Control Room	MRCC Chennai	044-25395018	mrc-east@indiancoastguard.nic.in
2.	First Escalation	Comdt BS Kothari, TM	9625557132	mrc-east@indiancoastguard.nic.in
3.	Second Escalation	DIG CD Mohapatra	9650960285	ops-east@indiancoastguard.nic.in

3.4 MRCC Port Blair

1.	Control Room	MRCC Port Blair	03192-245530 03192-235612	mrc-ptb@indiancoastguard.nic.in
2.	First Escalation	Comdt Vivek Sharma	8500635385	mrc-ptb@indiancoastguard.nic.in
3.	Second Escalation	DIG Ashish Sinha	9437007536	ops-an@indiancoastguard.nic.in

4. Directorate General of Hydrocarbons –

1.	Control Room	DGH Control Room	0120-2472000 9821233677	cto.dg@dghindia.gov.in
2.	First Escalation	Mr. D D Roy	9711596835	deo.roy@dghindia.gov.in
3.	Second Escalation	Mr. Anand Gupta	9428331098	adgdevelopment@dghindia.gov.in

5. ONGC –

1.1 West Coast -

1.	Control Room	Vasudhara Control Room	022-26275900 022-26562710 022-26599700 022-26599710 022-26599659	vasudhara_vcr@ongc.co.in
2.	First Escalation	R Sundar Iyer Head Offshore Safety	8332996910	iyer_sundarr@ongc.co.in
3.	Second Escalation	K S Pandey	9868282232 9324398026	pandey_ks@ongc.co.in

1.2 East Coast -

1.	Control Room	Radio Room Kakinada	0884- 2373004/2373006	radiokkd@ongc.co.in
2.	First Escalation	P Suresh Babu	9490168104	babu_polisetty@ongc.co.in
3.	Second Escalation	Arvind Morbale	9491069007	morbale_a@ongc.co.in

8. Annex 2

ANNEXURE-1	
FIRST REPORT OF MARINE CASUALTY/ INCIDENT	
To be completed and faxed/ e-mailed to DG Commerce at the earliest but within 24 hrs. positively djcommerce-dgs@nic.in Tel: +91 22 2261 0606, 2261 4646, Fax: +91 22 2261 3636.	
SHIP/ OWNERS/ CREW DATA	
Name of ship & call sign	
IMO no.	
Flag	
Official no.	
Registration no. (MSV/ SV)	
Year built/ rebuilt/ conversion	
Classification Society, if applicable	
Type of ship	
GRT	
Summer deadweight	
Loaded/ light condition	
Draft F & A in metres	
Freeboard in metres	
Cargo type & quantity (serious/ very serious casualty)	
Bunkers: (HFO/ DO/ LO) in metric tonnes	
Name & full style of owners	
Name & full style of Hull & Machinery Underwriter	
Name & full style of P & IC No. (IG or Non IG Group)	
Whether owned/ leased/ chartered	
Recruitment agency name & RPS Licence no.	
Master's name & Nationality	
Total crew with nationality (Attack crew list)	
In service/last voyage/ laid up	
SHIPPING CASUALTY DATA	
Last port/ departure date, Next port/ ETA	
Place of casualty: Indian Coast/ EEZ/ Overseas	
Date & time of Casualty	
Location (Latitude Longitude), from nearest landmark	
Port/Sea/Ocean name	
Nature of casualty/ incident & brief details*	
If SAR/ Salvage services required, if applicable	
Extent of oil pollution, if applicable	
Weather conditions prevailing (sea, swell, wind, temp, ice etc)	
Tidal current prevailing (L.T.H Tidal rate, surge/ surges etc)	
DETAILS OF SEAFARERS/ PASSENGERS/ SUPERNUMERARIES/ INVOLVED	
No. of deaths/ injuries	
Name/ Nationality of persons involved**	
Date of birth and age	
Rank & date of joining	
P & V other list trace cover for persons applicable	
CDC/ Passport no.	
COC no. & date of issue (if applicable)	
Type of CBA/ Articles of agreement	
Name & full style of next of kin**	
Name of appointed Investigation Officer (if applicable)	
Name & designation of person reporting casualty	
COC no. & date of issue (if applicable)	
Type of CBA/ Articles of agreement	
Name & full style of next of kin**	
Name of appointed Investigation Officer (if applicable)	
Name & designation of person reporting casualty	
Note: * Additional sheet may be used for detailed information	
** If Indian persons involved, full details of persons & next of kin to be furnished.	

9. Annex 3

F. No. _____

Dated: _____

NOTICE UNDER SECTION 356(J) OF MERCHANT SHIPPING ACT, 1958

Sub.:

Whereas, the vessel _____, Official No. _____, IMO No. _____, Flag _____, Owned by _____, Address _____, which is _____, in position Lat _____ long _____, and is approximately bearing _____ deg X _____ nm from the _____.

