



«Maritime emergency response in the High North» - institutions and operational management

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Outline

- Background
 - MARPART project
- Challenges of large-scale maritime incidents in Arctic context
- Emergency preparedness institutions and systems
 - Example: Norway
- Management roles
- Findings
- Further thoughts and recommendations

Background

MARPART network and research cooperation

R&D project lead by Nord University in Bodø and funded by the Norwegian Ministry of Foreign Affairs and Nordland regional government

- Focus on enhancing management of joint maritime emergency operations and cooperation
- Special focus on barriers and solutions for cross-border partnerships
- Concentrating on large scale combined emergency response that may include SAR, fire fighting, oil spill recovery or violent action at sea
- Incident command systems and managerial roles at different levels
- Competence needs/gaps of key personnel

FoU-RAPPORT

Maritime activity and risk
patterns in the High North
MARPART Project Report 2

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MARPART network and research cooperation

- Nord University (Norway)
- UNIS - University Center in Svalbard (Norway)
- UiT - The University of the Arctic (Norway)
- Norwegian Police University College (Norway)
- NBSK - The Norwegian Fire Protection Institute (Norway)
- The Norwegian Defence University College IFS (Norway)
- The Royal Norwegian Naval Academy (Norway)
- FFI - Norwegian Defense Research Establishment, (Norway)
- MSTU - Murmansk State Technical University (Russia)
- NARFU - The Northern (Arctic) Federal University (Russia)
- Admiral Makarov Maritime University, (Russia)
- The University of Greenland (Greenland)
- The University of Iceland (Iceland)
- WMU - World Maritime University (Sweden)
- Danish/Greenlandic National Police (Denmark)
- The University of Copenhagen (Denmark)
- Memorial University (Canada)
- US Coast Guard Academy (US)
- University of Alaska (US)
- (Admiral N. Kuznetsov Naval College, Russia)

MARPART reports

MARPART 1

WP 1. Future maritime activity level and risk patterns in the High North

WP 2. Institutional framework, governance, resources and institutional strategies

WP 3. Organizations and operational management structures



MARPART 2

WP 1. High-risk incidents and emergency management competence

WP 2. Educational programs in academic and training institutions in the High North

WP 3. Development of concepts for developing, testing and documenting various training concepts

WP 4. Testing of training programs in simulator/laboratories and through exercises

Report 5: Preparedness agencies' organizational design and management patterns

Sectors: SAR, oil spill response, firefighting, and violent action at sea

- Organizational structures in Norway, Iceland, Russia and Greenland (Denmark)
- Operational hierarchy including management roles and responsibilities
- External relations
- Plans and standard operating procedures



- Understanding challenges with multi-sectoral and multi-national operations
- Recommendations for further cooperation between agencies and countries

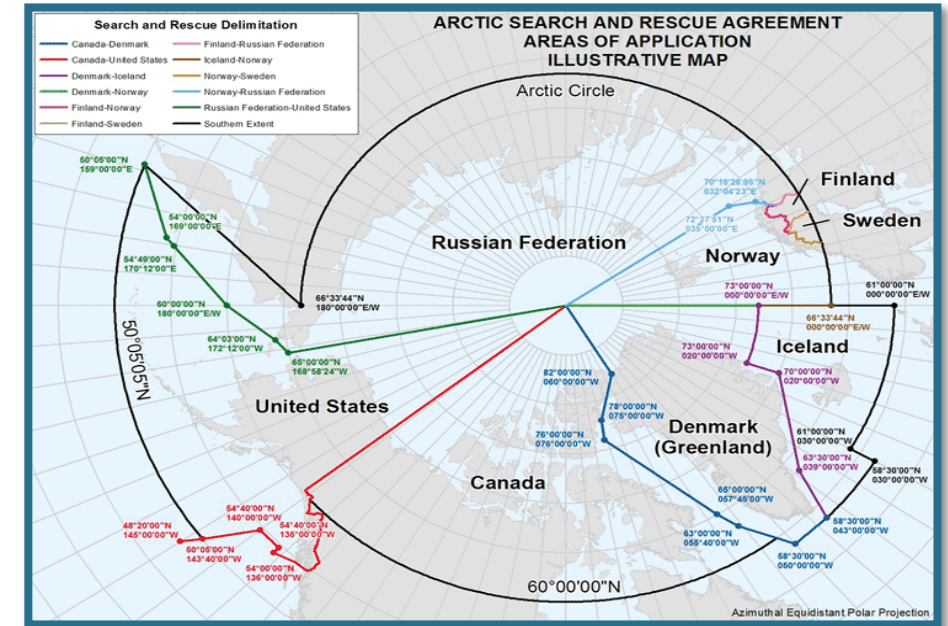
Challenges of large-scale maritime incidents

