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Report on ARCSAR 3rd Dissemination Workshop D5.4.

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EXECUTIVE SUMMARY

The ARCSAR project has established the first formal Arctic and North Atlantic Security and Emergency Preparedness Network. The ARCSAR network is primarily directed to security and emergency response practitioners operating in the Arctic and the North-Atlantic region. This includes members of the emergency management system such as border and coast guards, first responders such as oil spill response (OSR) and search and rescue (SAR) personnel, and incident coordinators among others.

In addition, the network includes other actors relevant to Arctic and North Atlantic Security and Emergency Preparedness. Namely, academics, industry and Small and Medium Sized Enterprises (SMEs), regional and local actors, local communities, and indigenous peoples.

This document is a summary of the ARCSAR 3rd Dissemination Workshop held in Portsmouth, UK, 13th May in conjunction with the first ARCSAR Stakeholder event. The whole event was called ARCSAR Solent Stakeholder Workshop. The workshop gathered participants both from the ARCSAR partners as well as the extended network including companies representing drone and satellite services, polar shipping, and communications technology. The purpose of the Dissemination event was to present the achievements of the ARCSAR project to wider audience, especially the relevant stakeholders, and to raise awareness of the project, announce the program of forthcoming events, and bring together participants, relevant practitioners, and stakeholders into a same arena. The dissemination event concentrated on presenting prioritization mapping, lessons learned, including best practice for procedures and technology, and exercise planning. Another goal was to get ideas and present the plan for demonstrations to utilize innovative drone and communications technology in the ARCSAR live exercise.



1 Introduction

The 3rd ARCSAR Dissemination workshop was held on the 13th May 2022, at the University of Portsmouth's Richmond Building, Portsmouth, UK. It was a half-day event and followed the first ARCSAR Stakeholder Event that was held on the 12th May at the same location. There were 31 participants in total – see next chapter.

The purpose of the Dissemination workshop was to describe the project's recent work and outcomes since the last Dissemination event in May 2021, to interested stakeholders. The format of the Dissemination workshop was 3 presentations followed by questions and answers.

The main emphasis in the project since May 2021, has been on developing emergency response practitioner competence through a discussion-based exercise for oil spill response in cold conditions, planning the large-scale live demonstration exercise in the High Arctic in Svalbard, and aiming to emphasize the direction of the project with prioritized topics and describing the sub-needs in a further detail. Part of the ARCSAR Solent Stakeholder event was to utilize the knowledge of the extended network on identifying barriers and innovation uptake to the prioritized sub-needs in the project.

As the ARCSAR stakeholder event gathered audience from relevant stakeholder groups, the project decided to combine the stakeholder and the dissemination event in order to reach a wide audience for presenting the recent work. The opinions and ideas of the extended network and stakeholders is vital for the ARCSAR project's progress and results, since the feedback can be used to guide the project forward, but also new innovations, concepts and policy initiatives are found during these events. The events feed into the ARCSAR deliverables, results, and milestones.

Although the Dissemination workshop was only one part of the Solent workshop, the whole event was utilized to disseminate results from the project and develop ideas for internal and external communication.

2 Participants

The participants of ARCSAR Stakeholder & Dissemination workshop represented a variety of different stakeholder entities varying from companies representing drone and satellite providers, to SAR and oil spill response practitioners, public safety authorities, and academia. The event gathered in total 31 participants.



Picture 1. Event attendees at University of Portsmouth

The following partners and extended network participated in the ARCSAR Solent Stakeholder Workshop:

ARCSAR partners

- Joint Rescue Coordination Centre North Norway
- Joint Rescue Coordination Centre South Norway
- Joint Rescue Coordination Centre Iceland (Icelandic Coast Guard)
- Nord University



- Laurea University of Applied Sciences
- University of Portsmouth
- MRCC Torshavn
- Halpin Research Group at Munster Technological University
- Maritime and Coast Guard Agency (UK)
- Norwegian Coastal Administration (NCA)
- Memorial University
- Norwegian Coast Guard

Extended network

- FL Polar Operation
- Smith Myers
- Fareham College
- CGI IT UK and Severn Area Rescue Association (Beachley)
- RINA Consulting Defence Ltd
- UAS Norway

3 Agenda and presentations

The overarching goals of the ARCSAR dissemination workshops are to promote the ongoing project activities, increase stakeholder engagement, secure additional network membership and interactions, while also facilitating interactions between ARCSAR researchers and key external participants.

The event agenda was as follows:

- Introduction, Kevin Fitzgibbon, Munster Technological University, Ireland
- Results and Learning from TTX exercises, Jan Pedersen, Norwegian Coastal Administration
- Classification and prioritisation of Arctic and North Atlantic Security Needs and



Innovations, Dylan Jones, University of Portsmouth, UK.

- An overview of LIVEx planning, Hekla Jósepsdóttir, Icelandic Coast Guard & Emmi Ikonen, Joint Rescue Coordination Centre Northern Norway

The main emphasis of the event was to present the lessons learned including identified best practice and uptake of innovation from the ARCSAR Oil in Ice TTX, held in November 2021, and publish the exercise report during the event. Another goal was to start promoting the ARCSAR LIVEx, a catastrophic simulation exercise, which will be held in Svalbard 28 August- 1 September. The LIVEx will be one of the highlights of the project and the workshop participants were very interested in the conduct and planning process of the exercise. One of the goals of the LIVEx is to utilize drones, and thus the whole Solent workshop was used to gather ideas and innovation for the exercise. Work with D2.1 and the classification and prioritization methods of Arctic and North Atlantic security needs and innovations were also presented, as the whole event was used to work further on the analysis.

3.1 Results and Learning from the ARCSAR 'Oil in Ice' Tabletop Exercise

Following a welcome and introduction by Kevin Fitzgibbon, the first presentation was delivered by Jan Pedersen of the Norwegian Coastal Administration. The presentation described the ARCSAR 'Oil in Ice' Table Top Exercise (TTX) that took place on the 9th & 10th of November 2021. The event was a hybrid type, with some of the contributions taking place online.