And whereas, there is possibility of the escape of oil from the grounded vessel which may cause pollution to Indian waters and Coastline;

Now therefore, under provisions of Section 356(J) of Merchant Shipping Act, 1958, I am directed to inform that the Master, Owner, Agent, Charterer, Managers, and Operator of the vessel are required to take all necessary steps required to prevent pollution of the Indian waters and coastline due to _____ of the vessel. The action should include steps for the following:

6. Action for preventing the escape of oil from the vessel;
7. Action for removal of oil from the vessel;
8. Action for removal of the vessel;
9. Action for removal of oil slicks on the surface of sea, if it were to occur; and
10. Action to disperse the oil slicks on the surface of sea, if it were to occur.

This Directorate and the jurisdictional MMD needs to be informed of the actions taken in the matter immediately and regular updates needs to be provided to all concerned Authorities.

This is issued with approval of the _____.

Name and Designation,

(_____)

To,

Master, Owner, Charterer, Agent, Manager, and Operator of the vessel _____

Copy to: All concerned Authorities

10. Annex 4

F. No. _____

Dated: _____

NOTICE UNDER SECTION 356(K) OF MERCHANT SHIPPING ACT, 1958

Sub.:

Whereas, on _____, notice under section 356(J) of Merchant Shipping Act (MSA), 1958 was issued to the Master, Owner, Agent, Charterer, Managers, and Operator of the vessel _____, Official No. _____, IMO No. _____, Flag _____, Owned by _____, Address _____, which is _____, in position Lat _____ long _____, and is approximately bearing _____ deg X _____ nm from the _____.

And whereas, it is noted that the aforesaid parties have failed to comply with the above-mentioned order issued under 356(J) of Merchant Shipping Act, 1958.

Now therefore, any expenditure or liability incurred by the Government, for carrying out of directives issued under abovementioned notices issued on _____ under 356(J) of Merchant Shipping Act, 1958, shall be a debt due to the Central Government by the person or persons on whom the notice was served and may be recovered from that person, or as the case may be, from all or any of those persons and shall be a charge upon all or any tanker, ship other than a tanker, mobile off-shore installation or off-shore installation of any other type owned by that person or persons which may be detained by the Government until the amount is paid.

This is issued with approval of the _____

Name and Designation,

(_____)

To,

Master, Owner, Charterer, Agent, Manager, and Operator of the vessel _____

Copy to: All concerned Authorities



भारत सरकार/ GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
नौवहन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI

DIRECTORATE GENERAL OF SHIPPING STANDARD OPERATING PROCEDURES FOR CYCLONES

2021

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1. Introduction

The Directorate General of Shipping (DGS), which is the Indian Maritime Authority (IMA) is an attached office of the the Ministry of Ports, Shipping and Waterways (MoPSW), Govt. of India and deals with all executive matters, relating to merchant shipping. Maritime transport is a critical infrastructure for the social and economic development of a country. It influences the pace, structure, and pattern of development. The Ministry of Ports, Shipping and Waterways encompasses within its fold Ports, Shipping and Waterways sectors which include Shipbuilding and Ship-repair, Major Ports, National Waterways, and Inland Water Transport.

The Directorate General of Shipping, India deals with implementation of shipping policy and legislation so as to ensure the safety of life and ships at sea, prevention of marine pollution, promotion of maritime education and training in co-ordination with the International Maritime Organization (IMO), regulation of employment and welfare of seamen, development of coastal shipping, augmentation of shipping tonnage, examination and certification of Merchant Navy Officers, Supervision and Control of the allied offices under its administrative jurisdiction. Following are the objectives of the Directorate General of Shipping:

- Matters affecting Merchant Shipping & navigation and administration of the Merchant Shipping Law,
- Measures to ensure safety of life and ships at sea,
- Development of Indian Shipping,
- International Conventions relating to Maritime matters,
- Provision of facilities for training of Officers and ratings for Merchant Navy,
- Regulation of Employment of Seamen and their welfare,
- Regulatory aspect of Sailing Vessel.

2. Legal Mandate

Section 37 of the Disaster Management Act 2005, requires every Ministry and Department of the Government of India, be it hazard-specific nodal ministries or not, shall prepare comprehensive Disaster Management Plan detailing how each of them will contribute to the national efforts in the domains of disaster prevention, preparedness, response, and recovery. ‘Under National Disaster Management Plan - 2019’ certain Ministries have been

assigned primary role to deal with different types of Disasters. The nodal Ministry assigned to deal with Cyclone / Storm is the Ministry of Earth Sciences (MoES). As a proactive measure the Directorate General of Shipping (DGS) has prepared this Plan to augment efforts of the Ministries and Departments which are dealing with Disasters such as Cyclones and Storms.

3. Disasters as per NDMP – 2019 applicable to the DGS

The ‘National Disaster Management Plan – 2019’ (NDMP – 2019) issued by National Disaster Management Authority, Ministry of Home Affairs, Government of India, lists the five major categories of disasters, which further has different ‘hazards or disasters’ listed under each of those five major categories.

