VESSEL TRIAGE – PROJECT

2014-2015

Rajavartiolaitos
Gränsbevakningsväsendet
The Finnish Border Guard

ORIGINS OF THE IDEA

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- Development of the Vessel TRIAGE system began in Finland in early 2012, immediately after the accident off the coast of Italy involving the cruise ship Costa Concordia.
- The basic concept of the idea of a categorization system has been introduced since in several international maritime search and rescue forums, where reception has been positive.
- The capsizing and sinking of the MV Sewol off the coast of South Korea highlighted again the need for rapid decision making tools.

But why this initiative?

BACKGROUND FOR THE VESSEL TRIAGE PROJECT

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- IMO / Maritime SAR doesn't have common classification system for vessels in distress focusing on ships damages
- A Maritime SAR mission classification system is not familiar for all shore side authorities
- The Finnish SAR Authorities have developed a classification system concept called "Vessel TRIAGE" to be used in SAR missions related to large-scale maritime accidents

VESSEL TRIAGE

The risk assessment takes into account for example vessel type, number of people, cargo, location, use the resources and conditions

RAPID RISK SURVEILLANCE
(or separate question surveillance)

VESSEL STABLE	VESSEL SITUATION UNCLEAR OR LIMITED DAMAGES	DAMAGES ARE NOT UNDER CONTROL ONBOARD	VESSEL LOST (for example sunk or capsized)
SITUATION ONBOARD The ship's condition is stable. Damages do not threaten the ship's stability, seaworthiness of the ship or the people onboard. Entrapement of the damage is very unlikely. The vessel has been checked and possible damage control or fire-fighting work has been completed successfully. The vessel will offer protection against sea and weather conditions to people onboard.	SITUATION ONBOARD The ship has a defect affecting the either the stability or seaworthiness or the damage has not yet been fully checked. The ship has not yet been completed fire-fighting or damage control measures. Ship damage is a direct or indirect threat to the people onboard. Damage control is possible with reasonable resources available to put the right measures in place.	SITUATION ONBOARD The vessel has no longer seaworthy and has significant damages. Damage control measures available are unlikely to be able to save the ship. A fire, leak or other damage onboard are not under control, and escalation is serious possibility. The vessel is unlikely to remain capable of being a place of safety for those people onboard.	SITUATION ONBOARD The vessel has been capsized, broken, sunk, burnt or otherwise damaged so badly that its stability or seaworthiness is totally lost. The vessel is completely or partly sunk, and is no longer a safe place for rescue activity to continue.
GENERAL ACTION PLAN AND GUIDELINES - The operational focus is on evacuation of injured and medical TRIAGE classification - If a ship has a number of persons injured, MIRG- or medical teams are put onboard to carry out medical TRIAGE ONLY red and yellow patients will be evacuated at first - Even if the situation does not involve damage prevention or fire extinguishing, active monitoring of the ship's safety is important.	GENERAL ACTION PLAN AND GUIDELINES - Even the damage control or firefighting operation is going on, active monitoring of the ship's safety is important - The operational focus is on evacuation as well as firefighting or damage controlling assistance - Evacuate people based on Medical TRIAGE-classification, if possible - The aim of firefighting or damage control is to return the ship's status back to "green" or play for extra time to carry out systematic evacuation and rescue operations - All non-essential persons will be evacuated from the ship - The ship's situation is continually monitored for the risk of "red" re-classification.	GENERAL ACTION PLAN AND GUIDELINES - The operational focus is on starting evacuation measures and the mass rescue operations (MRO) - All non-essential persons will be evacuated from the ship. - MIRG or other rescue teams will not be deployed to the ship unless their effective and efficient emergency evacuation can be guaranteed, (at least one unit must be dedicated to this evacuation task) - As Medical TRIAGE is unlikely to be possible, all persons will be evacuated without prior classification - If resources are limited, damage control and firefighting will be prioritised to provide extra time for evacuation. - The ship's situation is continually monitored for the high risk of "black" re-classification.	GENERAL ACTION PLAN AND GUIDELINES - The operational focus is on search and rescue of people from outside the ship's hull and from water - Additional personnel will not be allowed to board the ship. - Medical TRIAGE classification is no longer possible to implement - Any further entries into the ship's hull (either by diving, or by hull penetration) will be carefully assessed and approved in advance.