The presentation covered the nature of the event, the process followed, the outcomes arising from it, and the evaluation of the TTX that was carried out. Appendix 1 shows the slides presented.

The major learning points arising were in 4 Themes:

1. Improving understanding of the roles, responsibilities, and the needs of MER responders while preparing to take over from SAR authorities



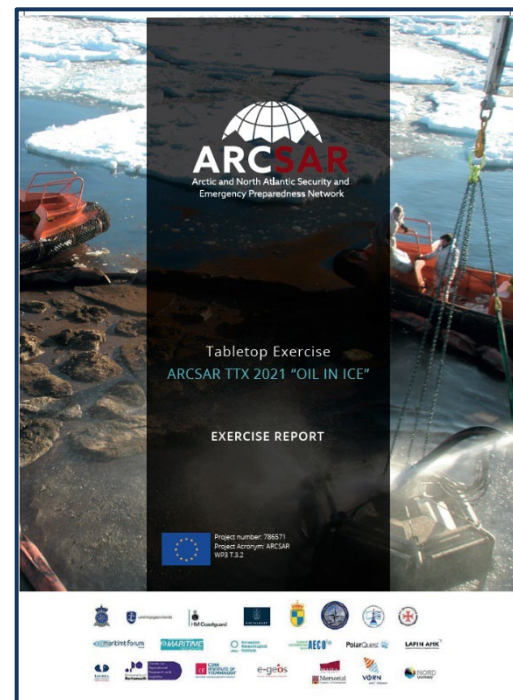
2. Improving understanding of handling a damaged vessel in the High Arctic
3. Improving understanding of the functionality, capacity, and limitations of remote sensing technology, equipment, and methods for oil spill response, as well as logistical challenges
4. Improving understanding of challenges related to shoreline response operations and long-term recovery in the Arctic

The TTX evaluation results were very positive from the 42 survey responders, rating the event under 6 questions at scores between 4.26 and 4.57 out of 5.

In addition, the final Exercise Report has been completed and printed; and it was launched at the Dissemination Event. The report can be found on the ARCSAR website.

The report includes chapters on:

- Exercise Conduct
- Outcomes
- Exercise Evaluation
- Future Training and the Way Forward



Picture 2. Cover of ARCSAR TTX 2021 ‘Oil in Ice’ Exercise Report – as launched at the Dissemination Event

3.2 Classifying, prioritizing and identifying innovations to meet Arctic & North Atlantic safety needs: An overview of ARCSAR D2.1 & D2.3

The second presentation was delivered by Dylan Jones of University of Portsmouth. It reported on the work that has been carried out by UoP under 2 headings:

1. Deliverable 2.1: Innovation Need Mapping and Categorisation of Sub-Needs

The presentation outlined the process followed in preparing D2.1, namely:

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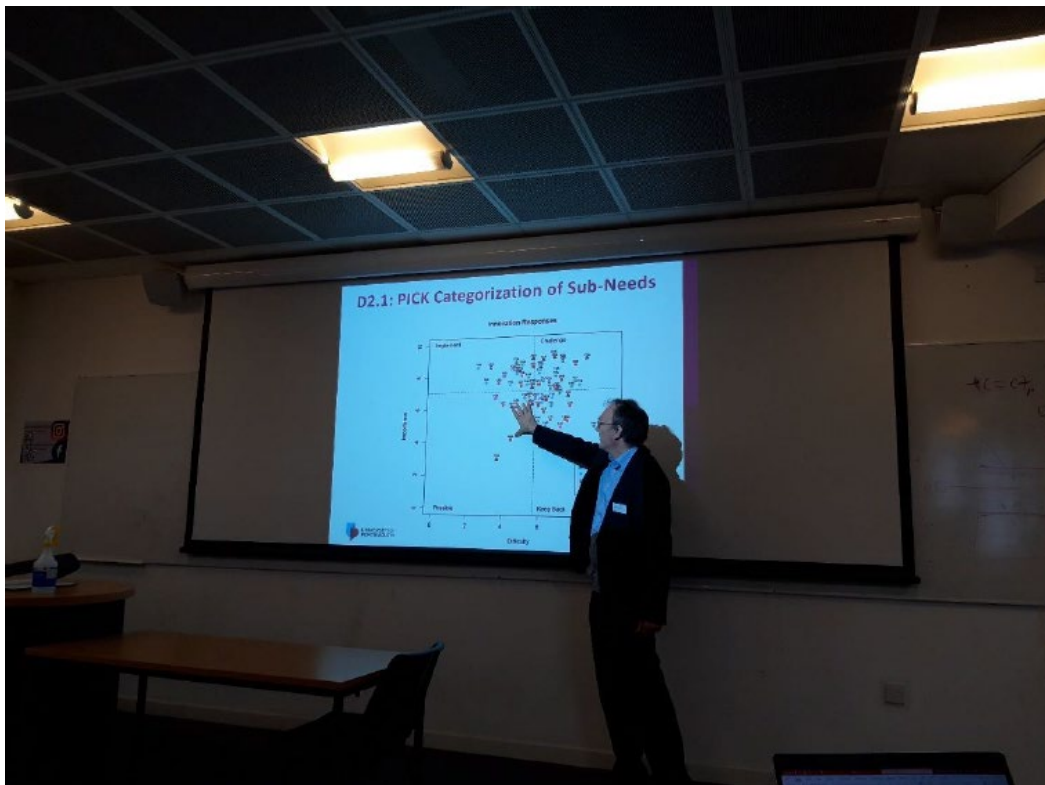
- Information Collection process
- Mapping of Research & Innovation Needs including a 6-type naming convention; resulting in a global set of 75 specific sub-needs categories.
- Classification by PICK Chart, using axes of Importance and Difficulty; which resulted in innovations being collected into one of four groups:
 1. Lower Importance, Lower Difficulty: the 'Possible' group
 2. Lower Importance, Higher Difficulty: the 'Keep Back' group
 3. Higher Importance, Lower Difficulty: the 'Implement' group
 4. Higher Importance, Higher Difficulty: the 'Challenge' group
- Selection of Priority Needs using a weighted Goal Programming Model. In this selection step, there were three principal goals, aiming to prioritise 20% of the needs identified across the range of innovation types.