From section 1.13.1 of NDMP – 2019, which lists the five major disasters, it is seen that the disasters namely ‘Cyclone / Wind / Storm’ which are placed under major disaster category of ‘Meteorological Disasters’ would be relevant to this Directorate. Further, it may be noted that section 1.14.1 of NDMP – 2019, designates Ministry of Earth Sciences (MoES) as the nodal Ministry for the disaster category of ‘Meteorological Disasters’ and remains responsible for all the disasters listed under this major disaster category. However, since this Directorate along with the Indian Coast Guard plays a role towards regulating safety of life at sea, protection of environment and property at sea, hence as a proactive measure it has prepared a Disaster Management Plan, which aim is to address the risks associated with Cyclone, Storm & Wind. This plan will augment the efforts of the nodal Ministry in this regard.

4. International Obligation pertaining to Meteorological Services and Warnings

The International Convention for the Safety of Life at Sea (SOLAS), Chapter V (Safety of Navigation), as amended, Regulation 5 (Meteorological services and warnings), obligates states to provide necessary meteorological warnings and forecasts in the specified area. Further, members of World Meteorological Organisation (WMO) are obligated to implement Marine Meteorological Services (MMS) in their specified region to ensure international coordination of meteorological services. Meteorological forecasts and warnings are issued as part of Maritime Safety Information (MSI) under the auspices of the International Maritime Organisation (IMO) and WMO as World-Wide Met-ocean Information and Warnings Service

(WWMIWS) under the Global Maritime Distress and Safety Systems (GMDSS). All meteorological forecasts and warnings are issued as part of Maritime Safety Information (MSI).

Maritime Safety Information (MSI) are issued in accordance with IMO resolution A.705(17), while all meteorological warnings and forecasts (which are part of MSI) are issued in accordance with the requirements of IMO resolution A.1051(27), section 3.4.1 which requires that ‘all Meteorological information’ shall be broadcast only in English by International NAVTEX and Safety NET services.

SOLAS, Chapter V, Regulation 5, requires that contracting governments have systems in place to warn ships of gales, storms and tropical cyclones by the issue of information in text and, as far as practicable in graphic form, using the appropriate shore-based facilities for terrestrial and space radiocommunications services. These warnings are to be issued at least twice a day and frequency may be increased in case of storm or cyclone. Further, it is required that forecasts, warnings, synoptic and other meteorological data intended for ships shall be issued and disseminated by the ‘national meteorological service’ which can serve both the coastal and high sea areas, in accordance with mutual arrangements made by the state with the World Meteorological Organization pertaining to the system, for the preparation and dissemination of meteorological forecasts and warnings for the high seas and coastal areas under the Global Maritime Distress and Safety System (GMDSS).

India Meteorological Department (IMD) is the designated ‘national meteorological service’ for India and caters to India’s international commitments in terms of weather warning forecasting and dissemination of same to all ships and vessels in the coastal and high seas. IMD is the department of ‘Ministry of Earth Science’ which is the designated nodal Ministry for Meteorological disasters as listed in ‘National Disaster Management Plan – 2019.

5. Scope of this plan in dealing with Disaster (Cyclones / Storms)

This document is prepared keeping DGS in the coordinating role with other government agencies and other stakeholders, such as Indian Meteorological Department (IMD), Directorate General of Hydrocarbons (DGH), Oil and Natural gas Corporation (ONGC), Indian Coast Guard (ICG), Indian navy (IN), Port Authorities, Shipowners and Shipowners Associations (INSA, ICCSA), etc. while dealing with disasters such as Cyclones and Storms. The aim is to augment efforts of all other Authorities and Government Departments in this regard.

Role of DGS primarily pertains to coordinating the weather warnings dissemination by the nodal agencies and receipt of same by various stakeholders such as ship owners, charterers, etc. If necessary, DGS may provide advise and instructions under the circumstances, to the ships, the advise or instructions given are to be considered by the ship Master and/or Owners and/or Charters when taking decisions for safety of life, environment, and property at sea. In addition, DGS would play a role in sorting out any issue in this regard, which is brought to its notice, by coordinating between stakeholders and the relevant authorities such as Port Authority, Directorate General of Hydrocarbons, Indian Coast Guard, etc.

6. Receipt of weather warning i.e Cyclone or Storm

‘DG Comm Centre’ is manned 24x7 to cater to India’s obligations under SOLAS, Chapter XI-2 and the International Ship & Port Facility Security Code (ISPS Code).

In addition, to the aforesaid functions, DG Comm Centre also act as the first point of contact in case of any marine casualty and/or act as the coordinating office in case of a Disaster such as Cyclone / Storm / Wind (as per the National Disaster Management Plan – 2019). This Plan outlines action taken by the DG Comm Center upon receipt of Cyclone warning from the IMD.

