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## Report on High Profile Launch of the ARCSAR Network D1.3.

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## Key terms

### **ARCSAR Network High Profile Launch:**

Is a three day workshop event that was held in Rome from 26-28, February 2019.

### **ARCSAR Network**

Refers to the network of practitioners, academia and other participatory stakeholders of the project.

### **ARCSAR Network Platform**

Refers to the web platform or service as a tool that will host the ARCSAR Network and other related links. This will be developed further as the project progresses.

### **SAR**

Search and Rescue

### **ACOPE**

Association of Arctic Expedition Cruise Operators



## EXECUTIVE SUMMARY

The increase in cruise vessel traffic is one of the key concerns for many Arctic countries. Different types of vessels in the region include: tourism related vessels, transport vessels such as liquefied natural gas (LNG) and oil tankers, bulk ships and container vessels, offshore service and exploration vessels, research vessels and naval fleet vessels including submarines. Especially as such vessels are growing in size, numbers of passengers are increasing, and shrinking sea ice is opening up the Northwest Passage. Cruise ships regularly take passengers to see Polar Bears, Seals and the Northern Lights, and there has been a 36% increase in the last 2 years in the Arctic region alone.

The ARCSAR project will establish the first formal Arctic and North Atlantic Security and Emergency Preparedness Network. It will be primarily for professional security and emergency response practitioners operating in the Arctic and the North-Atlantic region. This includes emergency system professionals such as border and coast guards, police, paramedics, oil spill response personnel and so on, who are responsible for keeping their professional staff at a high competence level in their respective professional fields.

This document is a summary of the High Profile Launch of ARCSAR Network event, which was held on 26 February 2019 from 10:00 -11:45, in Rome, Italy. This is the first project event with the purpose to raise awareness of the project, demonstrate the ARCSAR network platform, announce the programme of events, and bring together participants, relevant practitioners and stakeholders.

The document initially will cover some of the main panel speakers, then following a list of participating organisations and media coverage.



## INTRODUCTION

In addition to the short summary of the Rome event, this document consists also early on information regarding the ARCSAR network platform, its use cases and critical design features as derived from the event: High Profile Launch of the ARCSAR Network, held in Rome during February 26th-28th, 2019. Current state of understanding of the network based on partner and stakeholder discussions as well as gathered information on network platform from related projects such as ACOPE, will form the basis of the ARCSAR Network platform design approach.

Furthermore, main functionalities of the network will be described, in terms of its design and use cases as well as an attempt to answer some of the early on questions related to its design, purpose, usefulness and added value - not as much with regards to technical aspects, will be made. These may be addressed after more studies are carried out. The Network also is part of the dissemination effort, as it will host a database of users that have an interest or are highly connected to search and rescue operations in the Arctic regions, both in land and sea.

The platform will evolve as the project progresses, until a finalised version is presented at the end of the project lifecycle.

This document has been created by the Working Package (WP1), task leader: Laurea University of Applied Sciences.



## 1 ARCSAR Network High Profile Launch

During the ARCSAR Network High Profile Launch event, among the participants there were academics, government representatives, SAR practitioners, public safety authorities, satellite industry representatives, cruise operator representatives and so on.

### 1.1 Participants

The following partners were present at the ARCSAR network launch and workshop:

- Joint Rescue Coordination Centre North Norway (JRCC NN)
- Nord University (NORD)
- Maritime Forum North (MFN)
- Norwegian Ice Services (NIS)
- Norwegian Coast Guard (NMD)
- Admiral Makarov State Maritime University (AMSU)
- Landhelgisgæsla Islands (JRCC I)
- Association of Arctic Expedition Cruise Operators (AECO)
- Maritime Rescue Coordination Centre Bremen (MRCC B)
- Laurea University of Applied Sciences (LAUREA)
- University of Portsmouth (UP)
- Memorial University of Newfoundland (MUN)
- Cork Institute of Technology (CIT)
- Polar Quest AB (PQ)
- Lapland University of Applied Sciences (LUAS)
- e-GEOS SpA (GEO)
- MRCC Torshavn (MRCC T)
- Norwegian Coastal Administration (NCA)