EXAMPLES FOR OTHER MARITIME SAR CLASSIFICATION SYSTEMS

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- **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, …)

THE VESSEL TRIAGE PROJECT

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- ”Vessel TRIAGE” is a multinational project to develop a categorization and risk identification system for distress vessels in ship accidents.

- A uniform, international categorization system describing the status of a distress vessel is necessary in order to assess the seriousness of the vessel’s situation and to facilitate decision-making regarding search and rescue.

- Categorization enables rapid identification of the key operational risks and a correlative vessel status or condition in order to ensure appropriate SAR response and further operations.

- Project will be led by the Finnish Border Guard as the responsible maritime search and rescue authority

THE ULTIMATE GOAL

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- The goal of the system is to facilitate the maintenance of situational awareness between the authorities and the distress vessel, and enhance the communications between them.
- Categorization would make the cooperation between SAR services and various actors significantly more effective – both nationally and internationally.
- Apart from developing the categorization system, the project will also create a risk assessment tool to form part of the Vessel TRIAGE system.
  - The tool's main purpose is to facilitate the situational awareness of the distress vessel and the RCC concerning the vessel's status and prevailing risks.
  - The goal being that the safety of rescue work increases
- Actors participating in the events on shore, for example in the preparation of place of refuge decisions and at evacuation centers, would also benefit from the categorization system.

VESSEL TRIAGE CLASSIFICATION

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Vessel Triage classification system has four (4) categories

- ❖GREEN
- ❖YELLOW
- ❖RED
- ❖BLACK

- System may include national or regional operational guidelines for SAR operations FIRST main actions such as the “Main Action Plan“

VESSEL TRIAGE CONCEPT

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- Easy to understand, based on medical TRIAGE concept, but the focus is on situation of the distress vessel
- Risk assessment will be made easier (common tools)
- Includes operational guidelines ("MAP")
- Has positive influence for cooperation and for SRUs
- Common situational picture and better awareness among all players
- Situation onboard has strong influence to SAR operations and their effectiveness
- Has a positive influence on communication

WHY VESSEL TRIAGE?

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- Complexity and severity of the situation needs better understanding of the situation and its risks
- The speed of the situations development can have an negative effect on the decision making process
  - Common tools can make the risk assessment more efficient and facilitate decisions such as allowing place of refuge easier

VESSEL IS STABLE

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SITUATION ONBOARD

- The ship's condition is stable.
- Damages do not threaten the ship's stability, seaworthiness of the ship or the people onboard.
- Enlargement of the damage is very unlikely. The vessel has been checked and possible damage control or fire-fighting work has been completed successfully.
- The vessel will offer protection against sea and weather conditions to people onboard.

GENERAL NATIONAL ACTION PLAN AND GUIDELINES (for example)

- The operational focus is on evacuation of injured and medical TRIAGE classification
- If a ship has a number of persons injured, MIRG- or medical teams are put onboard to carry out medical TRIAGE
- ONLY red and yellow patients will be evacuated at first
- Even if the situation does not involve damage prevention or fire extinguishing, active monitoring of the ship's safety is important.

VESSELS SITUATION IS UNCLEAR OR IT HAS ONLY LIMITED DAMAGES

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SITUATION ONBOARD

- The ship has a defect affecting the either the stability or seaworthiness or the damage has not yet been fully checked.
- The ship has not yet been completed fire-fighting or damage control measures.
- Ship damage is a direct or indirect threat to the people onboard.
- Damage control is possible with reasonable resources available to put the right measures in place.

GENERAL NATIONAL ACTION PLAN AND GUIDELINES

(for example)

- Even the damage control or firefighting operation is going on, active monitoring of the ship's safety is important
- The operational focus is on evacuation as well as firefighting or damage controlling assistance
- Evacuate people based on Medical TRIAGE-classification, if possible.
- The aim of firefighting or damage control is to return the ship's status back to "green" or play for extra time to carry out systematic evacuation and rescue operations
- All non-essential persons will be evacuated from the ship
- The ship’s situation is continually monitored for the risk of "red" re-classification

DAMAGES ONBOARD ARE NOT UNDER CONTROL

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SITUATION ONBOARD

- The vessel has no longer seaworthy and has significant damages.
- Damage control measures available are unlikely to be able to save the ship.
- A fire, leak or other damage onboard are not under control, and escalation is serious possibility.
- The vessel is unlikely to remain capable of being a place of safety for those people onboard.