7. Flow Chart of actions in case of Cyclone / Storm

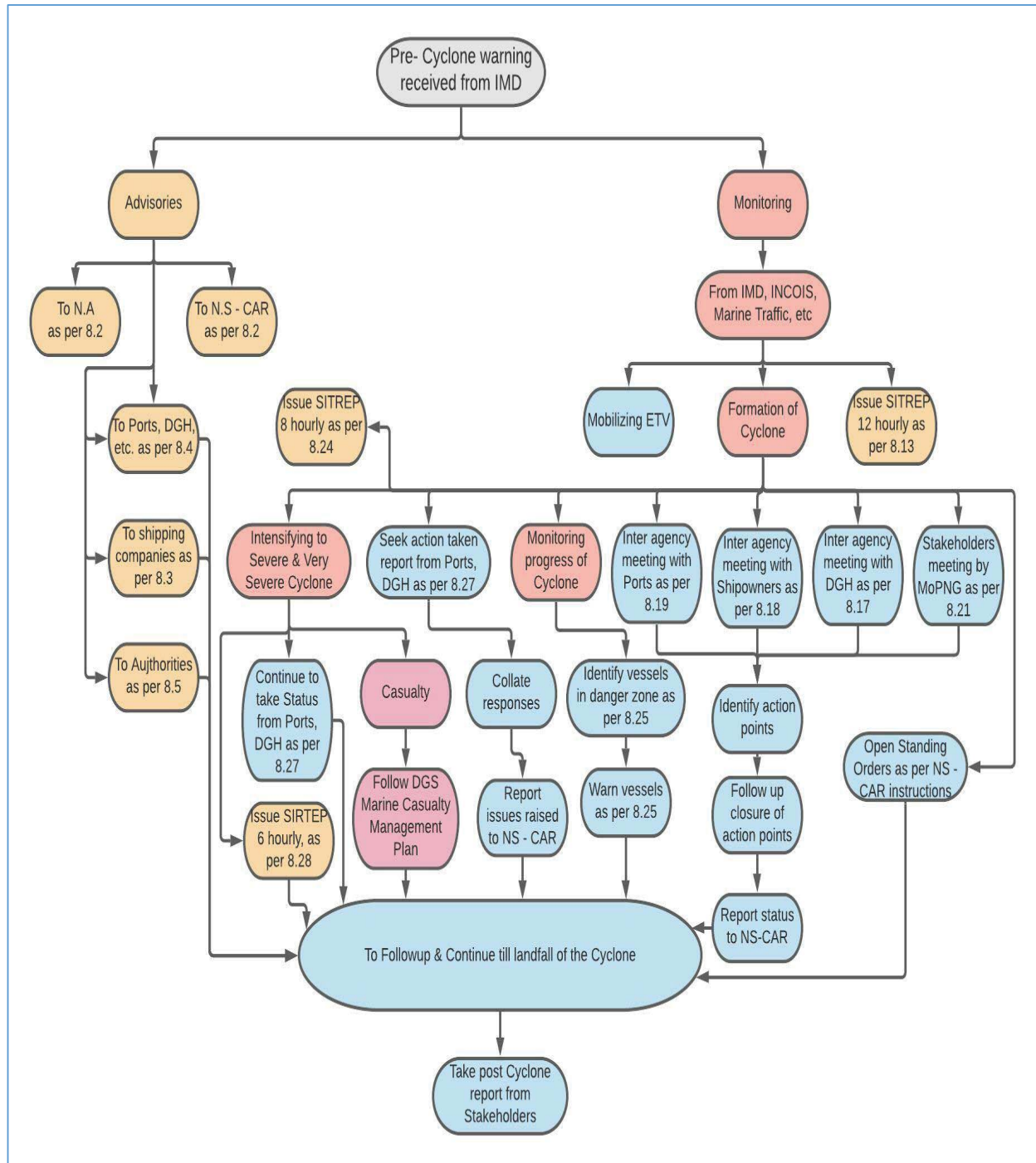


Figure 3 – Work Flow Chart

8. Action of D.G Comm Centre and/or L.R.I.T in case of Cyclone warning:

- 8.1 Receipt of initial warning from IMD (by email). This warning may be that of a 'depression' which is likely to develop into a Cyclone on a given date and time.
- 8.2 Inform N.A and N.S (Casualty & Response) by phone.
- 8.3 Upon receipt of such warning from IMD, forward same to Indian shipping companies, Charterers (approved by the DGS), and Indian ship-owners association such as ICCSA, INSA. The message should entail specific instructions, towards safety of life, environment, and property at sea during passage of Cyclone. Refer to Annex 2 for details of text. It may be noted that, all vessels in the area i.e both Coastal and at Sea would receive such warnings directly through their GMDSS equipment.
- 8.4 The weather warning received from IMD to be forwarded to all Ports in the area, Maritime boards or State Authorities, Directorate General of Hydrocarbons (DGH), and ONGC. The message to entail specific instructions, towards safety of life, environment, and property at sea during passage of Cyclone. Refer to Annex 3 for details of text. It may be noted that, all Port Authorities, State Authorities and DGH would also receive weather warnings directly from the IMD.
- 8.5 The weather warning received from IMD to be forwarded to Authorities, such as Indian Coast Guard, MRCC, and Indian Navy. The message to entail specific instructions, towards safety of life, environment, and property at sea during passage of Cyclone. Refer to Annex 4 for details of text. It may be noted that, above mentioned Authorities also receive weather warnings directly from the IMD.
- 8.6 It is the responsibility of the Shipowner, the Charterer, the Master and the Crew to take preventive actions on the basis of the advisories given.
- 8.7 Port and Oil Companies are to issue directions to the vessels in the area, if the advisories issued are not being followed by the vessels.
- 8.8 The advisories or the directions issued by Ports, Oil Companies, for vessels at sea and/or their jurisdictional waters are to be enforced by the Indian Coast Guard and Indian Navy.

