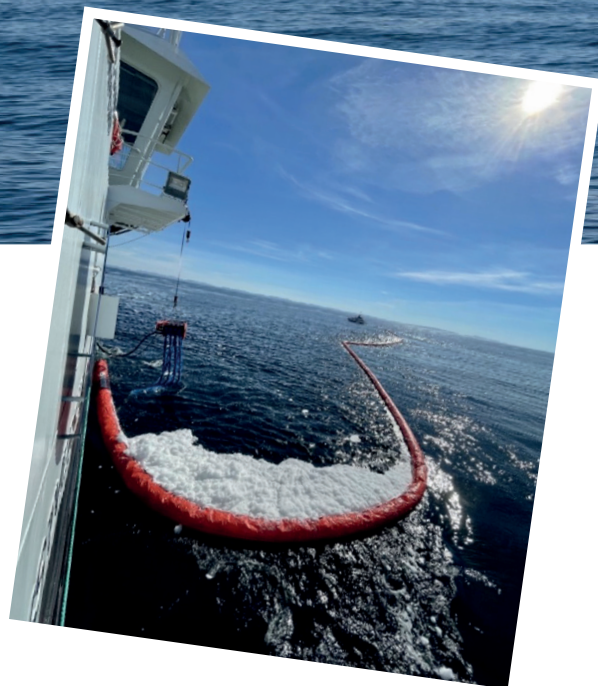


EXERCISE BARENTS

2021



Authors:

Joint Rescue Coordination Centre North Norway (JRCC NN)
Norwegian Coastal Administration (NCA)

Authors cover photography:

Onar Digernes Aase (Forsvaret), Stian Roen (Forsvaret), Kystverket.

Special acknowledgements:

Maritime Rescue Coordination Centre Murmansk (MRCC Murmansk)
Marine Rescue Service Northern Branch (MRS)

"The annual SAR and OSR Exercise Barents between Russia and Norway took place on June the 2nd 2021. This bilateral report is made to share with all, our tradition for cooperation for emergency preparedness and response in the Barents Sea. Our backyard in the arctic environment. The authors are fully responsible for the content and evaluations based on feedback after the livex.

We are very grateful to all participants for their contribution in planning and conduct of the live exercise, sharing knowledge, and building competence and capacity.

Our obligation is to navigators and to the environment in this area, to respond in remote and sometimes in harsh conditions. And we know, from real life incidents."



Content

Aim of the report.....	5
Executive summary	5
Exercise Barents	9
Aim of the exercise.....	9
A brief history of the exercise	9
Exercise Barents 2021	13
Objectives.....	13
Conduct of exercise	14
Participants.....	15
Scenarios for the exercise	16
Outcomes.....	17
Conclusion	20
Closing words.....	22

Aim of the report

The main aim of this report is to display the framework in which Exercise Barents 2021 was conducted by presenting the involved parts, the objectives, the conduct of exercise, and the lessons learned as well as to summarize the experiences of the participants.

This report also serves as an introduction to Exercise Barents. The report presents the framework, aim, and a brief history of the exercise.



CGV Jarl and Nikolai Chiker
(Onar Digernes Aase, Forsvaret)



SAR operation – Nikolai Chiker and crew from CGV Jarl
(Stian Roen, Forsvaret)

Executive summary

The 2021 Exercise Barents was held on June the 2nd in the Barents Sea on an area adjacent to the border between the Kingdom of Norway and the Russian Federation. The exercise consisted of two scenarios. A search and rescue (SAR) scenario and an oil spill response (OSR) scenario.

The framework, main objectives and common subordinate objectives were defined in the protocol meeting held on the 18th of February 2021 by the exercise signatories. Namely, the Maritime Rescue Coordination Centre Murmansk (MRCC Murmansk), the Joint Rescue Coordination Centre North Norway (JRCC NN), the Marine Rescue Service (MRS), and the Norwegian Coastal Administration (NCA).

The common subordinate objectives for the signatories of the exercise protocol were:

1. Correct bi-lateral notification and request for assistance.
2. Correct and effective request for, and reply to border crossing clearances.
3. Effective exercise control, exchange of information, and coordination of the scenarios.