- Limited resources and capabilities
- Low-probability high-consequence events, not much experience in the Arctic region
- Means and plans of communication
 - Interlinked amongst organizations at various levels
 - Huge amounts of information
- All stakeholders need to understand their roles and chains of command
 - Multi-sectoral and multi-national incidents
 - Incident command at sea, on land and in the air
- Planning of roles and responsibilities, nationally and internationally
- Evacuation, triage, reception points and other on-shore facilities
- Arctic specific challenges

Emergency management in Arctic context

Identified challenges:

- long distances
- scarce resources
- challenging weather, ice and cold conditions
- poor communications network
- lack of infrastructure
- capacity to host patients
- shared situational awareness
- rescue and survival equipment

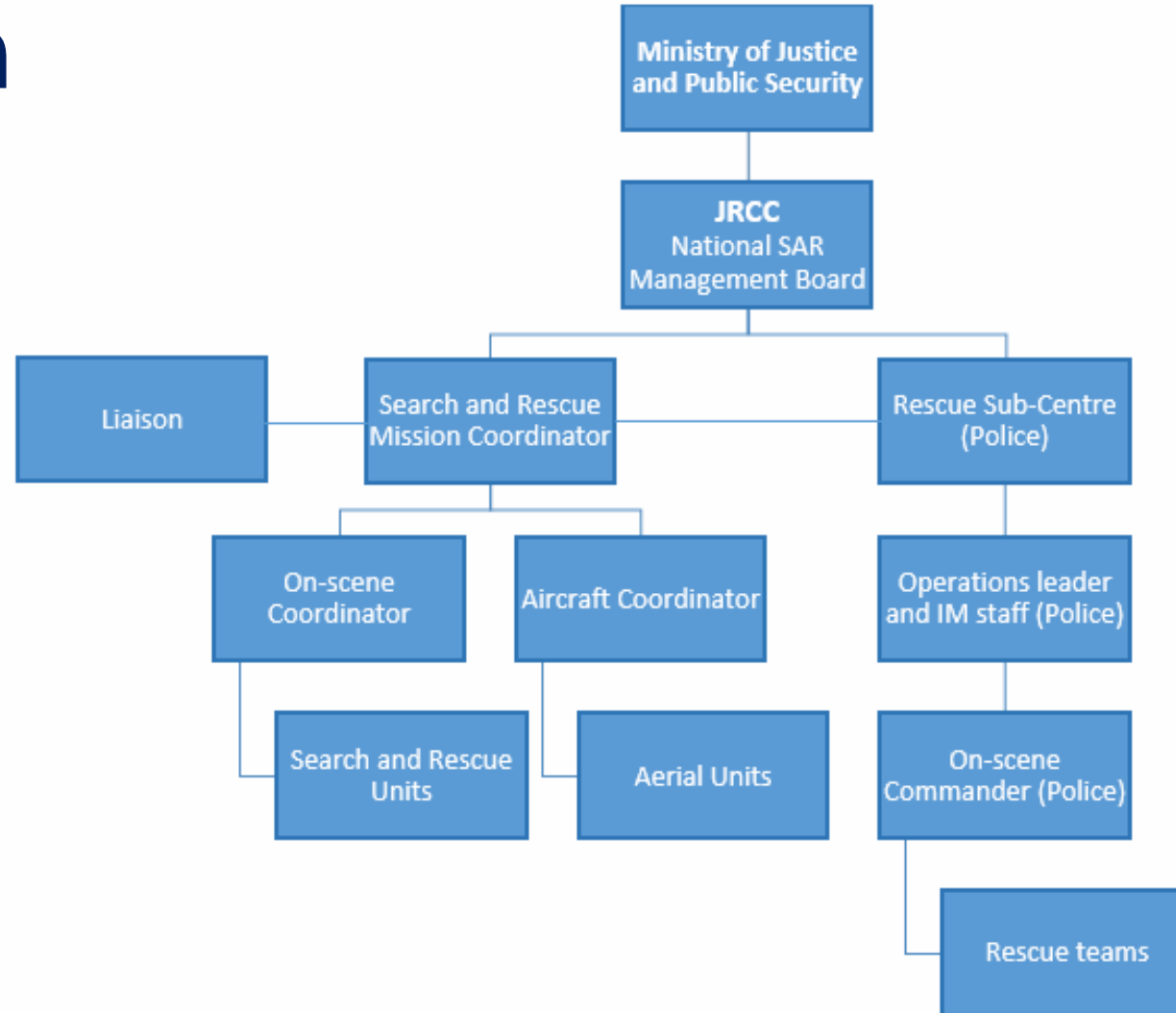


Need to develop information sharing and situational awareness between coast guards, emergency authorities, and other stakeholders involved in SAR operations