In addition the following organisations were present at the network launch and/or the ARCSAR workshop, as participants and/or speakers:

- Istituto Idrografico della Marina Militare Italiana,
- Leonardo company,
- Space Norway,
- ANSUR,
- Telespazio,
- Lufttransport AS,
- Governor of Svalbard,
- Canadian Coast Guard,
- Chief of Police in Finnmark County,



- Former chairman of the Inuit Circumpolar Council,
- Joint Rescue Coordination Centre South Norway,
- Northern Norway Regional Health Authority,
- EPPR/Arctic Council, BarenstWatch,
- Finnish Embassy in Rome,
- Italian Space Agency,
- Italian Ambassador in Finland,
- SIOI,
- MIUR,
- MAECI (Italian Ministry of Foreign Affairs and International Cooperation),
- Norwegian Embassy in Rome,
- Soccorso Alpino.

Among the main panelists and keynote speakers kick-starting the vent were the following:

- Mr. Giovanni De Gannaro, president of Leonardo,
- Hon. Prof. Lorenzo Fioramonti, Vice-Minister of Research, Italian Government,
- H.e. Margit F. Tveiten, Norwegian Ambassador in Italy,
- Mr. Giovanni Soccodato, Chief Strategy and Innovation Officer, Leonardo,
- Mr. Luigi Pasquali, Chief Executive Officer, Telespazio,
- Mr. Massimo Claudio Comparini, Chief Executive Officer, e-GEOS,
- Mr. Bent-Ove Jamtli, Director of JRCC North Norway, ARCSAR project coordinator,
- Mr. Snorre Hagen, Lufttransport AS, SAR Chief Pilot,
- Ms. Okalik Eegeesiak, former Chairman of the Inuit Circumpolar Council.

## 1.2 Topics of discussion

During the one-and a half hour event, presenters and panelists alike managed to touch on numerous subjects of the Arctic region including the involvement of indigenous people. The presentations evolved around the following topics:

- The significance of the ARCTIC region as an important aspect due to its uncharted territory nature, natural resources, safety, routes, transport and so on. As presented by the speakers, there is a need for higher efforts in strengthening capabilities, safe routes, communication and navigation systems. ARCTIC requires that countries overlook boundaries for the purpose of building capacity. New prospect technologies such as short take-off and landing planes, unmanned vehicles and reliable satellite communications were also discussed.
- The Project ARCSAR, planned activities and its significance as presented by the project coordinator Mr. Bent-Ove Jamtli (included in the appendices).
- Gaps and opportunities of search and rescue operations as observed from a recent case: The Grounding of the Northguider trawler, presented by SAR Chief Pilot of Lufttransport AS, Mr. Snorre Hagen and Ole Jakob Malmo, Police Chief Superintendent, Sysselmannen Svalbard. The case revealed that the difficulties faced during a SAR mission are evident.



SAR practitioners that responded to the scene were able to share detailed experience including videos of the operation as it happened illustrating the magnitude of the challenge. worth noting was that Northguider emergency call was received from SAR practitioners, however they faced difficulties acknowledging received message to the ship in distress due to disruptions in communications. Moreover, difficulties announcing to the grounded ship of dispatched helicopters and their ETA were also present.

- Inuit security and Inuit Emergency Preparedness as presented by Ms. Okalik Eegeesiak, former Chairman of the Inuit Circumpolar Council.



Figure 1 Panelists/presenters during the opening remarks.



Figure 2 •H.e. Margit F. Tveiten, Norwegian Ambassador in Italy, giving the opening remarks.





Figure 3 •Hon. Prof. Lorenzo Fioramonti, Vice-Minister of Research, Italian Government during the opening remarks.

### 1.2.1 Detailed minutes:

#### Opening remarks

Mr. Giovanni De Gennaro, President, Leonardo

- The president of Leonardo emphasized in his presentation that satellite technology is important to support search and rescue activities and sustainable development. He talked about the increasing activity in the Arctic and the environmental changes happening in the northern regions. He also gave an overview of the current situation in the Arctic with maritime activities and mentioned few words about how Leonardo can contribute in the Arctic.
  - o He highlighted the technology development and satellite services to people and companies going into non-hospitable areas.
- He also mentioned that Italy is an observer in the Arctic Council and have a responsibility to contribute to the sustainable development in the Arctic. Scientific



missions and Italian companies have already been contributing to safe operations in the Arctic for a long time, since 1920's.

