

THE HNS CONVENTION WHY IT IS NEEDED

HNS INCIDENT SCENARIOS



PLEASE NOTE THE FOLLOWING:

- The scenarios provided have used information from historic HNS incidents, but are not necessarily reflective of any specific incident either with regard to the claims quantum or categories of claim. Some of this data is used for illustrative purposes only.
- The HNS Convention refers to Special Drawing Rights (SDR) for calculating liability and compensation limits
 - SDR is the unit of account of the International Monetary Fund (IMF)
 - SDR figures have been converted to US\$ at the rate of SDR 1 = US\$ 1.34

INTRODUCTION

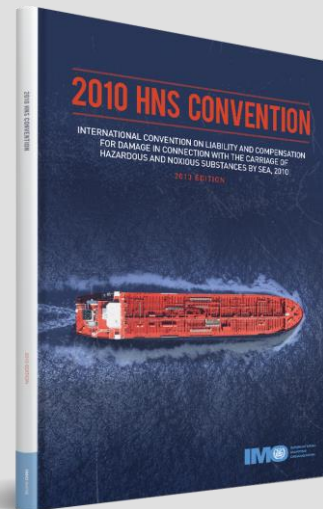
HNS Convention fills a gap in the regime of maritime liability and compensation

What it is:

- Liability and compensation regime for damage arising from the international or domestic carriage of bulk and packaged HNS by sea





What it covers:

- Over 2,000 types of chemicals, oils, acids, fertilizers, alcohols, LNG, and LPG carried by sea-going ships to/from/within a State Party



WHAT IS COVERED BY THE HNS CONVENTION?

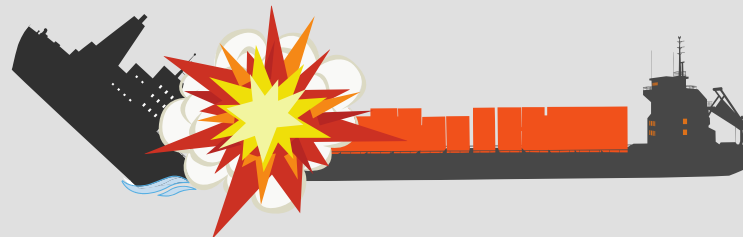
“DAMAGE” MEANS:

Loss of life or personal injury	
Loss of or damage to property; economic losses	
Costs of clean-up and preventive measures	
Reasonable measures of reinstatement of the environment	

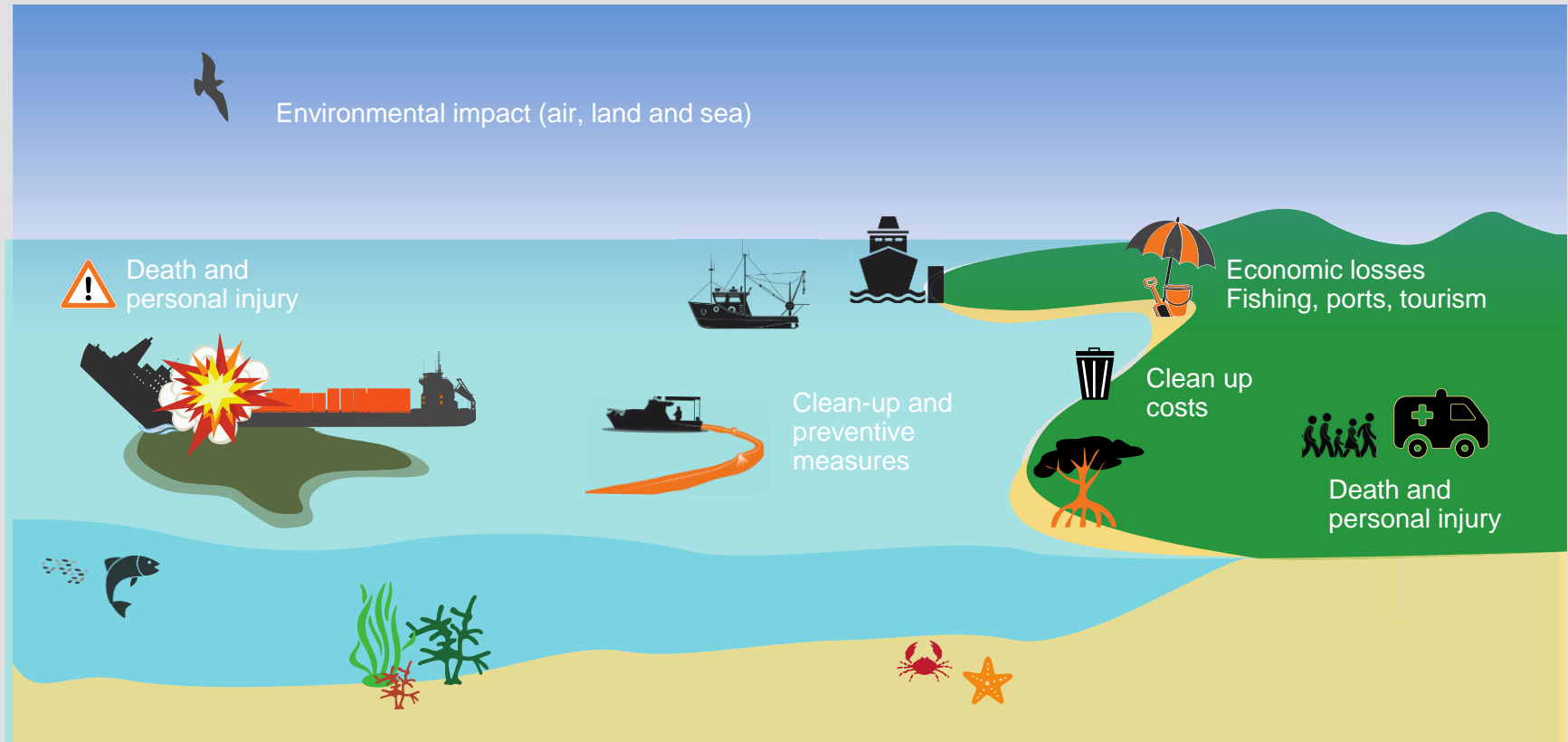
WHAT IS COVERED BY THE HNS CONVENTION?