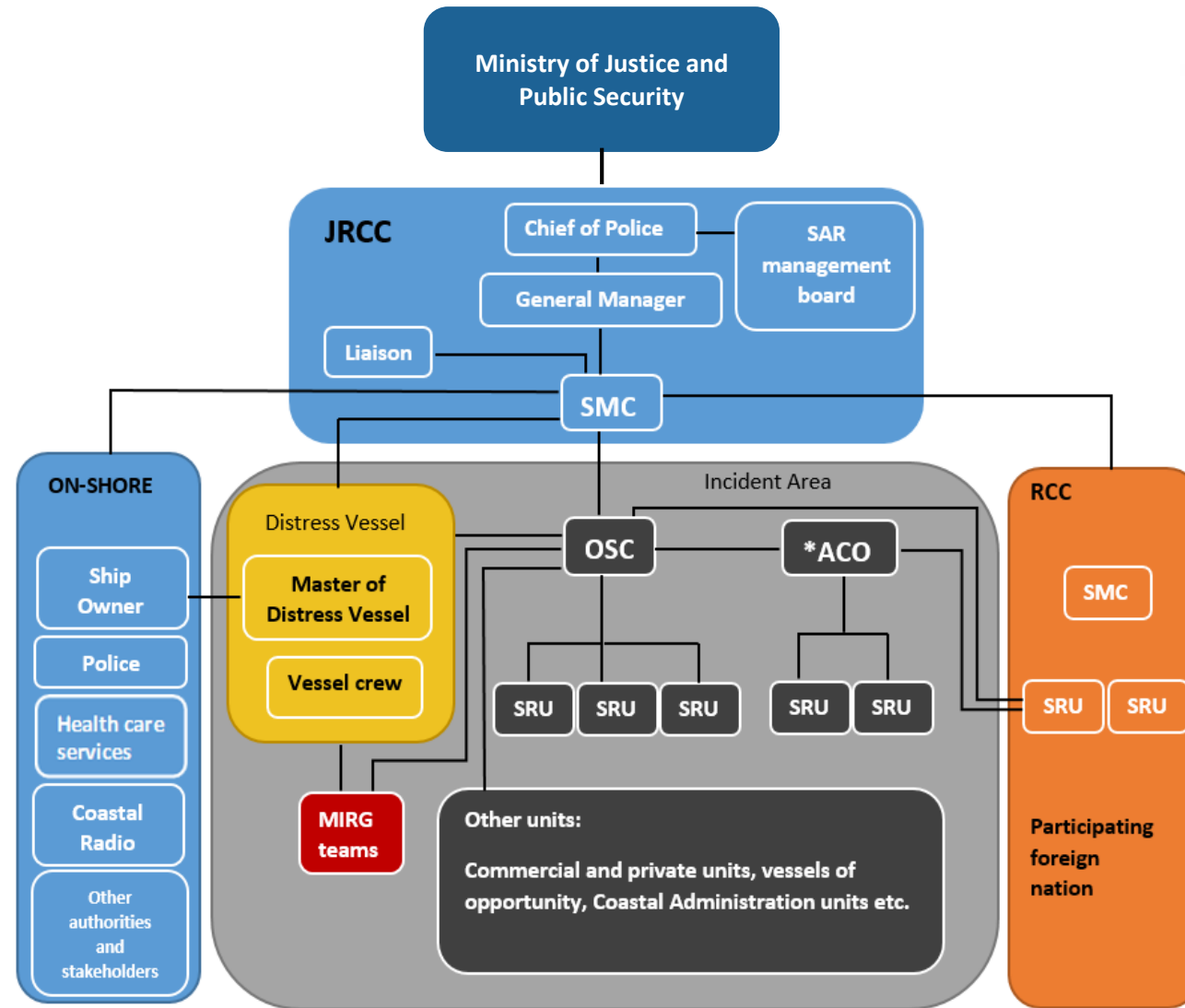
Institutions and systems

- Maritime and aeronautical SAR based on IAMSAR Manual and international conventions
- National plans and procedures
- All SAR authorities different in nature
 - Some military, some civilian
 - Various agencies involved, all under different ministries
 - Different organizational structures
 - Incident management in mass rescue operations
 - Various command structures
 - Communications
 - Resources
 - Understanding of each other's roles and procedures