The common subordinate objectives for all participating organizations and units were:

1. All operations shall be conducted in a safe manner.
2. Proper initial notification / reply to notification.
3. Effective On-Scene Coordination (SAR) / On-Scene Command (OSR).
4. Effective coordination of participating aerial resources, utilizing ACO function.
5. Effective search planning and search operations at sea.
6. Effective Oil Spill Response operations.
7. Effective communications between units.

In total nine vessels, three helicopters, two maritime patrol aircraft, one pollution control aircraft and a drone were mobilized to participate in the exercise. The exercise started at 0500 UTC with a SAR operation involving a fishing vessel in position 7000N-03100E. At 0941 UTC the SAR part of the exercise concluded and the OSR part commenced. The exercise ended at 1337 UTC.

In general terms, the common objectives and the common subordinate objectives for all participating organizations and units were fulfilled. Participants also reported positive experiences:

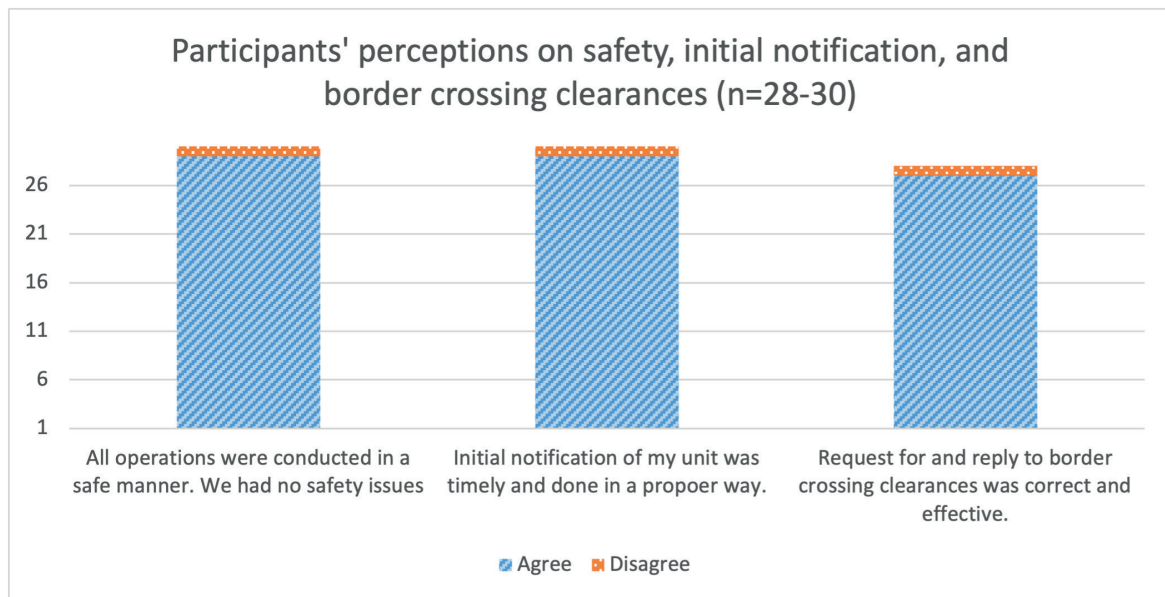


Figure 1: Participants' perceptions on safety, initial notification, and border crossing clearances