Hon. Prof. Lorenzo Fioramonti, Vice-Minister of Research, Italian Government

- Hon. Professor highlighted the importance in cooperation between research, industries and practitioners. He said that research would cut across sectors in the future and not only concentrate on academic studies. Research knows no boundaries when it comes to the Arctic.
- He further stated that we need to be proactive on how we prepare for development and emergency preparedness. H2020 is important as it brings different streams of research together and that we should jump on opportunities for exploring areas that are not yet researched.
- He continued further regarding satellite technologies: Research is also creating new satellite technologies and using the skills that are brought by industries  
And lastly he stated that the involvement of End-users is crucial in this research as they are an integral part of the research process.

H.e. Margit F. Tveiten, Norwegian Ambassador to Italy

- The Norwegian Ambassador to Italy stated that preparedness in the high north is essential to a nation like Norway that rely on maritime business and industry. Norway has a special responsibility to promote safe and sustainable development in the Arctic as a majority of maritime activity happen within the Norwegian Arctic areas.
- She also wanted to flag the importance of this ARCSAR workshop and project to Norway
- Good cooperation with emergency preparedness agencies and industry is essential
- She was very happy about the extensive Italian participation in the project
- Geo-services in Italy are well known and their competence in SAR activities is extensive

Mr. Giovanni Soccodato, Chief Strategy and Innovation Officer, Leonardo

- Mr. Giovanni opened his remarks by addressing the sustainability issues in the Arctic. He said that the maritime traffic in the Arctic has doubled from the previous year. He said that China has estimated that 5-12% of commercial Chinese traffic will go over the Arctic routes.
- He also mentioned Italy's status and responsibility in the Arctic Council as an observer
- Leonardo has contributed with plenty of technologies, helicopters, supporting Arctic countries already in Canada and Norway. Leonardo's aircrafts that are capable to support SAR and emergency preparedness in the Arctic and high north.
- The Leonardo company also has satellite technology, for advance planning of routes, ice maps etc. to support maritime activities.

Mr. Luigi Pasquali, Chief Executive Officer, Telespazio

- Mr. Pasquali stated that it is important to give contribution to the work of the emergency preparedness agencies and stakeholders. This work is demanding and looking a set of applications and technologies.
- Number of applications are based on reliable telecommunication systems. He stated that at the moment it is possible to satisfy telecommunication needs below 75 degrees.
- Telespazio can propose to Arctic countries additional ideas and applications



- They are also partnering with Galileo
- They are developing specific application to the use of GMDSS signal,
- Developing geoformation application in Italy,
- Impact of climate change is making the Arctic accessible
  - Navigation systems is one key element
  - Earth observation is essential to have control, to monitor and to have a sustainable development of the arctic region.

Mr. Massimo Claudio Comparini, Chief Executive Officer, e-GEOS

- Mr. Comparini gave an overview of space technologies for Arctic monitoring. He emphasized that Italy has a long history with the Arctic. One of the early expeditions from Alaska to Svalbard was an Italian aircraft in 1926.
- He mentioned the Arctic stakeholder forum, priorities for investment include digital infrastructure, local business development, and research.
- Norwegian, Finnish and Danish governments emphasize satellite technologies including Galileo and Copernicus.
- He also stated that Earth observation plays a key role to support sustainable development goals of UN but also other activities such as tourism, security, infrastructure development, and fisheries.  
He then further continued mentioning about the technologies used: E-GEOS uses COSMO-SkyMed for ice services and that there are 4 radar satellites for earth observation. They have also done a number of polar observations.
  - Including detecting and following the glacier movements and ice surface
- SeonSE and high north 18 projects already gathered huge amounts of data with testing.
  - This can contribute to emergency preparedness and ARCSAR

### **ARCSAR High Profile Launch & Project Status**

Mr. Bent-Ove Jamtli (Director of JRCC North Norway, ARCSAR Project Coordinator)