Norway SAR system based on IAMSAR

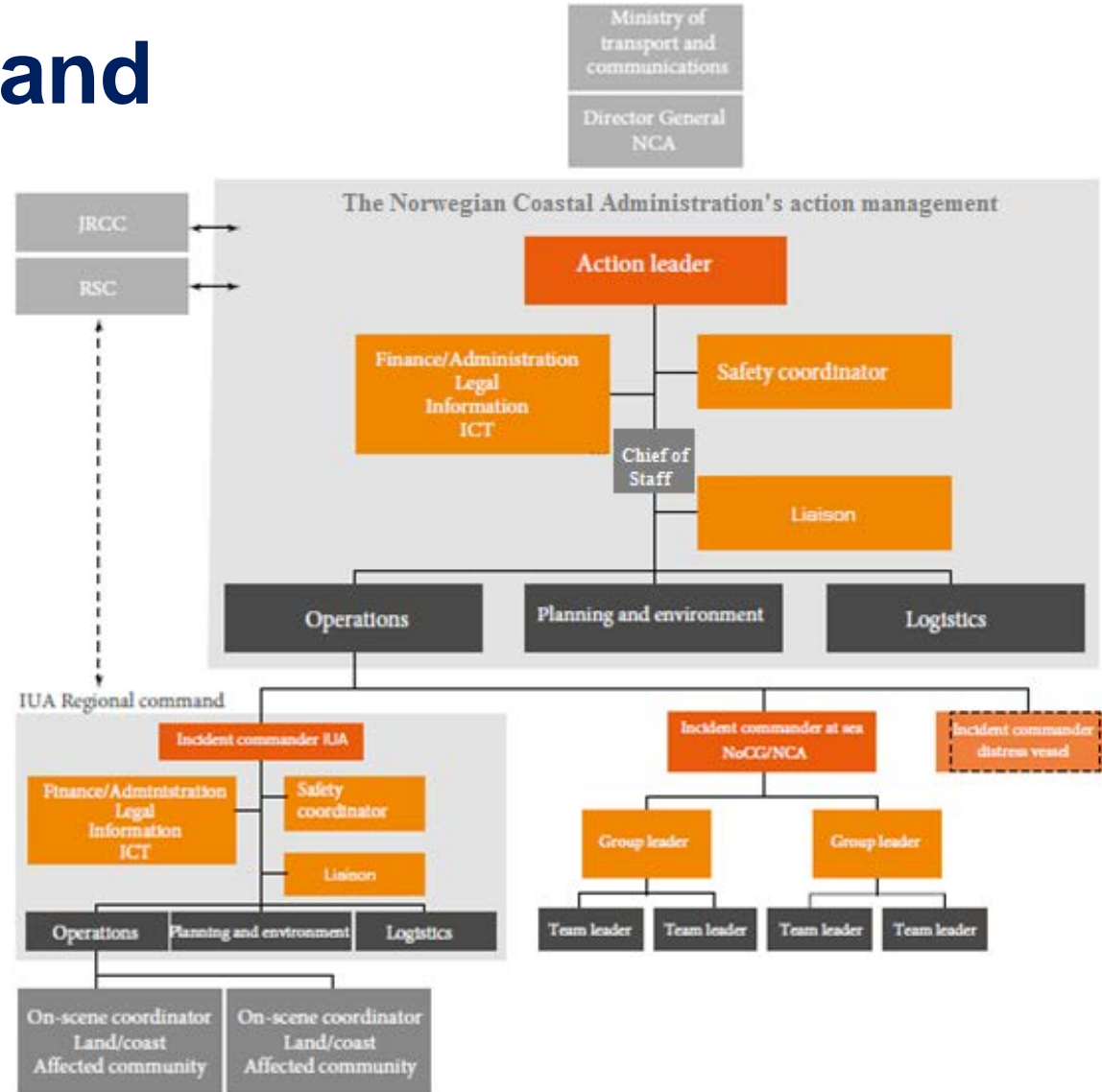


Norway SAR system based on IAMSAR



*In JRCC SN, ACO can also be situated at the JRCC

Norway Incident Command System



Management roles

Strategic

- Understanding of the authority and roles of multiple agencies
- Competence in procedures, standards and organizations at regional, national, and international levels
- Political and high-level awareness
 - Arctic Council and EPPR
- Funding and information sharing