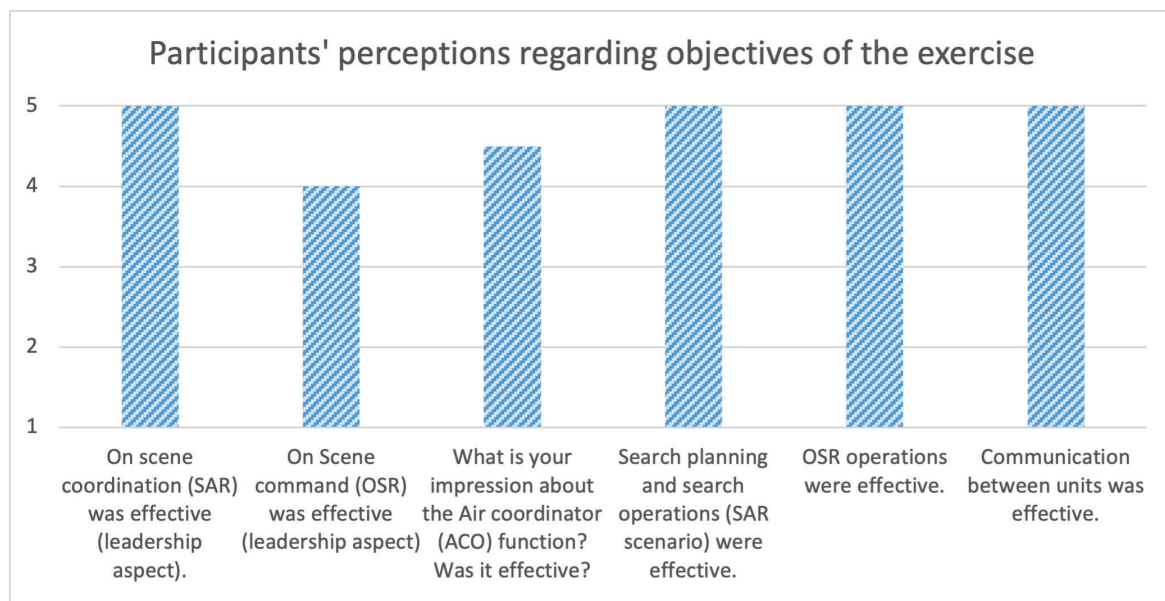


Figure 2: Participants' perceptions regarding objectives of the exercise

The lower response to some of the items is explained by the lower number of assets involved in the OSR part of the exercise.

The exercise can be considered to have been conducted satisfactorily and to have served to advance in the pursue of its main objective. Namely, to enhance and further develop SAR and OSR cooperation between the Russian Federation and the Kingdom of Norway in the Barents Sea.



OSR Operations. OV Bøkfjord, Halfdan Grieg and CGV Farm in the background
(Kystverket)

Exercise Barents

Introduction

Exercise Barents is based on the obligations to exercise two agreements between the Russian Federation and the Kingdom of Norway. Namely, the SAR agreement signed in 1995 and the Agreement to combat oil pollution in the Barents Sea signed in 1994.

At the beginning the two agreements were exercised separately, but in 2005 it was decided to conduct a joint SAR and OSR exercise since the same resources were involved in both exercises. The reasons for the change were, however, not solely logistical or economic as experiences from real accidents show that incidents at sea may start with SAR and be followed by OSR. Exercising both SAR and OSR in a single scenario enhances the level of preparation to respond to complex situation that may occur.

It is agreed between the parties that the responsibility for the planning of the exercise should shift between the two states every year.

Aim of the exercise

The aim of the exercise has been to implement the bilateral agreements to enhance and further develop SAR and OSR cooperation in the Barents Sea to enhance the coordination of maritime incident response operations in the region by strengthening the collaborative dynamics between relevant assets of both countries.

A brief history of the exercise

In the 1950' the USSR signed a series of agreements with neighbouring countries regarding Search and Rescue at sea. The agreement between the USSR and Norway was signed in Oslo in 1956.

As years passed, shipping, technology and international politics changed rendering the 1956 agreement obsolete. The need for an updated version was acknowledged by both countries and voiced by the Norwegian foreign minister Knut Olav Frydenlund in December 1980 while visiting Moscow.

In 1982 both countries exchanged proposals for a new agreement, however, the joint drafting work did not start until 1987.

The first meeting between USSR and Norwegian officials took place in Murmansk between the 23rd and 26th of March 1987. The meeting functioned as an arena to learn about each country's SAR systems, organization and assets. At the beginning of the meeting both delegations suggested that it would be convenient to draft a second agreement regarding joint sea pollution response. The drafting work for the SAR agreement started from a document presented by the Norwegian delegation based on the global framework on SAR - the IMO, 1979 SAR convention.

During the meeting, the Soviet delegation brought to the forefront the importance of conducting regular meetings and exercises in a fashion similar to the ones carried by the Soviet Union and Sweden. The Soviet Union and Sweden had also signed a

SAR agreement in the 1950', but that agreement had been updated with an additional protocol signed in 1981 where a yearly meeting and exercise was agreed upon.

In July/August 1987, after attending an international SAR conference in A Coruña (Spain), the Norwegian Sea Rescue Society and the Norwegian Airline Pilot Association argued for the relevance to conduct binational exercises in the Barents Sea in the same way that Norway participated in the Bright Eye exercises with other NATO members. The Joint Rescue Coordination Centre in Bodø also shared this position.