SCOPE OF COVER

- Damage caused by HNS in connection with their transport by sea
- Either bulk or in packages/containers
- Applies to damage caused by HNS in the territory, including the territorial sea and EEZ of a State Party
- Applies to loss of life and personal injury claims onboard and outside the ship, including from the carriage of all types of oil (e.g. from a fire or explosion)
- Applies to damage (other than pollution) caused outside territory and territorial sea of any State if caused by HNS carried on board a ship registered in a State Party
- Applies to preventive measures, wherever taken



IMPACTS ASSOCIATED WITH HNS INCIDENTS



SCENARIO 1: GENERAL CARGO VESSEL

SHIP (20,000 G.T.) CARRYING SODIUM AND OTHER TOXIC AND CORROSIVE SUBSTANCES SUFFERS STRUCTURAL FAILURE IN BAD WEATHER

SITUATION

- Ship is in territorial waters
- Hull cracks, substances leak into water, packages lost overboard
- Sodium ignites on contact with water causing fire on board the ship and further explosions due to other flammable substances
- Other toxic and corrosive substances present threat to fisheries

HNS RISKS

Sodium



Appearance:

Silvery metal (solid)

Behaviour:

Burns violently in contact with water

Main risks:







Dangerous when wet, highly flammable

CONSEQUENCES

- 23 crew members died during the fire
- 3 responders overcome by toxic fumes during operations
- Evacuation of nearby population (15,000 people)
- Fishing and harvesting ban in place for three weeks as precaution

SCENARIO 1: GENERAL CARGO VESSEL

IMPACT / CLAIMS

Type							TOTAL
Description	Crew killed by fire on board	Health impact on response personnel	Toxic impact on aquaculture	Fishing ban	Evacuation costs	Response costs	
Costs (est.)	US\$ 5 million	US\$ 100,000	US\$ 8 million	US\$ 15 million	US\$ 3 million	US\$ 30 million	US\$ 61.1 million

LIMITS

CLAIMS	LLMC LIMIT	HNS LIMIT SHIPOWNER	HNS LIMIT HNS FUND
DEATH AND PERSONAL INJURY	SDR 24.76 million US\$ 33.17 million	SDR 37 million US\$ 49.58 million	SDR 250 million US\$ 335 million (incl. shipowner limit)
OTHER CLAIMS (including clean-up and preventive measures)	SDR 12.38 million US\$ 16.58 million		

SCENARIO 2: CONTAINER SHIP

COLLISION BETWEEN A CONTAINER SHIP (33,113 G.T.) CARRYING EXPLOSIVE AND TOXIC SUBSTANCES IN PACKAGED FORM, AND ANOTHER SHIP

SITUATION

- Ships are in territorial waters
- Collision causes the container ship to ground just outside port
- 200 containers lost at sea, including 50 with dangerous goods
- Substances in some containers vaporized releasing toxic gases and fumes

HNS RISKS

Aluminium phosphide

Appearance:

Yellow solid

Behaviour:

Reacts with water to give flammable and poisonous gas phosphine

Main risks:

dangerous when wet, poisonous








CONSEQUENCES

- 2 responders injured while dealing with dangerous goods
- Extensive operations to remove wreck and containers
- Economic impacts with port closed for 4 days
- Environmental impacts on mangroves

