

DEVELOPING PREPAREDNESS FOR LARGE-SCALE MARITIME ACCIDENTS





- There is not a single Sea coastal state capable of handling a large-scale maritime incident alone.
- All of the countries want to operate more efficiently and intensify international cooperation.
- Common co-operation could be effective tools to collaborate in some special areas, like vessel fires.

VESSEL TRIAGE CATALYST

3



VESSEL TRIAGE METHOD



- *A method for assessing and communicating the safety of vessels in maritime accidents and incidents*
- Vessel Triage supports common situational awareness between SAR service – Ship – Shipping companies – Shore side authorities
 - ⇒ Helps communication and recognition of the most critical situations.
 - ⇒ Helps make right decision for first SAR action.
 - ⇒ Helps special shore side authorities understand situation on board.
 - ⇒ Helps to increase SAR action efficiency.



COMMON LANGUAGE

5



1) Exchange of information



2) Decision on vessel's Vessel Triage category

GREEN	YELLOW	RED	BLACK
THE VESSEL IS SAFE AND CAN BE ASSUMED TO REMAIN SO	1) THE VESSEL IS CURRENTLY SAFE, BUT THERE IS A RISK THAT THE SITUATION WILL GET WORSE OR 2) VESSEL STATUS IS UNCLEAR	THE LEVEL OF SAFETY ABOARD HAS SIGNIFICANTLY WEAKENED AND IMMEDIATE EXTERNAL ACTION IS REQUIRED TO ENSURE THE SAFETY OF THE PEOPLE ABOARD	THE VESSEL IS NO LONGER SAFE AND HAS BEEN LOST

THREAT FACTOR MATRIX



Threat factors	GREEN	YELLOW	RED	BLACK
Flooding	Flooding affects a limited or contained space and has no effect on the vessel's stability and seaworthiness.	Flooding can be kept under control with pumps and watertight compartments, but the seaworthiness of the vessel is restricted.	Extensive flooding or progressive flooding to undamaged watertight compartments. Flooding cannot be kept under control and poses a direct danger on the entire vessel.	Flooding is so severe that evacuation operations are no longer possible. OR Vessel has capsized or sunk.
Listing, decrease of stability	Listing or decrease of stability does not affect the seaworthiness of the vessel.	Seaworthiness of the vessel is restricted due to a decrease of stability or a notable list.	Large heel angles. The seaworthiness of the vessel is significantly impaired, its stability is threatened and there is an imminent need to evacuate.	Stability is decreased to such an extent that evacuation operations are no longer possible. OR Vessel has capsized or sunk.
Decrease of manoeuvrability	Vessel's manoeuvrability is hampered, but the vessel can still proceed on its course.	Vessel has lost its manoeuvrability, but is still capable of emergency anchoring or drifting safely.	Vessel has lost its manoeuvrability and is not capable of emergency anchoring or drifting safely.	(Not applicable)
Black-out	Functions important for ship operations are kept running by backup systems while the fault is repaired.	Operational capability of the vessel is limited: Backup systems do not work as planned OR functions important for ship operations are kept running by backup systems, but the fault cannot be repaired at sea.	A full black-out of long duration that cannot be repaired at sea poses a direct danger on the entire vessel.	(Not applicable)
Fire, explosion	Fire has been extinguished and there is no danger of reignition AND/OR the consequences of an explosion do not affect the vessel's safety.	Fire or explosion affects only a limited area and can be brought under control with the vessel's own or external damage control/firefighting resources.	Fire cannot be kept under control OR the consequences of an explosion pose a direct danger on the entire vessel.	Conditions on board the vessel are not survivable. The consequences of the fire or explosion pose a direct danger to persons aboard. OR Vessel has been destroyed.
Danger posed by hazardous substances	Release of hazardous substances on board does not pose any danger on the vessel.	Release of hazardous substances on board poses a danger in certain sections of the vessel, but the release can be contained to these sections.	Release of hazardous substances on board poses a direct danger on the entire vessel.	(Not applicable)

EXAMPLE

7

Threat factors	GREEN	YELLOW	RED	BLACK
Flooding	Flooding affects a limited or contained space and has no effect on the vessel's stability and seaworthiness.	Flooding can be kept under control with pumps and watertight compartments, but the seaworthiness of the vessel is restricted.	Extensive flooding or progressive flooding to undamaged watertight compartments. Flooding cannot be kept under control and poses a direct danger on the entire vessel.	Flooding is so severe that evacuation operations are no longer possible. OR Vessel has capsized or sunk.