The second drafting meeting was held in Bodø between the 27th and 30th of October 1987. From this meeting a new agreement emerged replacing the 1956 agreement. The new agreement was officially signed by both countries on the 15th of January 1988.

The 1988 agreement dedicated an article to joint meetings and exercises:

Representatives of both parts relevant authorities can meet in order to draft or organize practical measures regarding search of missing people and rescue of people in need in the Barents Sea. These meetings are to be hold alternately in Norway and the Union of Soviet Socialist Republics.

Following the decision of relevant authorities of both parties, joint communication exercises and other joint exercises can be conducted within the framework set in this agreement (Article 9).

This article set the stage for what later would become Exercise Barents. As the head of the Norwegian delegation almost premonitorily mentioned when referring to the establishment of regular exercises "one has to learn to crawl before walking".

On the 25th of August 1988, the first binational SAR exercise was conducted in the Barents Sea.



SAR cooperation (1991). Meeting between Murmansk Shipping Company/MRCC Murmansk and JRCC NN. From left to right: Jarl Sørensen (Vardø police district), Anne Birgitte Gundersen (JRCC NN), Hilde Hegelund (Chief of Police Vardø), Arne Kjell Dahlmo (Coastal Radio Station Bodø), Olav Sønnerland (Chief of police Bodø), Erik Hamremoen (Chief 330 sqd. Banak), Samouil Zamtfort (Murmansk Shipping Company). Finnmarken (18/07/1991)

In 1989 it was agreed that the two parties should increase the cooperation on oil spill preparedness and response in the Barents Sea. The goal was an agreement between the parties or another instrument for cooperation. As a follow up, the first Soviet-Norwegian Joint Expert Group meeting was held in February 1990 in Horten, Norway where the parties agreed on the way forward. The meeting was followed up by the second Expert Group meeting in Murmansk in September 1990. In the meeting, the Parties agreed to conduct the first Joint oil spill exercise I 1991. The exercise was held in Tromsø, Norway.

Through these activities and negotiations between the Parties, the Norwegian Minister of Environment and the Russian Minister of Transport signed the agreement between the Russian Federation and the Kingdom of Norway concerning Cooperation on the Combatment of Oil Pollution in the Barents Sea in April 1994. A year later a new SAR agreement was signed to further develop the collaboration between the two countries to respond to this type of events in the Barents Sea.

In the agreement for the concerning Cooperation on the Combatment of Oil Pollution in the Barents Sea, it is stated that the parties should develop a Joint Plan. The Joint Norwegian-Russian Contingency Plan for Oil Spill Response in the Barents Sea (Joint Plan) was signed by the Director of Emergency Response in Norwegian Pollution Control Authority and the Director of Marine Pollution Control and Salvage Administration in Moscow. The foreign ministers of both countries signed the SAR agreement.

In the Agreements, it is stated that the Parties should conduct joint exercises.

Exercise Barents 2021

A note on the influence of COVID-19 on Exercise Barents

Due to the pandemic in 2020 and 2021 and the national restrictions in both Russia and Norway contingency plans and protective measures were defined.

Among other measures, no physical meetings were conducted before, during or after exercise Barents 2021. The protocol planning meeting and the pre-exercise meeting took place on a digital platform with the same participants as the regular protocol meetings and pre-exercise meetings of previous years.

In addition, there was no liaison exchange between Russia and Norway on any vessels. The traditional Norwegian-Russian debrief on board a Norwegian or Russian vessel in the exercise area was substituted by questionnaire distributed to all involved assets and a meeting on a digital platform held on the 11th of June.

Objectives

The framework, main objectives and common subordinate objectives were defined in the protocol meeting held on the 18th of February 2021.

The main objective of the exercise, held on June the 2nd, was to contribute to the improvement of the coordination of maritime incident response operations in the Barents Sea region by strengthening the collaborative dynamics between MRCC Murmansk and JRCC NN in what concerns SAR and between MRS and NCA in relation to OSR.

The common subordinate objectives for the signatories of the exercise protocol were:

1. Correct international (bilateral) notification and request for assistance.
2. Correct and effective request for, and reply to border crossing clearances.
All clearances shall be written (e-mail or fax) and confirmed by voice communications (as example, landline phone).
3. Exchange of Norwegian and Russian liaisons (and interpreters if needed), through transfer between agreed vessels in the exercise area.
4. Effective exercise control, exchange of information, and coordination of the scenarios (SAR and OSR). Reporting formats (SITREP and/or POLREP system) to be used in accordance with established procedures.