SCENARIO 2: CONTAINER SHIP

IMPACTS/CLAIMS

TYPE						TOTAL
Description	Personal injury for response personnel	Wreck removal (ship & containers)	Recovery of dangerous goods on coastline	Impacts on port operations	Measures to minimize environmental impact	
Costs (est.)	US\$ 200,000	US\$ 73 million*	US\$ 2 million	US\$ 3.05 million	US\$ 3 million	US\$ 81.25 million

* These costs could in part or in full be covered under the Nairobi Wreck Removal Convention

LIMITS

CLAIMS	LLMC LIMIT	HNS LIMIT SHIPOWNER	HNS LIMIT HNS FUND
DEATH AND PERSONAL INJURY	SDR 39.7 million US\$ 53.2 million	SDR 65.2 million US\$ 87.4 million	SDR 250 million US\$ 335 million (incl. shipowner limit)
OTHER CLAIMS (including clean-up and preventive measures)	SDR 19.8 million US\$ 26.5 million		

SCENARIO 3: CHEMICAL TANKER

CHEMICAL TANKER (1,597 G.T.) CARRYING FLAMMABLE, EXPLOSIVE, TOXIC AND CORROSIVE SUBSTANCES IN BULK, COLLIDES WITH ANOTHER SHIP IN BAD WEATHER

SITUATION

- Severely damaged by collision, sank in the EEZ following a fire on board
- Cargo of 547 tons of Acrylonitrile and 500 tons of Dodecyl benzene
- Cargo of Acrylonitrile presents an ongoing threat to people and environment
- Burning materials released fumes of hydrogen cyanide and oxides of nitrogen. Substances classified as a carcinogen

HNS RISKS

Acrylonitrile



Appearance:

colourless, volatile liquid, pungent, onion-like odour

Behaviour:

Highly flammable, toxic at low doses and undergoes explosive polymerization

Main risks:





Marine pollutant and very dangerous to humans and environment

CONSEQUENCES

- 2 crew members died in fire
- Exclusion zone (10 km radius, 300m height)
- Recovery of the acrylonitrile using large floating crane.
- Continuous monitoring of air and water concentration of acrylonitrile
- More than 2 months to lift the wreck elements and half of HNS cargo due to bad weather

SCENARIO 3: CHEMICAL TANKER

IMPACTS/CLAIMS

TYPE					TOTAL
Description	Personal injury	Removal of cargo, survey etc.	Clean-up, discharge, storage	Preventive measures, air surveillance	
Costs (est.)	\$ 2.14 million	\$ 4.34 million	\$ 4.10 million	\$ 1.80 million	\$ 12.4 million

LIMITS

CLAIMS	LLMC LIMIT	HNS LIMIT SHIPOWNER	HNS LIMIT HNS FUND
DEATH AND PERSONAL INJURY	SDR 3.02 million US\$ 4.04 million	SDR 10 million US\$ 13.4 million	SDR 250 million US\$ 335 million (incl. shipowner limit)
OTHER CLAIMS (including clean-up and preventive measures)	SDR 1.51 million US\$ 2.02 million		

SCENARIO 4: LPG TANKER

LPG TANKER (12,240 G.T.) CARRYING CARGO OF LIQUEFIED PETROLEUM SUFFERS A MECHANICAL FAILURE AND DRIFTS TO SHORE NEAR POPULATED AREA

SITUATION

- Ship disabled and majority of crew rescued
- Ship drifting towards a populated coastal area
- Potential boiling liquid expanding vapour explosion
- Attempts to restart engines and tow ship unsuccessful and ship runs aground

HNS RISKS

Liquefied Petroleum Gas



Appearance:

Gas. Transported as liquid under pressure

Behaviour:

Evaporator

Main risks:

Highly flammable

CONSEQUENCES

- Preventive measures taken
- Salvage operations undertaken
- Exclusion zone set up as precaution - evacuation of nearby population