- The ARCSAR project leader, Bent-Ove Jamtli welcomed all the participants and recapped the events that have happened so far in the ARCSAR project
  - Kick off and workshop last September,
  - Workshop in Portsmouth, last November. The workshop is meant to find knowledge gaps with technology when it comes to SAR and OSR. This workshop will also involve businesses and local knowledge and people in the Arctic.
- ARCSAR is the first network within emergency preparedness and prevention in the Arctic that includes industry, practitioners and academia. New Zealand is also a partner because they also have a huge responsibility for emergency preparedness in the Antarctic.
- Often research solves problems that the practitioners do not have, so we have to connect both in order to find mutual interests – solving the problems that actually exist
- He showed the preliminary plan for the next five years (Figure 4).
- He also announced to the participants and the media that there will be a Live exercise in May involving SAR practitioners in the ARCTIC involving real life scenario exercise



“Fire on board”, in 2021. The cost of this exercise will be around 160 000 EUR, using one of the Polarquest’s vessels.



## Planned events

Year	When	What	Where
2019	26. – 28. February	Launch ARCSAR Network platform Participatory Workshop 2	Rome
	9. – 10. April	Fourth Joint Arctic SAR TTX and Workshop*	Reykjavik <small>*(Arr. AECO, JRCC I, JRCC N)</small>
	8. – 10. October	ARCSAR General assembly meeting Innovation & Knowledge Exchange 1 Dissemination Workshop 1  <i>10. - 13.10 Arctic Circle Assembly ARCSAR Breakout Session planned</i>	Reykjavik
2020	April	Innovation & Knowledge Exchange 2 Fifth Joint Arctic SAR TTX and Workshop*	Reykjavik <small>*(Arr. AECO, JRCC I, JRCC N)</small>
	October	Innovation & Knowledge Exchange 3 Dissemination Workshop 2	Bodø or Rovaniemi
2021	May	Catastrophe live exercise Dissemination Workshop 3	Longyearbyen / Svalbard
2022	April	Sixth Joint Arctic SAR TTX and Workshop* Stakeholder Event 1	Reykjavik <small>*(Arr. AECO, JRCC I, JRCC N)</small>
	August	Stakeholder Event 2	Portsmouth
	October	Stakeholder Event 3 Dissemination Workshop 4	Cork
2023	February	International ARCSAR Conference	Brussels
	June	Dissemination Workshop 5	Bodø

Changes may occur.  
 Updated event calendar with dates and details  
 will be published at [www.arcsar.eu](http://www.arcsar.eu)



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Figure 4 ARCSAR planned events in the next 5 years.

The Northguider trawler SAR case; Mr. Snorre Hagen (Lufttransport AS, SAR Chief Pilot) and Ole Jakob Malmo, Police Chief Superintendent, Sysselmannen Svalbard

- The Northguider trawler grounded 28<sup>th</sup> December. Snorre Hagen and Ole Jakob Malmo went through the incident and what happened.
- KV Barentshav was 24 hours away from the incident site. By air the incident site was 104NM/193km away, Svalbard had two helicopters that they could send out.



- Usually Polarsysse is in Longyearbyen but it was wintering somewhere else on the mainland. From the trawler, it was 50 or 100m to shore, however the crew would have had to climb an ice shelf to get to shore, polar bears live around the national park, there were also currents in the water. It was 26 degrees minus, 35-40knots wind, heavy snow. At first, all the emergency services knew was that two different emergency beacons were activated, so judging by that it was a serious case. There were No VHF or MF radio coverage at first. After a while, they got through by MF radio. First, they hear that there are 15 people, and they have gone to life rafts and drifted, next they hear that they've lost one life raft, but are still all in the ship. After a while the engine stops in darkness, it's getting icy and cold, the vessel is drifting to shore and sinking. They finally get a message back that helicopters are on the way and that when they hear the helicopters, they should shoot up a flare.
- Important to consider the mindset of the helicopter pilot and the SAR crew, pressure is on them because they are their only hope but they also cannot push the limits so that they crash themselves.
- They showed a video of the rescue swimmer going on to the vessel. Worth noting was that in these waters, if one jumps in the water, everything freezes instantly.
- Helicopter was equipped well with technology. Radar, AIS, GPS, night vision, comms.
- The first helicopter took 10 crew members, and the other took 4.
- 2,5h from the emergency call to the last pax in the helo
- The pax got a place to stay in Longyearbyen, new clothes, airline tickets, hospital treatment, and a restaurant offered the crew to celebrate new years eve for dinner.
- After SAR, there was environmental clean-up, Norwegian CG, KV Svalbard, oil would create a lot of problems for wild life in these areas, the vessels was already full of icing. There was assistance from a Dutch salvage company, the ship owner and everyone wanted to put good efforts into the clean-up operation. It took three days for the clean-up, pumping everything and taking all equipment out, salvage was left to be done during the summer when there is more light and warmer.