Other threat factors:

- "Listing, decrease of stability",
- "Decrease of manoeuvrability",
- "Black-out",
- "Fire, explosion" and
- "Danger posed by hazardous substances"

EXAMPLE



Threat factors	GREEN	YELLOW	RED	BLACK
Flooding	Flooding affects a limited or contained space and has no effect on the vessel's stability and seaworthiness.	Flooding can be kept under control with pumps and watertight compartments, but the seaworthiness of the vessel is restricted.	Extensive flooding or progressive flooding to undamaged watertight compartments. Flooding cannot be kept under control and poses a direct danger on the entire vessel.	Flooding is so severe that evacuation operations are no longer possible. OR Vessel has capsized or sunk.

Vessel Triage-category is decided on the basis of the assessed severities of threat factors. Category is determined to be the same as the highest selected answer option shows.

GREEN	YELLOW	RED	BLACK
THE VESSEL IS SAFE AND CAN BE ASSUMED TO REMAIN SO	THE VESSEL IS CURRENTLY SAFE, BUT THERE IS A RISK THAT THE SITUATION WILL GET WORSE	THE LEVEL OF SAFETY ABOARD HAS SIGNIFICANTLY WEAKENED AND IMMEDIATE EXTERNAL ACTION IS REQUIRED TO ENSURE THE SAFETY OF THE PEOPLE ABOARD	THE VESSEL IS NO LONGER SAFE AND HAS BEEN LOST

OPERATIONAL FOCUS BASED ON VESSEL TRIAGE CLASSIFICATION

9

GREEN	YELLOW	RED	BLACK
<p>Vessel is safe and can be assumed to remain so</p>	<p>Vessel is currently safe, but there is a risk that the situation will get worse</p>	<p>Level of safety has significantly worsened or will worsen and external actions are required to ensure the safety of the people aboard</p>	<p>Vessel is no longer safe and has been lost</p>
<p>OPERATIONAL FOCUS</p> <ul style="list-style-type: none"> - Damage control or firefighting operations are not or are no longer required. - If there are injured people aboard, the operational focus is on emergency care. - Only patients in need of urgent care are evacuated from the vessel. - Active monitoring of the situation aboard is important. 	<p>OPERATIONAL FOCUS</p> <p>The operational focus is on limiting damage / damage control and preparations for possible evacuation from the vessel.</p> <ul style="list-style-type: none"> - In addition to carrying out damage control measures and rescue operations, it is important to determine the actual condition of the vessel. - At the discretion of the master of the vessel, non-essential persons can be evacuated from the vessel. - Proactive measures are taken to stabilise the situation aboard so that its condition becomes "green" or alternatively to allocate more time to evacuation and other rescue operations. - Continuous monitoring of the situation aboard is important (risk of the situation turning "red"). 	<p>OPERATIONAL FOCUS</p> <ul style="list-style-type: none"> - The operational focus is on evacuation of the vessel. - All non-essential persons will be evacuated from the vessel. - Patient classification may not be able to be carried out aboard the vessel. - If enough resources are available, damage control/ firefighting will be carried out to provide extra time for evacuation. - Emergency towing to shallows could be an alternative to evacuation, or a means of gaining time for actual evacuation. - Continuous monitoring of the situation aboard becomes more important (damage usually spreads progressively = significant risk of the situation turning "black"). 	<p>OPERATIONAL FOCUS</p> <ul style="list-style-type: none"> - The operational focus is on rescuing people on the hull as well as searching for and rescuing those in the water. - Patient classification cannot be carried out aboard the vessel. - Operations involving diving or rescue by means of hull penetration are special operations that are planned and decided on separately. - As a rule, additional personnel are not dispatched from land into the vessel.



MARITIME SAR CLASSIFICATION SYSTEMS

10

- **According Emergency Phases**

- International Maritime and Aeronautical
 - ❖ Uncertainty Phase
 - ❖ Alert Phase
 - ❖ Distress Phase

- **According Accident type**

- "What has happened?"
- "What kind of assistance is needed?"