SCENARIO 4: LPG TANKER

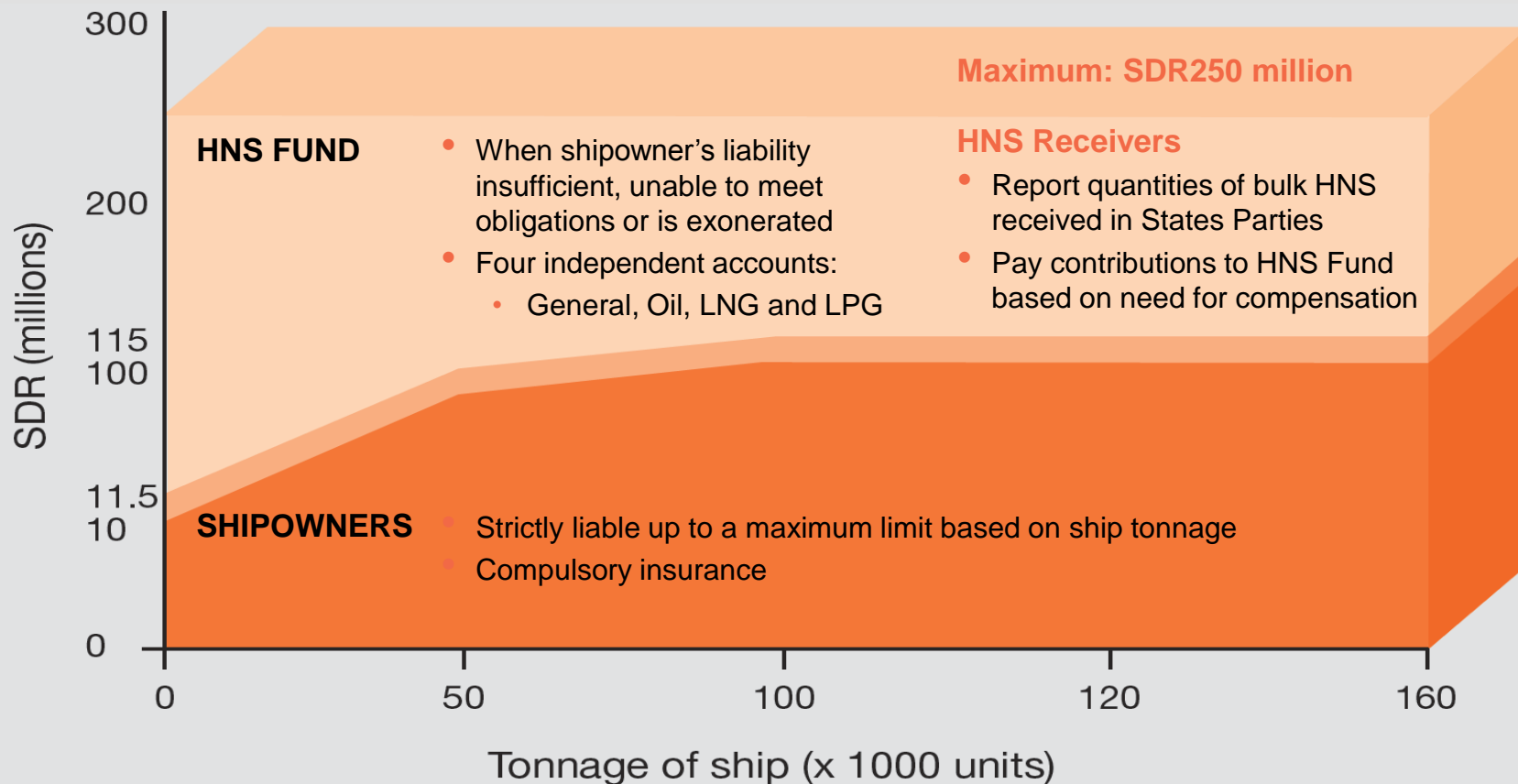
IMPACTS/CLAIMS

Type				TOTAL
Description	Preventive measures	Salvage operations	Exclusion zone / economic losses	
Costs (est.)	US\$ 152,000	US\$ 285,000	US\$ 943,000	US\$ 1,380,000

LIMITS

CLAIMS	LLMC LIMIT	HNS LIMIT SHIPOWNER	HNS LIMIT HNS FUND
DEATH AND PERSONAL INJURY	SDR 15.4 million US\$ 20.6 million	SDR 25.4 million US\$ 34 million	SDR 250 million US\$ 335 million (incl. shipowner limit)
OTHER CLAIMS (including clean-up and preventive measures)	SDR 7.7 million US\$ 10.3 million		

COMPENSATION AVAILABLE UNDER THE CONVENTION



BENEFITS OF THE HNS CONVENTION

- The HNS Convention establishes that the polluter pays by ensuring that the shipping and HNS industries provide compensation for those who have suffered loss or damage resulting from an HNS incident
- It is an international regime based on a well tested system of international conventions for compensation for oil spills from tankers
- It provides a framework for States adopting the HNS Convention and it is directly administered by those States that are members of the regime
- The HNS Convention benefits all States Parties (producing, receiving and coastal States) through a system of strict liability and clear claims criteria

NEXT STEPS FOR STATES: WHAT TO DO?

- **BE PROACTIVE** in ensuring adequate compensation is available in the event of an HNS incident
- **ACCEDE TO** the HNS Convention

States are urged to become parties to the HNS Convention, bring it into force and ensure that this risk is covered internationally.

HOW TO DO IT?

- **FIND OUT MORE** and **VISIT** **www.hnsconvention.org**
- **CONTACT** the IMO and IOPC Funds Secretariats

Assistance from IMO and IOPC Funds is available to States and the industry for implementing the Convention nationally.