#### Inuit Security and Inuit Emergency Preparedness; Ms. Okalik Egeesiak (former Chairman of the Inuit Circumpolar Council)

- Ms. Egeesiak greeted everyone in Inuktitut. She then proceeded emphasizing that security, emergency preparedness is important for the Inuit, and they have always had their traditions with safety. Their high way goes across the waters and land in the Arctic. The Inuit are always aware of their environment and have always been prepared for coping in this kind of environment.
- They are the original and permanent explorers and researchers in the Arctic. Inuit have increasing need for emergency preparedness because of the traffic that goes along Arctic waters and land.
- She stated that Inuit are normally the first responders when disasters happen due to their extensive knowledge of the areas and their geolocation. She emphasized the importance of engaging Inuit in the development that affect their people.
- Inuit always find a way to navigate opportunities and work together with the partners. Inuit have built relationships with government organizations and others that affect their



lives. They need to and want to be engaged in the discussion of use of the marine environment and water ways.

She further continued on the importance to have reliable broadband, ship terminals and airstrips, hospitals in case of emergencies.

- Furthermore, they will be very interested in hearing about the lessons we learn from ARCSAR. What is missing from the project is the Inuit and other indigenous partners.
- There is a research project in Ottawa consulting Inuit on ship corridors and where Inuit prefer the ships to pass to avoid disturbing wildlife and Inuit food resources.
- Each community has its own SAR community that will rescue hunters from the waters.
- Canada has also established Inuit SAR teams in the Canadian Arctic. She further emphasized that we should remember that we don't have to start from scratch, we have local communities, research and universities and so on.
- The local communities also need to do some planning, need to be prepared and know what is happening. We should remember to give a human face to development of the Arctic.

### 1.3 Media coverage

The event has been disseminated on the webpage and social media of the ARCSAR project with illustrated pictures.

External media participation was also at a satisfactory level. There were a considerable amount of seats reserved for different media channels that were present. After the event a series of statements were taken from the speakers. An update of the exact report on media coverage will follow in the coming deliverable prepared by beneficiary E-Geos.

### 1.4 Discussion on the network platform with other project ACOPE as an integral part of the ARCSAR project.

ACOPE project workshop followed on the 28-th February. It discussed challenges identified in studies and how to provide access to different kinds of navigation, situational awareness and other supportive information using an online platform. According to ACOPE project findings, a lot of information providers exist on the internet. Some more reliable and others less and heavily fragmented. The project has already created early design mock-ups of a platform that will serve as a hub for filtered, reliable information, which are useful when designing the ARCSAR Network.

According to the discussion, it was stated that such platform should be able to run on autopilot, meaning with minimum maintenance needed. It should refer links to ARCSAR, and it should provide non-classified information. I.e. information from ARCTIC-WEB and other



available platforms to the public. One issue is that some of the services offered by private companies are subject to fees.

There were also proposals that the platform should serve as a common information sharing platform, which would aid SAR practitioners to find charts, of seabed, ice movements, wind, geo-location of all ships in area, medical centres, nearby points of interest and so on.