- **According size of the Accident**

- Daily mission (1-10 persons OR max 2 seriously injured)
- Multi Patients mission (less than 20 persons OR 3-10 seriously injured)
- Disaster (over 20 persons OR over 10 seriously injured)
- Multi Actor case (humans, environmental and property is in danger)

- **According other players classification** (rescue service, medical, ...)

PLACE OF REFUGE

11

- **A place of refuge is a place where a ship in need of assistance can take action to enable it to stabilize its condition and reduce the hazards to navigation, and to protect human life and the environment.**
- **It may include a port, a place of shelter near the coast, an inlet, a cove ; a bay or any part of the coast**



WHAT INFORMATION IS IMPORTANT TO THE STAKEHOLDERS?

12

- Local politics
- Availability of resources
- Weather forecasts
- Ongoing status of the cargo and any deterioration
- True status of the casualty –live information and facts about any changes
- Any relevant local wildlife species
- Constant monitoring and updating of status
- The type, value and specification of the cargo
- Legislation
- Who are the authorities ashore
- The plans and particulars of the ship as was
- The interested parties

PLACE OF REFUGE DECISIONS

13

- Decisions should not be made on the basis of scanty information



MEDICAL TRIAGE PRINCIPLE



The Four Colors of Triage

MINOR	delayed care / can delay up to three hours
DELAYED	urgent care / can delay up to one hour
IMMEDIATE	immediate care / life-threatening
DEAD	victim is dead / no care required

- The main factor that distinguishes true mass casualty disasters from the routine management of injured patients is the large number of casualties that present essentially simultaneously, which outstrip the available resources required for their optimal care.
- The injuries themselves tend to be similar to those normally encountered in daily trauma practice,
- A major change in the approach to medical care is therefore required in order to optimize outcome.

Classification

15

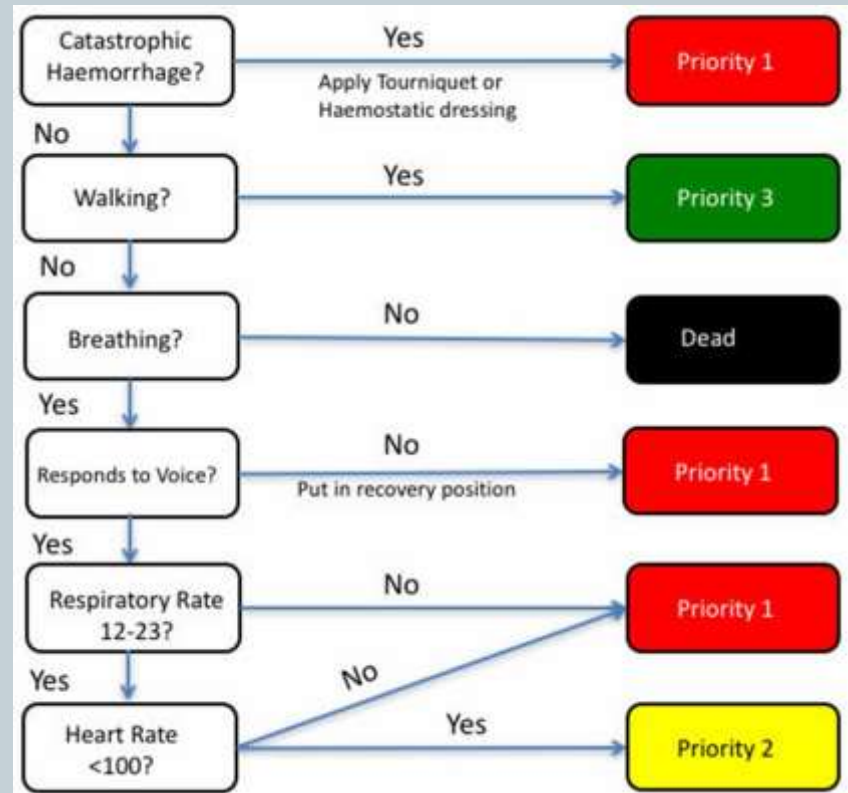
NY 563959 NY 563959

START-AID TRIAGE TAG **CONTAMINATION:**
 NO YES
 NO YES
 NO YES

Respiration Yes No
 Pulse Yes No
 Major Wounds Yes No
 Major Bleeds Yes No
 Conscious Yes No
 Time: _____

DECEASED
 IMMEDIATE
 DELAYED
 MINOR

DECEASED
 IMMEDIATE
 DELAYED
 MINOR



THANK YOU!