The common subordinate objectives for all participating organizations and units were:

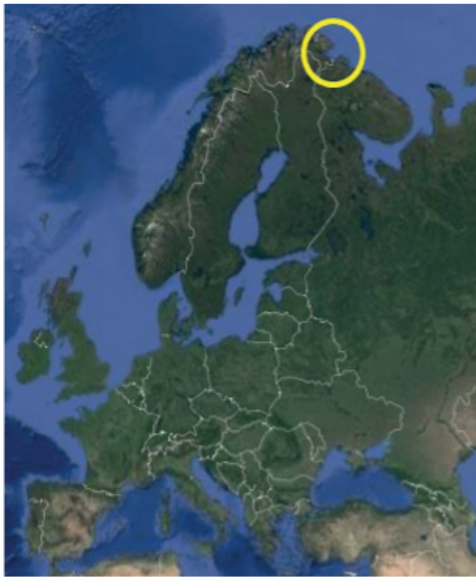
1. All operations shall be conducted in a safe manner.
2. Proper initial notification / reply to notification.
3. Effective On-Scene Coordination (SAR) / On-Scene Command (OSR).
4. Effective coordination of participating aerial resources, utilizing the Aircraft Coordinator (ACO) function.
5. Effective search planning and search operations at sea
6. Effective Oil Spill Response operations.
7. Effective communications between units.

Conduct of exercise

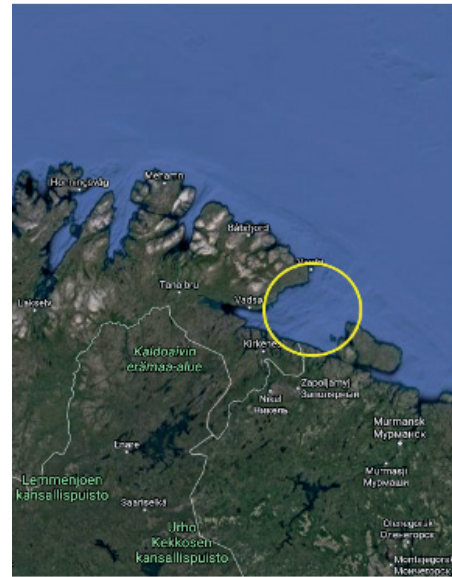
The 2021 Exercise Barents was organized by Norway and included two scenarios. A search and rescue scenario (SAR) and an oil spill response scenario (OSR).

JRCC-NN was responsible of transmitting STARTEX (0500 UTC) and ENDEX (no later than 2100 UTC).

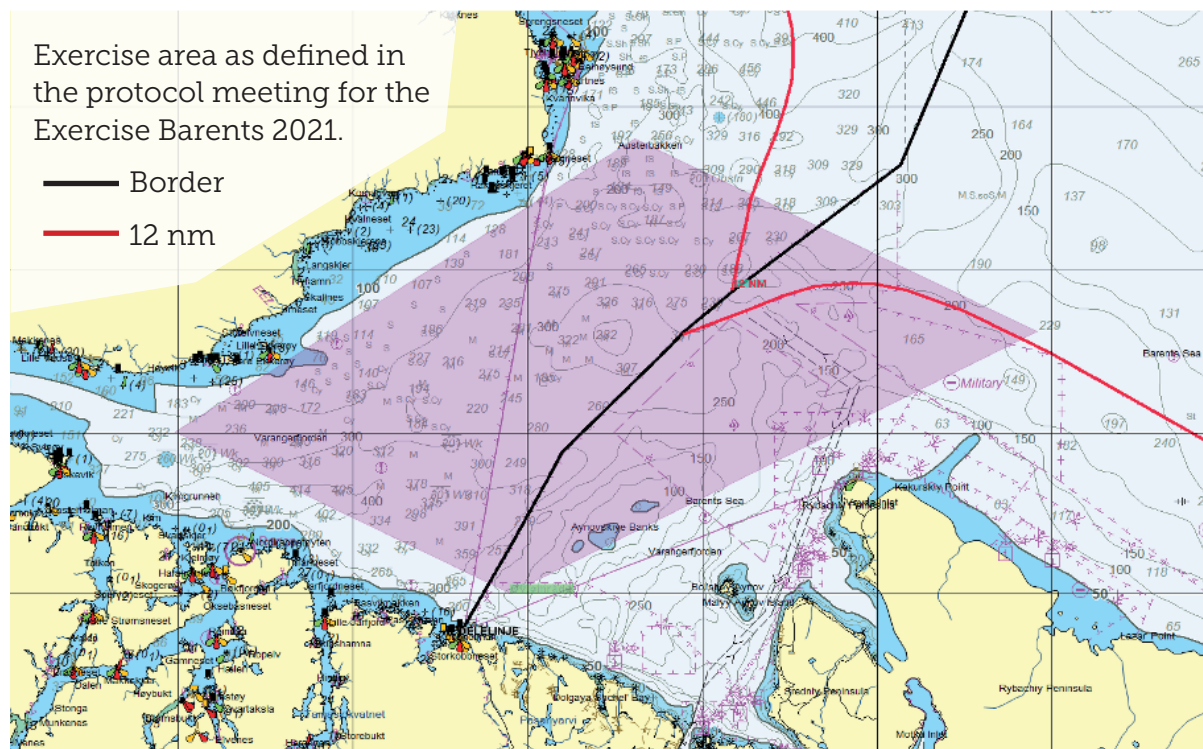
The exercise was held in the area between the Varanger peninsula (Norway) and Rybachiy peninsula (Russia). The exercise area is presented in the following maps.