GENERAL NATIONAL ACTION PLAN AND GUIDELINES (for example)

- The operational focus is on starting evacuation measures and the mass rescue operations (MRO)
- All non-essential persons will be evacuated from the ship.
- MIRG or other rescue teams will not be deployed to the ship unless their effective and efficient emergency evacuation can be guaranteed, (at least one unit must be dedicated to this evacuation task)
- As Medical TRIAGE is unlikely to be possible, all persons will be evacuated without prior classification
- If there are enough resources on scene, damage control and firefighting will be prioritised to provide extra time for evacuation.
- The ship's situation is continually monitored for the high risk of "black" re-classification.

VESSEL IS LOST
(for example sunken or capsized)

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SITUATION ONBOARD

- The vessel has been capsized, broken, sunk, burnt or otherwise damaged so badly that its stability or seaworthiness is totally lost.
- The vessel is completely or partly sunk, and is no longer a safe place for rescue activity to continue.

GENERAL NATIONAL ACTION PLAN AND GUIDELINES
(for example)

- The operational focus is on search and rescue of people from outside the ship's hull and from water
- Additional personnel will not be allowed to board the ship.
- Medical TRIAGE classification is no longer possible to implement
- Any further entries into the ship’s hull (either by diving, or by hull penetration) will be carefully assessed and approved in advance.

THE VESSEL TRIAGE PROJECT OBJECTIVES

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Further development of rapid risk assessment tools / indicators related to the Vessel TRIAGE system

- Development of rapid risks identification and classification
- Development of the rapid risk assessment tools for ship officers in distress vessels, maritime SAR coordination centers (RCC), and all operational units participating in rescue missions

An "Excel-based" or other demo tool to identify risks and make classified rapid risk assessments

PROJECT PARTNERS

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Founding partners:

- Ministry for Foreign Affairs of Finland
- The Finnish Border Guard (as project coordinator)
- Finnish Transport Safety Agency
- Finnish Transport Agency
- International Maritime Rescue Federation (IMRF)

MINISTRY FOR FOREIGN AFFAIRS OF FINLAND

Trafi
Finnish Transport Safety Agency

Liikenne virasto
Finnish Transport Agency

INTERNATIONAL MARITIME RESCUE

Other key partners:

- The Finnish Lifeboat Institution
- Maritime SAR authorities
- Merchant shipping
- Universities and / or Technical Research Centres
- Other SAR Partners

PROJECT IMPLEMENTATION

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- The project will be implemented between July 2014 and May 2015, funded by the Ministry for Foreign Affairs of Finland.
  - Related development work will be carried out by means of international workshops held in Finland supported by different internet and video based communication tools.
- The Vessel TRIAGE project is open to all. We look forward to participation from the public authorities, research institutes and universities, and merchant shipping.
- Joining the project is free of charge.
- Project results will be available world wide for all users
  - SAR services, Shipping companies, Shipping industry, …

IMPLEMENTATION OF THE PROJECT

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7/2014-5/2015

- Phase I (7-10/2014): Launching of the project and finishing of the classification criteria
- Phase II (11/2014-1/2015): Development of rapid risk assessment criteria
- Phase III (2-4/2015): Development of the rapid risk assessment demo tool
- Phase IV (5/2015): Publication of the developed risk assessment classification and demo tool, project closure
- Budget: over 400 000 €

THE PROJECT IS CURRENTLY SEEKING…

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Vessel Triage project 6/2014 – 5/2015

- For partners to join the venture
- For political support for the ongoing project and "Flagship status"
  - *Any further action once the categorization system and risk assessment tool are ready will be agreed upon between the actors who have participated in the project.*

Further development after the Vessel Triage project may include

- Proposal to IMO (for IAMSAR and possibly ISM –code)
- Advanced rapid risk management application for ships masters and SAR authorities
  - this will evidently require financial support for possible future development

THANK YOU!

Capt. Jori Nordström, Vessel Triage Project Manager
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