G1: Achieve the maximal level of importance within the total allowable difficulty limit (Knapsack principle)

G2: Achieve a balance between the less challenging (possible, implement) and more challenging (challenge) topics chosen.

G3: Achieve a balance between the sub-needs chosen from the six topics. This is needed to ensure a balanced portfolio of chosen topics

The outcome of this process was a Priority Sub-Needs List of some 17 innovation needs with a mix of Importance & Difficulty scores, across the 6 categories. Refer to slides in Appendix 2.



Picture 3. Dylan Jones, UoP, presenting at the Dissemination workshop

2. Deliverable 2.3: Identifying Innovation and Barriers to their uptake

The key findings were that

101 distinct sources of innovation and/or knowledge were identified, from the past 5 years; most of these were incremental in nature, rather than radical.

Classification of the innovations was carried out under 2 main headings: pollution incident & control; and personnel, education & training.

Key barriers to the uptake of innovations were identified under 2 main headings:

- Regulatory barriers – either the solution is not approved or it is not mandatory under current regulations
- Technological barriers – either due to a lack of awareness of the solution or lack of training in its use.

A condensed version of the slides presented is included in Appendix 2.



3.3 An overview of LIVEx Planning

The third presentation of the event was by Hekla Jósepsdóttir of the Icelandic Coast Guard, and Emmi Ikonen of the Joint Rescue Coordination Centre, North Norway. The topic was the upcoming LIVEx Search & Rescue exercise and events that are planned for late August 2022 at Svalbard, Norway.

The presentation described the work that has been undertaken through the process to date in planning for the event. The presentation described the 2 Planning Conferences have been held to date – Online, and in Bodo, Norway; and the forthcoming planning events scheduled for Helsinki, Finland in June 2022, and Online in August.

The inputs that are informing the design of LIVEx were described briefly, as well as the objectives of the exercise. The presentation set out the nature of the overall LIVEx event. It will consist of

- Days 1-3 at sea: 'VEEx' – Voyage Events & Exercises:
- Day 4: A simulated MRO – Mass Rescue Operation
- Day 5: A 'Hot wash' debriefing session onshore at Longyearbyen.

The project team will also take the opportunity to hold the second ARCSAR Stakeholder Event on Day 5.

Details of the planned VEEx activities were described, including Lectures on relevant topics, and Landings including relevant activities when ashore.

The MRO was described in further detail, in terms of the scenario being simulated, namely a fire on a cruise vessel in the Arctic leading to complete loss of power; and requiring complete evacuation of the vessel. The actors and their roles were described, including the Governor of Svalbard, the JRCC North Norway, Norwegian Coast Guard, 330 Squadron, the M/S Quest as the cruise vessel, Polar Quest home office, and the



Association of Arctic Expedition Cruise Operators. In addition, the participants and crew of the vessel will play roles as ‘evacuees’; with a selected group also acting as Evaluators during the exercise. Finally, the challenges arising from such a major and complex exercise were described and discussed.

4 Conclusion

The Portsmouth Dissemination Event presented the latest updates on ARCSAR project work to the assembled stakeholders, and generated discussion on all the topics. The relevance of the Oil in Ice TTX was noted vis-à-vis the increasing risk of such incidents in the Arctic. There was some discussion as to the innovation sub-needs that were prioritised, and the rationale adopted in the selection process. Finally, the LIVEx event attracted the interest of the audience, as regards the nature and details of the planned events, and its uniqueness as a major SAR exercise in the Arctic that will involve academic institutions, as well as Expedition Cruise ship, Coast Guard vessel and SAR Helicopter actors.



5 Appendix

5.1 Appendix 1. Presentation: ARCSAR TTX: Oil in Ice. Jan Pedersen, Norwegian Coastal Administration



ARCSAR TTX Oil in ice

Jan Pedersen, Norwegian Coastal Administration



Exercise conduct

Task led by the Icelandic Coast Guard

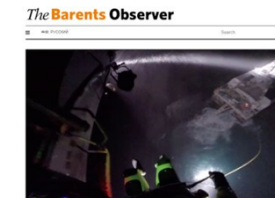
Scenario and exercise conducted by the Norwegian Coastal Administration and NORDLAB/Nord University

Scenario and learning objectives based on:

Deliverable D2.1, Report on Mapping of practitioner needs for Innovation and Knowledge Exchange in the ANA region (University of Portsmouth)

- i.e. Technology for detecting oil under ice and skills assessment of new competences needed to deal with Arctic pollution incidents

Lessons from the Northguider incident

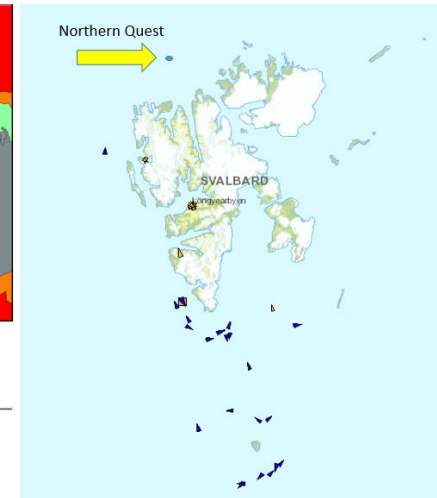
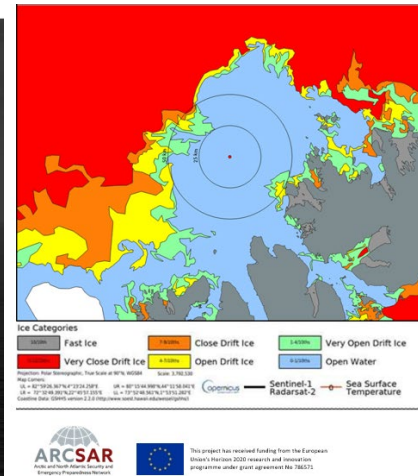