Google, 2021



Google, 2021



Participants

Participants in the Exercise Barents 2021

From Russia	From Norway
<ul style="list-style-type: none"> • MRCC Murmansk • Murmansk Hydro Met Service • Murmansk Coastal radio • Murmansk Air Traffic Control Centre 	<ul style="list-style-type: none"> • JRCC NN • NCA Area for Environment Emergency Response NOR VTS • Norwegian Joint Headquarters • Norwegian Air Operations Centre • Norway Area Control Centre • Norwegian Coastal Radio North
<ul style="list-style-type: none"> • SAR/Oil spill response boom-setting vessels PENAY MARKAB • SAR vessel NIKOLAI CHIKER MIKULA • Russian CGV CGV VELBOT • SAR helicopter KA-27 MI-8 • SAR maritime patrol aircraft IL-38 	<ul style="list-style-type: none"> • Oil spill response vessel OV BØKFJORD • Rescue cutters HALFDAN GRIEG • Norwegian CGV CGV JARL CGV FARM • SAR helicopter Seaking • SAR maritime patrol aircraft P3C Orion • Pollution control aircraft Beechcraft King Air 200 • Drone Aeryon Skyranger R70

Scenarios for the exercise

The Norwegian registered fishing vessel Barentsfish/LAAL in position 7000N-03100E sends a distress call at 0500 UTC. The vessel is taking in water. Heavy listing. They foresee that the ship will sink. 15 crewmembers onboard are putting on survival suits and preparing life rafts. Requests immediate assistance.

Barentsfish/LAAL is a 60 meter long and 14 meter wide vessel with 350 tons of heavy fuel oil on board. When the vessel sinks an unknown amount of fuel is released.



From the Penay bridge
(Sergey Anhimov, MRCC Murmansk)

Outcomes

Objective	Experiences
Correct international (bi-lateral) notification and request for assistance	The relevant participants declared after the exercise that notification and request for assistance was done in a correct and efficient manner.
Correct and effective request for, and reply to border crossing clearances	The relevant participants declared after the exercise that request and reply to border crossing clearances was done correctly. In most cases, clearances were given within a short period of time. Some assets were not cleared to cross the border.
Effective exercise control, exchange of information, and coordination of the scenarios (SAR and OSR)	<p>Relevant participants declared after the exercise that control, exchange of information and the coordination of both scenarios was done correctly and effectively.</p> <p>Some situations regarding exercise control arouse due to the dynamics of the exercise. These types of situations, or exercise artificialities, are to be expected in any exercise e.g., the availability of multiple relevant assets near the incident area.</p>
All operations shall be conducted in a safe manner	<p>No situations representing dire danger to the participating assets were reported.</p> <p>The ACO reported a situation that they would have perceived as risky if the weather conditions at the time of the exercise would have been different. The situation only lasted a few moments. Other than that, the ACO declared the rest of the exercise as being conducted in a safe manner.</p>
Proper initial notification / reply to notification	The relevant participants declared after the exercise that notification and reply to notification occurred in a timely manner.
Effective On-Scene Coordination (SAR) / On-Scene Command (OSR).	<p>The role of OSC was assigned to CGV Jarl. When the OSR part of the scenario started CGV Jarl was also assigned the role of Supreme On Scene Commander (SOSC).</p> <p>In general terms participants declared that both the OSC and the SOSC functioned effectively and that it had an influence in the positive outcome of the exercise.</p>