## 2 Conclusions

### 2.1 The Network platform - the Rome event

Based on the grant agreement and studies thus far in the project, the network platform can be seen as a hub that brings together the most reliable and up to date information necessary for SAR practitioners in the ARCTIC region. However, questions have risen, how to obtain such information if it is closed for public or against a fee? As well as whether the platform should provide information useful to SAR practitioners only i.e. situational awareness, communication and navigation data that is readily obtained from the platform or should it include also non SAR information i.e. networking capabilities, points of interest data, general information on ARCTIC, i.e. manuals on how to prepare before one's journey starts and other relevant portals and so on.

Significant amount of information can be derived from the workshops that can support the design phase of the platform. I.e. The satellite coverage and data sending/receiving is a strong gap that could see use in the ARCSAR network platform. There are a number of independent and project based service providers that offer some form of satellite data, provided that data communications and funding is sufficient. Some of these service providers are listed online and they can be added to the ARCSAR network for ease of access, however, some are paid service and some are limited to public use. To mention a few: Smart Eyes On Seas (SEONSE), Marine Copernicus, Spacedata Copernicus, General Bathymetric Chart of the Oceans - GEBCO, SEABED2030, ICE-EDGE and so on. Certainly the possibilities exist if information sources are easily obtainable. With regards to non SAR information, it can be added to a supportive section inside the platform.

#### 2.1.1 Platform design

The design of the platform has to be approached in an agile manner, with stages that would ensure the relativity of information in the future is useful. This can be achieved through careful studies that are inclusive of SAR practitioners' and stakeholder needs and requirements, while also keeping in line with possible ethical and social implications.



As ACOPE studies have shown, finding correct data and information is challenging for SAR practitioners and other stakeholders, hence the network should serve as a hub that would interlink the best information sources.

The main features at this stage that are crucial for the ARCSAR Network platform are a stakeholder database, innovation arena, and information related to weather, ice movements, wind, positional information (GPS), live updated maps, live seabed movement monitoring and so on.

During the recent workshop in Rome, it was mentioned that about 4000 new satellites are planned to be launched into space in the near future. There is good potential for some of the communication gaps to be filled.

### 2.1.2 Early stage mockups and ideas

#### Home Page

The initial home page of the ARCSAR Network platform is envisioned to be as illustrated in the figure 1. Users will have the possibility to search for publicly available information or login/sign-up to access more personalized or perhaps classified information.