Drama in Arctic waters as trawler runs aground at Svalbard



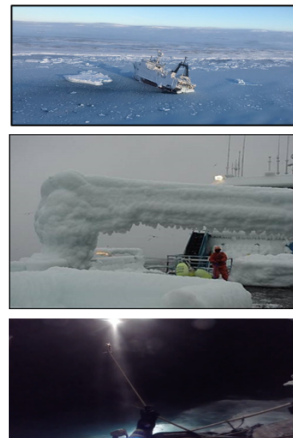
November 8th 2021 – 1130 CET Mayday from Northern Quest

- During fishing activity north of Svalbard on November 8, an explosion occurs with a subsequent fire on a Norwegian flagged fishing vessel.
- The control systems and propulsion come to a halt. As a result, the vessel collides with an ice floe that punctures a bunker fuel tank.
- 200m3 of Wide Range Diesel (out of the 500m3 on board) spill into the sea and ice.
- The crew extinguishes the fire, and after stabilizing the vessel using bilge pumps, the vessel floats stable but heavy in the sea.
- Due to the difficult situation, the master sent a MAYDAY



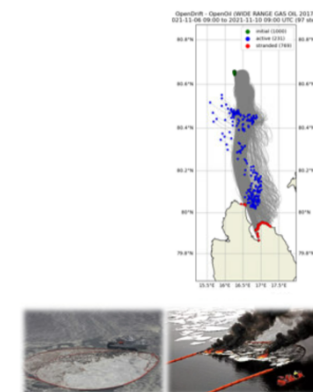
Day 1 topics

- SAR to MER transition
- Roles and responsibilities for MER
- Challenges related to MER in the High Arctic
- Resources and capabilities
- Handling of the vessel
- Handling/ considerations of the remaining fuel on board
- Emergency towing
- Places of Refuge



Day 2 topics

- Remote sensing technology and oil drift models
- Equipment and methods for oil spill response (in the High Arctic at Sea and shorelines)
- Logistical challenges connected to the oil spill response at sea and in ice in the region
- Challenges related to shoreline response operations and long-term recovery in the Arctic

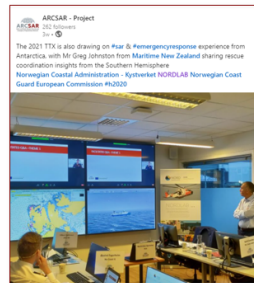




Hybrid Exercise Format

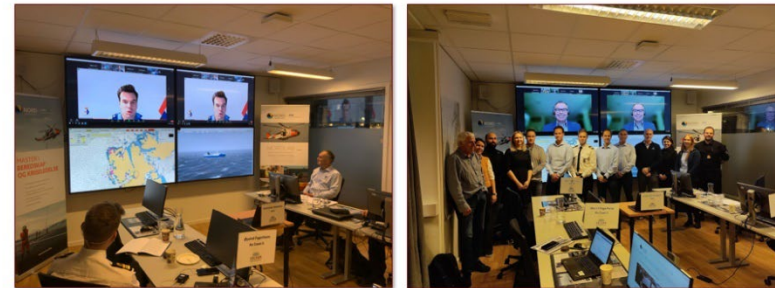
Participants from Norwegian Authorities, ARCSAR, EPPR, Industry and invited guests.

1. **Primary Training Audience (in NORDLAB)**
 - Governor of Svalbard
 - Norwegian Coastal Administration
 - Joint Rescue Coordination Centre North Norway
 - Norwegian Coast Guard
2. **Secondary Training Audience (in Zoom)**
 - Authorities and relevant institutions/companies from various countries
3. **Observers (link for streaming)**
 - Universities, companies, research institutions, etc.
 - Invited to share ideas and experience in Padlet



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Teamwork between all participants



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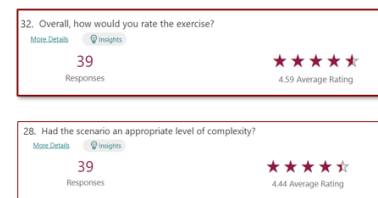
Evaluation

- Critical to identify recommendations, gaps, challenges, and best practices.
- Comprehensive notes from discussions and Zoom chat.
- Feedback in Padlet from the observers.
- Questionnaire to all participants and observers to collect written feedback.
- After Action Report developed and published on the ARCSAR website



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Feedback from the participants



"The TTX was an inspiration to how discussion based exercises could be conducted in the future, both domestically and regionally."

The TTX illustrated well the logistical challenges of MER operations in the Arctic with high demand on very limited means in a challenging environment."



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Roles, responsibilities, and needs of MER agencies while preparing to take over authority from SAR

Early warning	Clear and defined roles and responsibilities	Other	To improve
<ul style="list-style-type: none"> • Important for MER agencies to have awareness of incidents at an early stage. • Not just when the SAR phase has finished • Plan and start moving resources into incident location. • Continuous information sharing between SAR and MER authorities. 	<ul style="list-style-type: none"> • What lies behind decision making in this process • Pre-planning to clarify roles & responsibilities. • A transfer of responsibility does not take place suddenly, seamless transfer from JRCC to the NCA. 	<ul style="list-style-type: none"> • The varying approach to incorporating experts into risk assessment and response. • SAR continues to stay alert, there is a strong possibility of re-activation given challenging conditions, remoteness etc. of the area. 	<ul style="list-style-type: none"> • The shipowner's/ responsible party's role could be further discussed in exercises like this. • Maritime capacities (ice going vessels) from other nations was not brought up as a topic.



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Improve understanding of handling of a damaged vessel in the High Arctic

Handling of an abandoned ship in the High North is a many sided problem with no clear answer

- **Best practice:** Crew on board the distressed vessel should, if at all possible, prepare the vessel for emergency towing before being evacuated.
- Would be good to do emergency offloading exercise also with expedition cruise vessels

Operational environment

- Lack of equipment that can handle and be effective in a cold climate
- Challenges posed by 24 hour darkness

The health and safety of the responders is the first priority

Pre-assessment and pre-designation of places of refuge (POR):

- The discussion on characteristics and assessment of POR was a good way to adjust the mindset to the complex problems that MER operation poses.