8.9 The shipping company must identify the high-risk vessels, and special attention must be paid to all vessels in the affected area, including the high-risk vessels. High-risk vessels must include, non-propelled vessels with passengers or work force on board other than the ship's crew, propelled vessels with passengers, barges without hatch cover, RSV Class vessels, ICV Class vessels, derelict vessels, vessels under arrest, vessels those have become unseaworthy, harbour crafts, etc. In addition to the aforesaid vessels, criteria such as, available engine power, and freeboard of the vessel should be used by the Company for determining the high-risk vessels. All the high-risk vessels must be informed to the DG Comm Centre and MRCC, and must be prioritised for according shelter, when and if required.

The criteria mentioned above is not exhaustive and does not cover all situations, hence company to exercise due diligence while determining high-risk vessels.

8.10 Above weather warnings to be forwarded till the Cyclone makes the land fall and weather conditions subside in the coastal areas.

8.11 Weather system to be monitored using weather information from IMD website, INCOIS website, Marine Traffic, and other websites such as: windy.com, zoom.earth, cyclocane.com, etc.

8.12 Prior formation of Cyclone SITREP to be prepared approximately every 12 hours, as per format in Annex 5 and have it approved from N.S (Casualty & Response).

8.13 Under the directions of N.S (Casualty & Response), SITREPs are to be posted on the casualty group, and are to be shared with MoPSW, MoPNG, Port Authorities, ICG/MRCC, IN, DGH and ONGC.

8.14 Under the directions of N.S (Casualty and Response) mobilise the ETV to a strategic location where it is able to provide assistance if and when required, and at the same time it is in a safe zone from the Cyclone / Storm. Location of ETV may be shared with ICG / MRCC.

8.15 Once the Cyclone is formed, forward all effected ports the checklist requesting status of action taken by the respective Port Authority in view of the forecasted Cyclone. For format of the checklist refer to Annex 6.

- 8.16 Collate responses from each port and inform N.S (Casualty and Response) in case of any issue raised by the port. If necessary, send reminders and follow up by phone calls to get the required information for the Ports.
- 8.17 Under the direction of N.S (Casualty & Response) convene a meeting under the chairmanship of D.G(S) to be attended by NA, DGH, ONGC, affected Oil Companies and N.S (Casualty and Response) to discuss the weather conditions and action taken by the oil companies for safety of life, environment, and offshore assets.
- 8.18 Under the direction of N.S (Casualty & Response) convene a meeting under the chairmanship of D.G(S) to be attended by NA, representative from ICCSA, representatives from INSA, and N.S (Casualty and Response) to discuss the weather conditions and actions required to be taken by ship owners to move their ships to safe zones especially the high-risk vessel.
- 8.19 Under the direction of N.S (Casualty & Response) convene a meeting with all Major and Minor port which would fall in the line of the Cyclone projected path or be adversely affected due to the Cyclone. The meeting would be chaired by D.G(S) and attended by NA, Deputy Chairman of the port, any other representative of the port, and N.S (Casualty and Response) to discuss the weather conditions and actions required to be taken by the ports especially regarding high-risk vessel and port operations.
- 8.20 Monitor closure of action items identified from both the above Meetings i.e with Oil Companies and with Ship Owners. Advise status of same to N.S (Casualty and Response).
- 8.21 MoPNG to organise meeting with MoPSW, and stakeholders such as Confederation of Indian Industry (CII), The Associated Chambers of Commerce and Industry of India (ASSOCHAM), and The Federation of Indian Chambers of Commerce & Industry (FICCI), Maritime Boards and State Authorities.
- 8.22 Standing Orders to be opened under instructions of N.S (Casualty and Response). To be opened every 6 hourly to warn vessels in danger zone of the Cyclone as mentioned in section 8.21
- 8.23 Include status of action items of aforesaid meetings i.e with Oil Companies, Ports, and Ship Owners in the SITREP.