Operational

- IAMSAR, however needs to know systems and resources of other agencies and countries
- Some functions (i.e. MIRG/ACO) might not be used in all countries or will have a different structure
- Communications and situational awareness
- Sufficient knowledge and expertise in Arctic conditions and local knowledge

Tactical

- OSC possibly a vessel of opportunity
 - Training and competence
 - Arctic specific conditions and challenges
- Communications; both technical and cultural
- Prepared to take on a lot of responsibility
- Multi-sectoral operations
- Evacuation and infrastructure

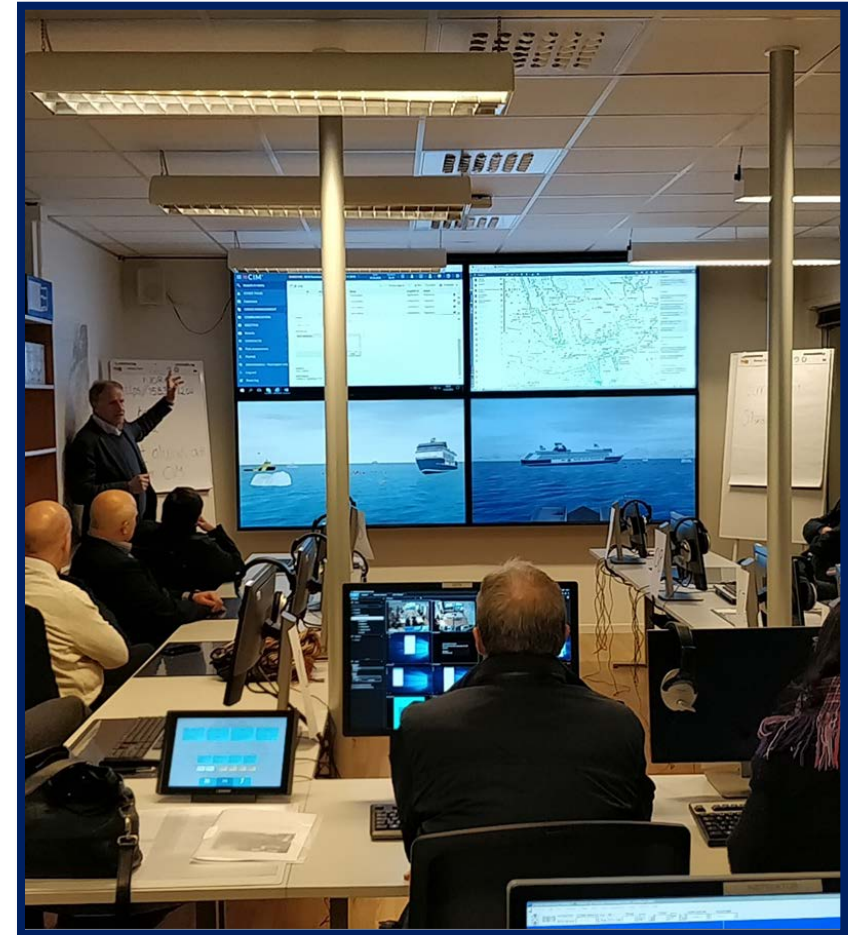
Findings

- Maritime SAR system similar due to IAMSAR however differences in organizational structure, responsibilities, national procedures, and training
- Knowledge of neighbouring countries' resources and system important
 - Especially when it comes to cooperation with other agencies and their operational procedures
 - All levels; strategic, operational and tactical
- Arctic SAR operations and especially mass rescue operations are very complex and require experience from key personnel
- More training and competence building with other agencies
 - Exercises
 - Communications
 - Unexpected situations
 - Debriefing and lessons learned
 - Training and information sharing with operators

Further thoughts and recommendations

- Familiarizing with other countries on both strategic and operational level
 - Sharing MRO plans
- Training
 - Training with operators and other stakeholders
 - Developing common training programs with the Arctic countries – standardization, all levels
- Use of simulation training
 - Complexity of multi-sectoral response
 - Operational management training and education
 - Development of specialized training concepts and scenarios
 - Familiarizing with different systems and management patterns
- Tools for strategic and operational cooperation and information sharing
- Facilitation of networks for sharing experience

NORDLAB - Nord University Preparedness Management Lab



Thank you

How to ensure fluent cooperation and coordination between emergency preparedness agencies across borders in the Arctic?

MARPART
INTERNATIONAL R&D PARTNERSHIP ON MARITIME
SAFETY AND SECURITY IN THE HIGH NORTH

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