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Improve understanding of the functionality, capacity, and limitations of the equipment and technology in the High Arctic

Careful consideration as to what equipment is carried on board vessels (both from authorities but also vessels of opportunity)

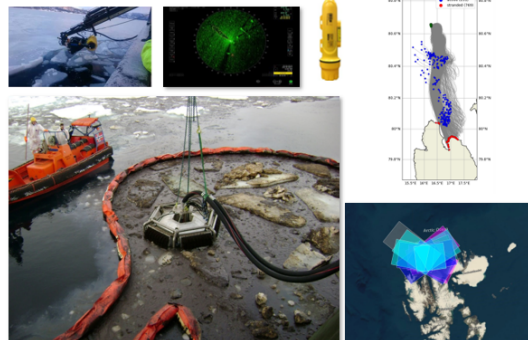
- **Best practice:** Mobilize 2-3 times as much as needed

Low temperature and ice limits use of equipment and detection of oil

- I.e. ice will block skimmer intakes
- Difficult to distinguish between oil and ice from satellite pictures

Behaviour of oil in cold water

Best practice: dropping AIS buoys to monitor drift



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Improve understanding of challenges related to shoreline response operations and long-term recovery in the Arctic

Shoreline response at wintertime almost impossible in Svalbard

- Safety of the responders comes first
- The ability to convince the public/media that there is very little that can be done until the spring in this region
- Surveillance until the ice opens for better working conditions in the area
- Long term impacts to marine life and wildlife may be unavoidable, but few alternatives were discussed
- **Best practice:** Perhaps possible to protect some vulnerable areas/islands with booms or patrolling

Heating facilities/containers for equipment deployed to shore in order to ensure continuous operations for both people and machinery

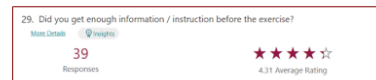


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 786571.



For future exercises

- More sharing of exercises and lessons learned including show-and-tell between countries on equipment/ technologies being developed and currently used.
- Oil detection under ice
- How much would the decision making change in a summer scenario?
- Much more thought and experience needed to fully understand the limitations in MER procedures and what plans exist for procedures in the High Arctic.
- Secondary audience did not exercise the handling of the incident
- Higher intensity and complexity for TTXs



"As an external that had not previously had exposure to the Norwegian regime, it would have been helpful to have a cheat sheet, describing the various agencies, their roles for response, their mandates/authorities."

"As a supporting tool, it could have been valuable to share a resource list of what types of equipment are currently available."



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 786571





5.2 Appendix 2. Presentation: Classifying, prioritizing and identifying innovations to meet Arctic & North Atlantic safety needs: An overview of ARCSAR D2.1 & D2.3; Dylan Jones, University of Portsmouth



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ARCSAR
Arctic and North Atlantic Security and Emergency Preparedness Network

Classifying, prioritizing and identifying innovations to meet Arctic and North Atlantic safety needs.
An overview of ARCSAR D2.1 and D2.3

Prof. Dylan Jones, Prof. Ashraf Labib, Dr. Kevin Willis, Dr. Joe Costello
 + ARCSAR Consortium and network
 Centre for Operational Research and Logistics (www.nort.ac.uk/corl)



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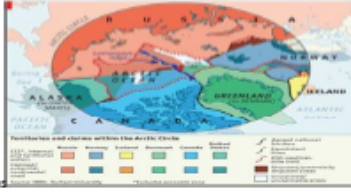

- Context: the ARCSAR project
- Mapping of Research and Innovation Needs (D2.1)
- Classification by PICK chart (D2.1)
- Selection of Priority Needs (D2.1)
- Innovations and Barriers to Uptake (D2.3)



2

Arctic Challenges



- Sheer Distances
- Lack of Infrastructure
- Inhospitable Climate
 - Cold, ice, polar night
- Delicate Eco-system
 - Indigenous populations
- Complex geo-political zone
- Melting ice -> Increased activity
 - Container shipping, oil and gas, military, tourism


3

The ARCSAR Project

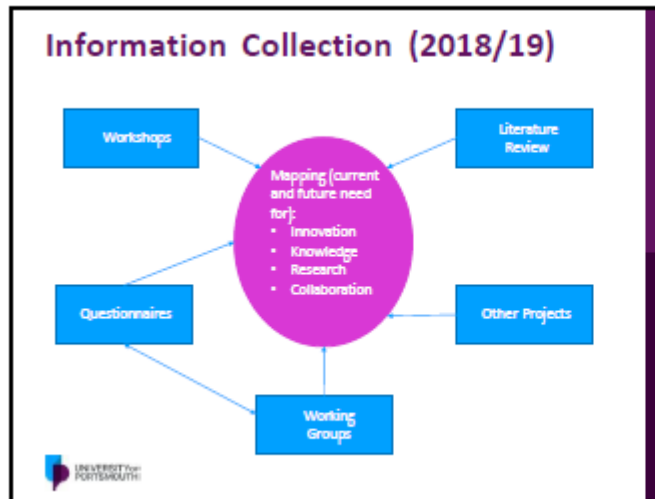
- 21 Partner Horizon 2020 Project, 2018-2024
- Partner Types: SAR practitioners, Industry Bodies, Governmental Departments, Satellite Providers, Universities, Research Institutes.
- Aims: The ARCSAR network will address the Arctic and North-Atlantic (ANA) region, preparing to cope with the Security and safety threats that will result from increased commercial activity in the region
- Focus: Maritime Search and Rescue
www.arcsar.eu