- 8.24 After formation of Cyclone SITREP to be prepared approximately every 8 hours, coinciding with the weather reports being received. Under the directions of N.S (Casualty & Response), SITREPs are to be posted on the casualty group, and are to be shared with MoPSW, MoPNG, Port Authorities, ICG/MRCC, IN, DGH and ONGC.
- 8.25 Progress of the cyclone to be monitored by all available means, especially in respect to the traffic in the area. This may be done by Marine Traffic, LRIT, Exact Earth, etc. Under the directions of N.S (Casualty and Response) any vessel in the danger zone to be identified and warned by any means available i.e direct contact with the vessel, and/or contact through the company, and/or through ICG / MRCC. Danger zone would depend upon the type of vessel, however any vessel within 50 to 70 nm of the forward semi-circle of the Cyclone may need to be warned of the weather conditions.
- 8.26 Warnings issued to specific vessel if required, are to be enforced by ICG and/or Indian Navy. In case of any problem, IGC/IN to contact the concerned agency for alternate solutions.
- 8.27 Check the affected ports i.e the ones which would be affected by the landfall and ensure the following from the Port Authority, and through DGH for Oil Companies:
- The date and time all the vessels at anchorage would be instructed to move out to safe areas
 - No. of high-risk vessel which would remain in the harbour and provided shelter by the Port Authority.
 - Date and time when Port Authority would cease port operations.
- 8.28 Once Cyclone is categorised as ‘Severe Cyclone’ SITREP to be prepared every 6 hours. Under the directions of N.S (Casualty & Response), SITREPs are to be posted on the casualty group, and are to be shared with MoPSW, MoPNG, Port Authorities, ICG/MRCC, IN, DGH and ONGC.
- 8.29 Once the Cyclone makes the landfall, report to be taken from all affected ports regarding damage or casualty if any.
- 8.30 In case of any ‘Marine Casualty’ due to Cyclone, relevant section of the Directorate General of Shipping – Casualty Management Plan’ are to be followed. DGS – Casualty Management Plan is attached at Section 16 as Annex 7 for guidance and compliance.

- 8.31 In consultation with the P.O MMD, of affected the region a lead surveyor may be designated for coordination and monitoring with the local authorities.
- 8.32 Contact points and escalation levels are as per details in Annex 1

9. Annex 1- Inter-agency contact details

CONTACT POINTS AND ESCALATION LEVELS:

1. **Directorate General of Shipping –**

1.	Control Room	D.G Comm Center	022 – 22614646 8657549760 8657549752	dgcommcentre-dgs@nic.in
2.	First Escalation	Capt. Vikram Singh Manhas	9888890826	vikram.manhas@gov.in
3.	Second Escalation	Capt. K.P Jayakumar	9518788735	na-dgs@nic.in

2. **Indian Navy –**

2.1 Head Quarters:

1.	Control Room	MoC Delhi	011 - 21411563	dno@navy.gov.in
2.	First Escalation	Capt. M.B Dongre	9930640873	muralidhardongre@gmail.com
3.	Second Escalation	Cmde Alok Ananda	8527088900 011 – 23010100 011 – 23010198 011 – 23011253	dno@navy.gov.in

3. Indian Coast Guard –

3.1 Head Quarters:

1.	Control Room	Ops Centre	011 - 23384934 011 - 23383999	dte-ops@indiancoastguard.nic.in
2.	First Escalation	Duty Staff Officer	011-23384934	dte-ops@indiancoastguard.nic.in
3.	Second Escalation	Comdt Ashok K Bhama	9444409160	dte-ops@indiancoastguard.nic.in

3.2 MRCC Mumbai

1.	Control Room	MRCC	022-24383592	mrcc-west@indiancoastguard.nic.in
2.	First Escalation	Comdt S Samale	9497034845	mrcc-west@indiancoastguard.nic.in
3.	Second Escalation	DIG T Ashish	8900922220	ops-west@indiancoastguard.nic.in

3.3 MRCC Chennai

1.	Control Room	MRCC Chennai	044-25395018	mrcc-east@indiancoastguard.nic.in
2.	First Escalation	Comdt BS Kothari, TM	9625557132	mrcc-east@indiancoastguard.nic.in
3.	Second Escalation	DIG CD Mohapatra	9650960285	ops-east@indiancoastguard.nic.in

3.4 MRCC Port Blair

1.	Control Room	MRCC Port Blair	03192-245530 03192-235612	mrcc-ptb@indiancoastguard.nic.in
2.	First Escalation	Comdt Vivek Sharma	8500635385	mrcc-ptb@indiancoastguard.nic.in
3.	Second Escalation	DIG Ashish Sinha	9437007536	ops-an@indiancoastguard.nic.in

4. Directorate General of Hydrocarbons –

1.	Control Room	DGH Control Room	0120-2472000 9821233677	cto.dg@dghindia.gov.in
2.	First Escalation	Mr. D D Roy	9711596835	deo.roy@dghindia.gov.in
3.	Second Escalation	Mr. Anand Gupta	9428331098	adgdevelopment@dghindia.gov.in

5. ONGC –

5.1 West Coast -

1.	Control Room	Vasudhara Control Room	022-26275900 022-26562710 022-26599700 022-26599710 022-26599659	vasudhara_vcr@ongc.co.in
2.	First Escalation	R Sundar Iyer Head Offshore Safety	8332996910	iyer_sundarr@ongc.co.in
3.	Second Escalation	K S Pandey	9868282232	pandey_ks@ongc.co.in

			9324398026	
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5.2 East Coast -

1.	Control Room	Radio Room Kakinada	0884- 2373004/2373006	radiokkd@ongc.co.in
2.	First Escalation	P Suresh Babu	9490168104	babu_polisetty@ongc.co.in
3.	Second Escalation	Arvind Morbale	9491069007	morbale_a@ongc.co.in

10. Annex 2 – Advisory message for Shipping Companies

Specific instructions for Shipowners, Charterers (DGS approved) and Shipowner Associations for message as per 8.3

Instructions – Shipping Companies:

=====

The above weather advisory issued by the Indian Meteorological Department, is required to be forwarded to all the vessels of your fleet in the area.