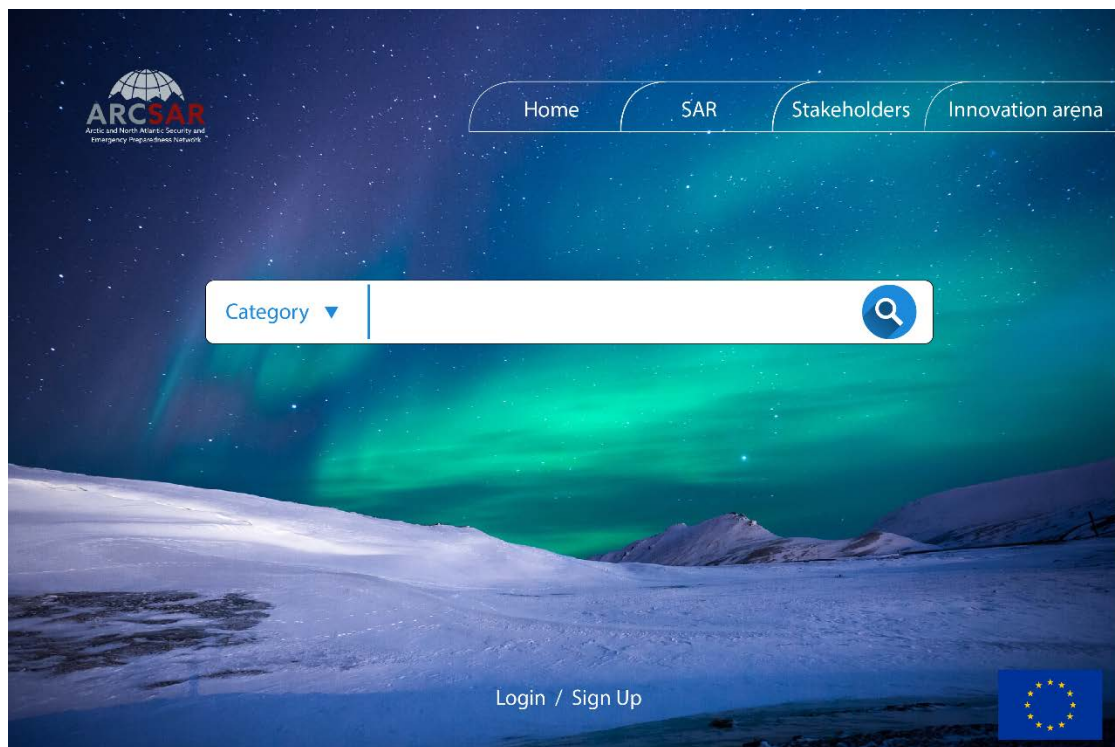


Figure 5 ARCSAR Network Platform landing page

Whether the platform should have a user management system or not this remains to be seen later on in the project.





### SAR practitioners' page

In the platform users will have the possibility to search, access and save useful links for faster discovery in the future (Figure 2). The links will be referred to external sources that provide information crucial to SAR practitioners. In Addition to SAR information there is also a tab where an extensive stakeholder database will be located and interacted with. The ARCSAR network will also host the Innovation arena which will be covered in later stages in the project.

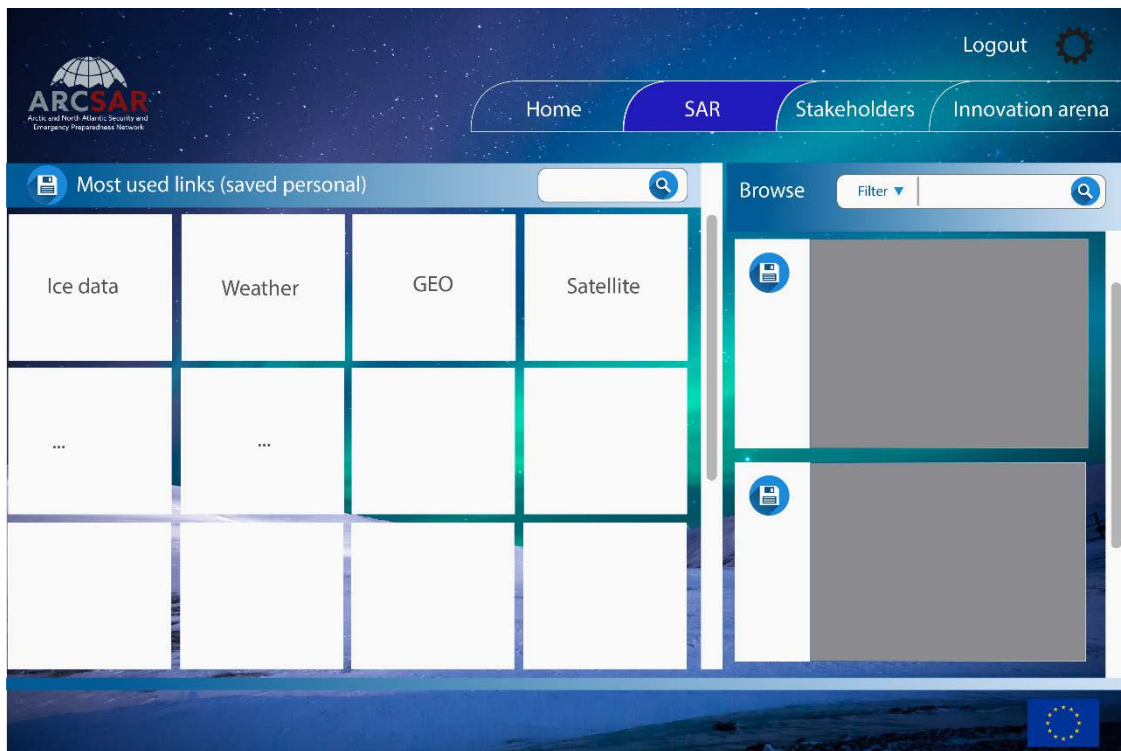


Figure 6 SAR Practitioners' page