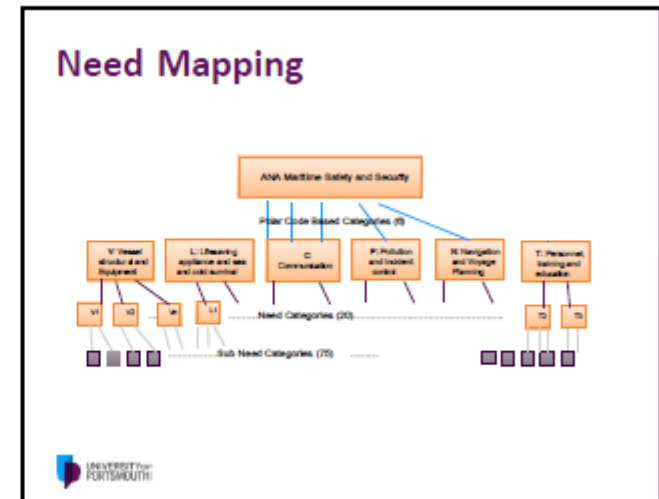
Task of Mapping and Prioritising Need for Research and Innovation



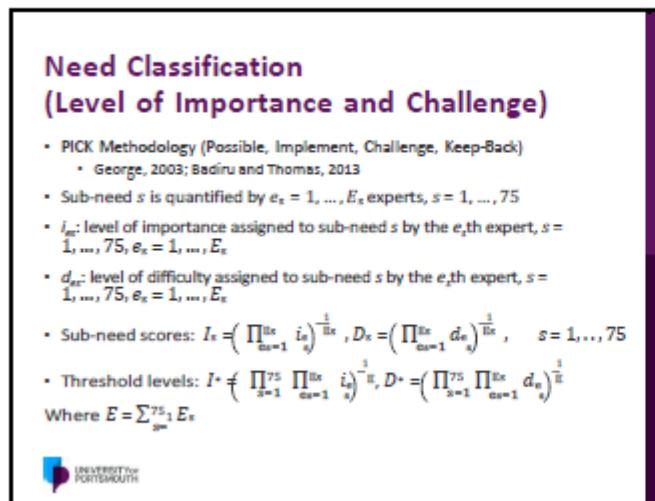
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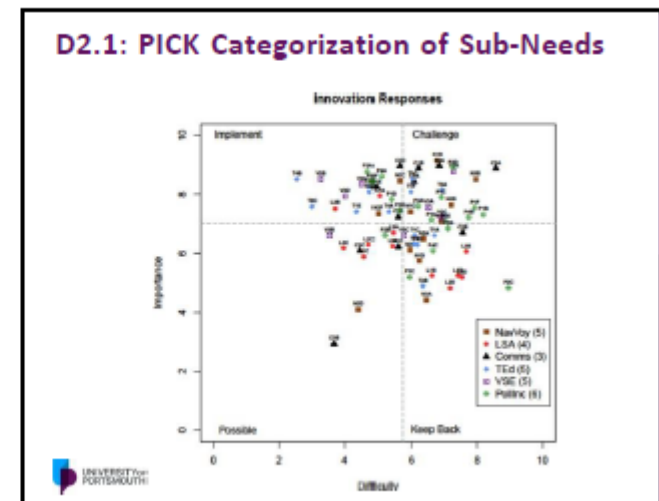
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8



Goal Programming Model

- Three principal goals
 - G1: Achieve the maximal level of importance within the total allowable difficulty limit (Knapsack principle)
 - G2: Achieve a balance between the less challenging (possible, implement) and more challenging (challenge) topics chosen.
 - G3: Achieve a balance between the sub-needs chosen from the six topics. This is needed to ensure a balanced portfolio of chosen topics.
- Weighted (non pre-emptive) goal programming variant used
 - In order to compare trade-offs between goals
- Aim for a priority sub-need set of around 20% of total sub-needs (i.e. 15)

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Priority Sub-Needs List

Sub-Need	Sub-Need Description	Category	Importance	Difficulty
Y01	Ensuring availability of (helicopters) at all times	Implement	8,838	4,832
Y02	Standardisation of requirements (including maintenance schedules) for life-saving equipment	Implement	8,824	5,257
Y03	Enhanced collaboration between vessel owners and SAR and industrial stakeholders	Implement	7,882	4,032
Y04	Technologies to combat fuel loss	Implement	7,821	5,722
Y05	Collaboration on how to meet "5 day" requirement of polar code	Feasible	6,182	3,884
Y06	Ensuring sufficient satellite coverage of ARS region	Challenge	6,094	6,079
Y07	Communication Technology to ensure satellite data is accessible within needed timeframe	Challenge	6,079	6,254
Y08	Need for enhanced batteries with longer life for usage in ARS region	Challenge	5,983	6,882
Y09	Standardised regulations for prevention of oil spill	Implement	5,769	4,724
Y10	Ensure all results covered by Polar Code in similar regulations	Implement	5,694	4,832
Y11	Risk assessment of new competences needed to deal with Arctic pollution incidents	Challenge	7,381	6,227
Y12	Real time data analysis tools and apps for advanced ice and route condition forecasting	Challenge	6,148	6,782
Y13	Technology to ensure systems are not weather affected	Challenge	7,824	5,988
Y14	Creation of telemedical stations for shore based and current ships and mobile information	Challenge	7,684	7,227
Y15	Standardised protocol for incident investigation and implementation of lessons learned	Challenge	6,528	6,284
Y16	Enhanced sharing of results of ongoing SAR projects within ARS SAR community	Implement	6,528	2,882
Y17	Enhanced liaison with hospitals for emergency incident planning	Implement	7,381	5,057
Grand Total			88,911	158,817

Maximum Importance (in selected goals) = 154,361
Maximum Importance (in selected goals) = 154,361

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Deliverable 2.3 - Key Findings

- Identifying Innovations and Barriers to their uptake
- 101 Distinct sources of Innovation and/or Knowledge found
 - Scope: Last 5 years, since initiation of project concept
- Innovation classification varied across polar code categories
 - Pollution and Incident Control -> product – technological
 - Personnel, Education and Training -> process – administrative
 - Most innovations incremental rather than radical
- Key barriers, particularly in non-represented priority sub-needs:
 - Regulatory: Required technology or process cannot be implemented because it has not been regulatory approved / regulations for its enforcement do not exist.
 - Technological: Required technology exists but practitioners are unaware of it or adequate training is not available.