The Master of the vessels may be directed to take all required precautions including heavy weather precautions, that would be applicable under the prevailing circumstances as per the relevant national and international instruments including the ‘bridge procedures guide’ and the SMS of the vessel.

Any malfunction of any equipment effecting the seaworthiness of the vessel is to be immediately reported to the Company and then to the DG Comm Centre.

The shipping company must identify the high-risk vessels while special attention must be paid to all vessels in the affected area, the high-risk vessels may be immediately provided shelter. High-risk vessels should include, non-propelled vessels with passengers or work force on board other than the ship’s crew, propelled vessels with passengers, barges without hatch cover, RSV Class vessels, ICV Class vessels, derelict vessels, vessels under arrest, vessels those have become unseaworthy, harbour crafts, etc. In addition to the aforesaid vessels, criteria such as, available engine power, and freeboard of the vessel should be used by the Company for determining the high-risk vessels. All the high-risk vessel must be informed to the DG Comm Centre and MRCC, and must be prioritised when and if required for providing shelter. The criteria mentioned above is not exhaustive and does not cover all situations, hence company to exercise due diligence while determining high-risk vessels.

The Master of the vessels may also be directed to keep well clear of the storm system and navigate with utmost caution keeping safety of life, safety of ship, protection of property and the environment as utmost priority.

11. Annex 3 – Advisory message to Ports, DGH, ONGC & State Authorities

Specific instructions for Maritime Boards or State Authorities, Port Authority, DGH and ONGC for message as per 8.4

Instructions - Ports

=====

Kindly be guided by the above weather advisory, which is for information and further necessary action. The port may ensure Compliance of all actions specified in the checklist of MoPSW.

All traffic within the port limits and in the vicinity of the port are to be monitored closely to ensure that the vessels are clear of the storm system and high-risk areas of the system.

The port may also ensure that all high-risk vessel such as non-propelled vessels with passengers or work force on board other than the ship's crew, propelled vessels with passengers, barges without hatch cover, derelict vessels, vessels under arrest, vessels with low engine power, vessels that have become unseaworthy, etc., are given priority while assigning safe location within port.

The Master of the vessels in the port may also be directed to ensure that the vessels at berth are secured with adequate number of lines and vessels at anchor have adequate length of chain in the water as per the prevailing circumstances.

All vessels in port need to have their engines in readiness at all times and take all required precautions that would be applicable under the prevailing circumstances as per the relevant national and international instruments including the 'bridge procedures guide' and the SMS of the vessel.

The port may also take adequate steps to ensure that safety of life, safety of ships in port, protection of property and the environment as utmost priority.

12. Annex 4 – Advisory message to ICG & IN

Specific instructions for Indian navy and Indian Coast Guard for message as per 8.5

Instructions – Indian Navy & Indian Coast Guard

=====

Kindly be guided by the enclosed weather advisory, which is for information and further necessary action. It is requested that storm system may be carefully monitored and if any vessel is found in high-risk areas of the storm system, such vessels may be warned and instructed to keep clear of the storm system and to always remain in safe zone.

13. Annex 5 – SITREP format

Format of SITREP

**Directorate General of Shipping
DG COMM CENTER (MM-DAC)**

SITREP

1. General

.1	SITREP No.	
.2	Date/ Time of SITREP (IST)	
.3	Detailed Weather Report	IMD Bulletin No. x, dated xx @ xx is attached below for detailed weather report.
.4	Loss of Life/ Injury?	
.5	Any security breaches?	
.6	Environmental damage?	
.7	Property damage?	
.8	Any other untoward incident?	