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Conclusions

- The (Maritime) Arctic and North Atlantic safety and security needs are broad and multi-disciplinary
 - Progress needed across the multiple categories
- Needs can be differentiated by importance and difficulty
 - Can give a prioritization and inform research and innovation agendas
- Sources of (Process and Product) Innovation may exist but so do regulatory, awareness and training barriers to their uptake
- There is a need, in ARCSAR and beyond, for collaboration and development in order to resolve current, emerging and future needs
 - Action plan development for priority needs.

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Project number: 786571
Project Acronym: ARCSAR
D. 5.4. ARCSAR Network

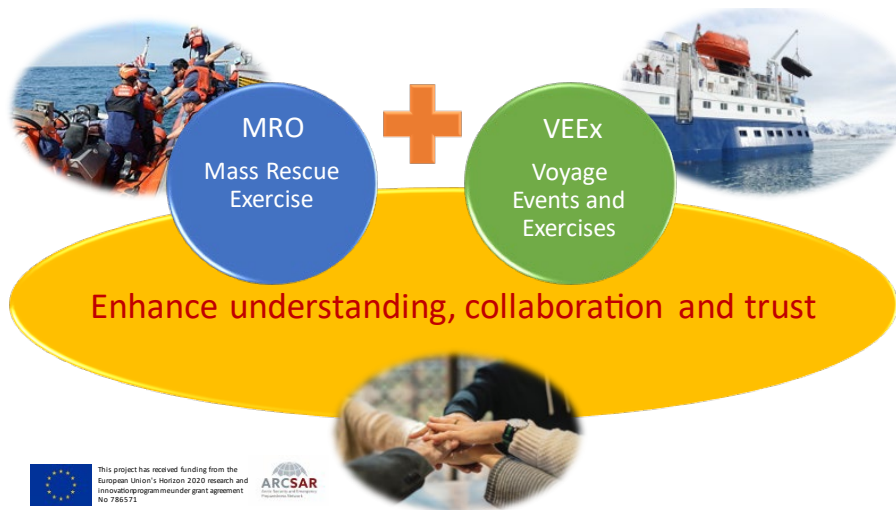


5.3 Appendix 3. Presentation: An overview of LIVEx Planning: Hekla Jósepsdóttir, Icelandic Coast Guard & Emmi Ikonen, Joint Rescue Coordination Centre, North Norway

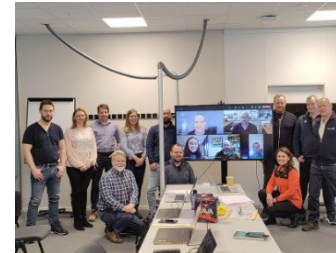


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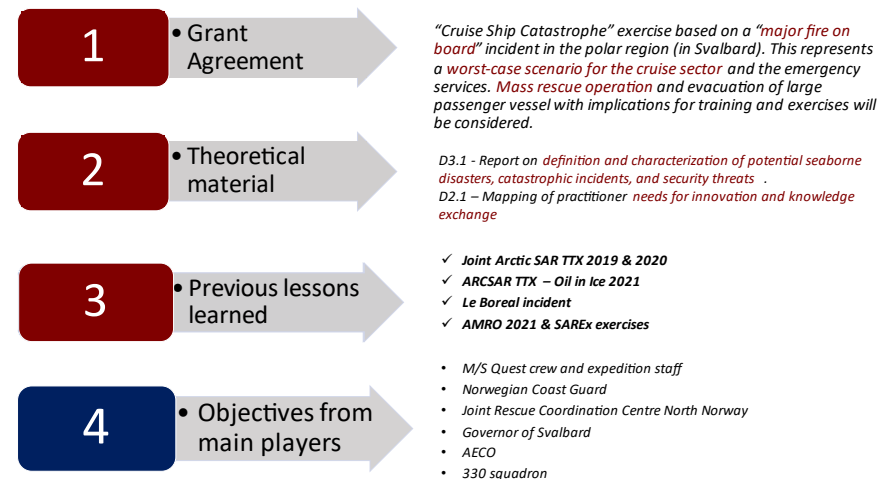


Planning Team



Workgroup	Description	Responsible party	Other parties involved
WG1 - MRO scripting	Scripting and creating exercise plan for MOR (August 31st)	Led by JRCC NN - supported by JRCC-I/NoCG	MRCC-F, Gov. Svalbard, Support: AECO, Polar Quest, 330 sqd Banak and other partners
WG2 - Logistics	Hotel, flight, information on Svalbard etc.	Led by AECO	
WG3 - VEEx scripting	Chartering M/S Quest, planning of the VEEx agenda	Led by Polar Quest	AECO, JRCC-NN - MUN
WG4 - Evaluation	Evaluation and final report	Led by LAUREA	NORD
WG5 - Administration	Administration. Coordination with all groups, plan for MPC, IPC and Pre-sailing conference.	Led by JRCC NN and JRCC I	
WG6 - Media and communications and GDPR issues	Media and communications, GDPR issues - Press officer (VIP visitors, etc.)	Led by MTU	UAS Norway, JRCC NN
WG7 - Stakeholders event	Stakeholder event in Longyearbyen	Led by UP	AECO, JRCC NN
WG8 - Safety	Safety for the exercise, risk assessment	JRCC-I, JRCC-NN Polar Quest, NCG	

The planning process



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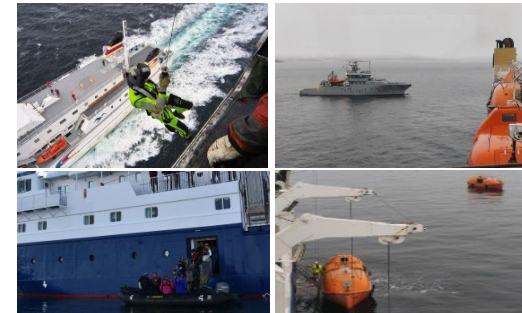


Brief scenario for LIVEX, MRO 31st August

- An expedition cruise vessel in remote areas north of Nordaustlandet (played in Isfjorden for safety reasons)
- MS Quest, 54 pax and 25 crew. Fire in engine room, they were able to extinguish the fire, but the vessel engine is destroyed, and emergency generator failed to start. Therefore, no power onboard and a lot of smoke in the superstructure.