2 Contingency Measures Deployed

.1	DG CommCenter:	
.2	Status of vessels and action taken:	
.3	Status of Port's preparation for the Cyclone	
	Summary for action taken report by the high risk ports is as follows:	
.4	Status from Ports after / during Cyclone:	
.5	Action Points after meeting with DGH and Ship Owners:	
.6	Reported Incidents:	

.7	Status of Emergency Towing Vessels (ETVs):
----	--

3 **Other information**

.1	Latest Tack of the Depression / Cyclone:
.2	Forecasted wind speeds of the Cyclone in its path:
.3	Snapshot of Marine traffic screen – Small scale chart showing traffic
.4	Snapshot of Marine traffic screen – Large scale chart showing traffic close to the Cyclone

14. Annex 6 – Format for seeking action taken report from Ports & DGH

Action taken report from Ports in the specified format

Port Name	Activities / Information Particulars	Reponses	Any other preventive measures	Remark
	E. GENERAL INFORMATION			
	1. CURRENT WIND SPEED AT PORT WATERS (KM/HR) AND WEATHER			
	2. ANTICIPATED DATE AND TIME OF IMPACT			
	3. LIKELY STORM SURGE (M)			
	4. FORECASTED WND SPEED (KM/HR) TILL NEXT REPORT			
	5. PRESENT PORT STORM SIGNAL			
	6. CRISIS MANAGEMENT PROCEDURE ACTIVATED			
	F. MARINE AREAS			
	7. INITIATION OF SHIFTING OUT OF VESSELS (EXPECTED DT. & TIME IF, NOT STARTED)			
	8. COMPLETION OF SHIFTING OUT OF VESSELS (EXPECTED DT. & TIME IF, NOT STARTED)			
	9. STATUS OF SECURING OF PORT CMFTS/ LAUNCHES ETC.			
	10. STATUS OF SECURING OF PVT CMFTS/ LAUNCHES ETC.			
	11. INFORMATION ON DERELICT VESSEL IN PORT LIMIT, IF ANY. STEPS TAKEN TO SAFEGUARD / PREVENT ACCIDENT.			
	12. TOTAL NUMBER OF HARBOUR CRAFTS, LAUNCHES, TOURIST :ERRIES ETC REMAINED INSIDE HARBOUR AND ACTION TAKEN FOR THEIR SAFETY			
	13. TOTAL NO OF VESSELS AVAILBLE IN OUTER HARBOURY PORT CREAS (EXCULDING INSIDE)			
	C. LAND AREAS			
	14. PRUNING OF TREES ON ROADS			
	15. HAZARD REDUCTION STEPS TAKEN / PROPOSED FOR VULNERABLE ARIEL STRUCTURES			
	16. PLAN OF SECURING ROOFS OF GODOWNS AND SHEDS.			
	17. SHORE CRANES – SECURED (NOS / TOTAL NOS)			

	18. PVT CARGO HANDLING EQUIPMENTS – SECURED (NOS)			
	19. ACTION PLAN FOR UNSECURED EQUIPMENTS / MACHINERIES FOR THEIR SAFETY.			
	20. PROJECT SITES – SECURING OF ITEMS.			
	21. LOWERING OF HIGH MAST LIGHTS			
	22. SUSPENSION OF RAIL TRANSPORT 7 ISOLATION OF OVERHEAD POWER LINES.			
	23. SUSPENSION OF ROAD TRANSPORT / INCOMING OF TRUCKS.			
	24. SECURING OF LOCOMOTIVES & RACKES.			
	25. SECURING OF MISCELLANEOUS FLYABLE OBJECTS / MATERIALS.			
	26. AVAILIBLTY OF PORTABLE GENSETS FITTED WITH FLOOD LIGHTS FOR GENERAL LIGHTING AT STRETEGIC LOCATIONS.			
	27. CLEANING OF FLOOD DRAINS.			
	28. CONSIDERING TIDE LEVEL, IF WATER LOGGING EXPECTED DURING THE IMPACT – COUNTER MEASURES.			
	D. PEOPLE			
	29. NUMBER OF PUBLIC ADDRESSAL SYSTEMS DEPLOYED FOR MAKING ANNOUNCEMENTS FOR THE PUBLIC WITHIN PORT AREAS.			
	30. TOTAL POPULATION REQUIRING EVACUATION FROM PORT AREAS.			
	31. TOTAL NO OF TEAMS DEPLOYED FOR EVACUATION.			
	32. TOTAL NUMBER OF VEHICLES DEPLOYED FOR EVACUATION.			
	33. NUMBER OF CYCLONE SHELTERS PROVIDED WITH ESSENTIAL ITEMS (WATER, DRY EATABLES, DRINKING WATER, PORTABLE GENSET/ ETC)			
	34. TOTAL CAPACITY OF CYCLONE SHELTERS.			
	35. EVACUATION – INITIATION AND COMPLETION (DATE & TIME)			
	36. MEDICAL – AMBULANCES AT STRETIGIC LOCATIONS.			
	37. MEDICAL – TRAUMA & EMERGENCY SERVICES.			
	38. WHETHER ENTIRE PORT OPERATIONAL AREA CLEARED OF PORT USERS AND WORKERS			

	(EXCEPT FOR EMERGENCY DEPLOYMENT)			
	39. CO-ORDINATION WITH DISTRICT / STATE DMA			

NOTE-1 : the port shall be expected to start sending this information on daily / more frequent intervals to the Ministry of Shipping from the time of hoisting storm warning signal 5.

2. Relevant information may be provided in short, specifying date, time, numbers etc.

15. Annex 7 – DGS Casualty Management Plan

Refer to the DGS SOPs in case of Casualty - 2021.