Brief scenario for LIVEX, MRO 31st August



- Training mass rescue operation in open sea with ship-to-ship transfer of passengers
- Play the *Vessel of Opportunity* role with both vessels
- Goal is to test various means of evacuation



Main players involved in the exercise



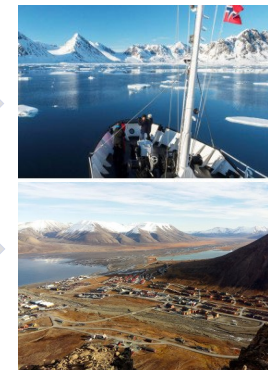
The VEE and the stakeholder event

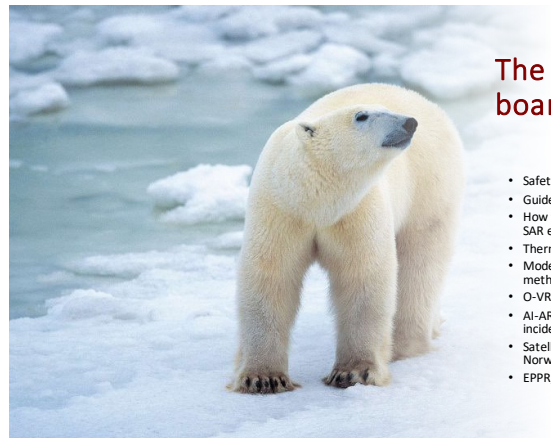
1. Voyage events and exercises (VEEx)

- The voyage on MS Quest will consist of:
 - lectures on various emergency preparedness related topics
 - demonstrations
 - small exercises
 - outings/landings with Zodiacs as a part of the normal expedition cruise

2. Hotwash and 2nd stakeholder event

- Hotwash after the LIVEX in Longyearbyen
- Stakeholder event discussing the rescue phase and capacities in Longyearbyen on the 1st of September.

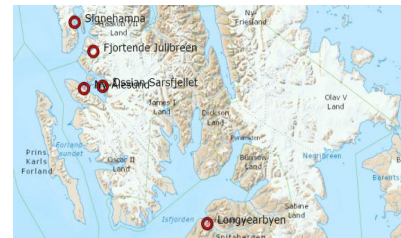




The lectures on board the M/S Quest

- Safety and behavior
- Guide lectures
- How to act as an observer and evaluate in a SAR exercise
- Thermal protection in life rafts
- Moderated panel discussion on evacuation methods
- O-VRAT Risk – assessment tool for landings
- AI-ARC solution for Arctic Exercises and incidents
- Satellite technology testing by e-Geos and Norwegian Space Agency
- EPPR/ACGF Casualty tracking project

The landings



1. 14 Júlíbukta/-breen

2. Signehamna

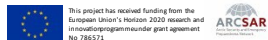
3. Ny-Ålesund

4. Ossián Sars

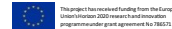


Example topics during the outings

- Polar bear safety
- Safety equipment ashore
- How to act if someone gets injured
- Safety and glacier fronts
- Steep terrain challenges
- Zodiac as shelter
- Polar Code equipment



Follow the exercise on our social media:





5.4 Appendix 4. Agenda for the ARCSAR Solent stakeholder workshop

THE ARCSAR SOLENT STAKEHOLDER WORKSHOP

May 12-13, 2022, Portsmouth, UK

Location: University of Portsmouth

Address: Richmond Building, Portland St, Portsmouth PO1 3DE



AGENDA

The workshop will be a combination of presentations and facilitated roundtable discussions.

Thursday 12th May

09:00 Welcome and Introduction

09:15-12:30 Stakeholder Workshop

09:15-09:20: Introduction, Peter Lee, Thematic Lead Professor of Risk and Security, University of Portsmouth, UK.

09:20-10:20: Presentations

- Richard Teeuw, Toby Meredith, University of Portsmouth, UK. "An overview of satellite technologies and drones to enhance situational awareness in SAR activities"
- Anders Martinsen, UAS, Norway "Experiences of drone usage to assist SAR activities"
- Kevin Fitzgibbon, Munster Technological University, "An overview of the AI-ARC project"
- Jan Pedersen, Norwegian Coastal Administration, "The use of satellite technologies and UAVs in dealing with environmental emergency response"

10:20-10:40: *Refreshment Break*

10:40-11:00: Moderated Panel Session

11:00-12:10: Round Table Exercise

12:10-12:30: Summary and Conclusions

12:30-13:30 Lunch

13:30-16:30 Priority Sub-Need Working Groups

19:00 Dinner at the Still and West





Friday 13th May

08:45 Delegates arrive at UoP for embarkation

09:00-12:40 Tour of UK JRCC and SAR Flight (participants will be divided into two groups)

09:00 – 09:30 Travel from UoP to JRCC / SAR Flight

09:30 – 12:00 Visits in two groups to JRCC and SAR Flight including transfers between venues

12:00 – 12:40 Travel from JRCC / SAR Flight to UoP

12:40-13:40 Lunch

13:40-15:20 ARCSAR Dissemination Workshop (facilitated by Munster Technological University)

- Introduction, Kevin Fitzgibbon, Munster Technological University, Ireland
- Results and Learning from TTX exercises, TBC
- Classification and prioritisation of Arctic and North Atlantic Security Needs and Innovations, Dylan Jones, University of Portsmouth, UK.
- An overview of LIVEX planning, Hekla Jósepsdóttir, Icelandic Coast Guard

15:20-15:30 Closing Remarks (JRCC-NN)



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