Effective coordination of participating aerial resources	<p>The role of the ACO was given to the P-3 Orion. The role was later transferred to CGV Jarl. The transition was deemed to be smooth and unproblematic. The Russian aerial assets communicated with a Russian ACO sub-unit (Nikolay Chiker) that streamlined communications between the Russian aircraft and the P3 Orion and later CGV Jarl.</p> <p>In general terms participants perceived a well-functioning and effective ACO.</p>
Effective search planning and search operations at sea	<p>With the datum known the OSC chose to implement an expanding box search pattern that was continuously adjusted in accordance with different factors.</p> <p>In general terms all participants declared that the planning and operations was effective.</p>
Effective Oil Spill Response operations	<p>The relevant participants declared after the exercise that the OSR was conducted in an appropriate and effective manner. Some difficulties were reported at the beginning of the OSR part by some of the assets. Nevertheless, this was solved in a matter of minutes.</p>
Effective communications between units	<p>Communication and exchange of information was reported to be effective between units in the exercise area, between MRCC Murmansk and JRCC-NN, and between MRCC Murmansk and NCA.</p> <p>Communication between units was mostly carried in English. Some Russian aircraft used Russian as the working language, however, the presence of an interpreter aboard Nikolai Chiker, playing the role as a sub ACO, allowed to carry the exercise in a safe and efficient manner.</p>

Participants reported that there is a feeling that the collaboration between the assets of the two countries becomes better every year and that the continuation of the exercise is paramount to offer a good service to all vessels that navigate the Barents Sea and to combat pollution.

Many of the Norwegian assets declared that collaboration between Norwegian units was enhanced considerably due to the effective use of different communication platforms. Participants also declared that it would be very relevant to expand the exercise to include land assets to practice mass-evacuation.



OSR operation in CGV Jarl and Nikolai Chicker in the background
(Onar Digernes Aase, Forsvaret)

Conclusion

The exercise Barents 2021 was conducted on June the 2nd in an area between the Varanger peninsula (Norway) and Rybachiy peninsula (Russia). Nine vessels, three helicopters, two maritime patrol aircraft, one pollution control aircraft were mobilized. In addition, a drone was used in this year's OSR scenario. Both scenarios (SAR and OSR) were conducted without setbacks.

Due to restrictions related to the COVID 19, pandemic there was no liaison exchange between Russia and Norway on any vessels. Moreover, Norway restricted access to observers in its vessels. Nevertheless, cross-deck exercises including pick up and marker dummy transfers were conducted.

The exercise started at 0500 UTC with a distress call from Barentsfish/LAAL a Norwegian registered fishing vessel with 15 crewmembers.

Exercise Barents 21 was conducted under very favourable weather conditions with clear skies and calm sea. The Orion P3 maritime patrol aircraft acting as ACO located all rafts and dummies early in the exercise. This information, however, was not transmitted to other participant assets. This was done in agreement with the SAR DISTAFF in order to allow other participants to practice procedures.



Crew onboard Halfdan Grieg checking on one of the training dummies found drifting in the exercise area. (Norwegian Sea Rescue Society)

At 0522 UTC the JRCC NN requested assistance from MRCC Murmansk. At 0532 UTC the Orion P3 was designated to be ACO, and at 0537 UTC the CGV Jarl was assigned the role of OSC. Initial information from JRCC NN to NCA about the incident contained information about possible release of oil from the wrecked vessel.

At 0533 UTC four crewmembers were found. At 0610 UTC the Russian vessels Nikolay Chiker, Velbot, Penay, and Mikula were cleared to enter Norwegian territorial waters. At 0711 UTC the Russian aircraft was cleared to enter Norwegian airspace.

At 0738 UTC Nikolay Chiker arrived at the exercise area as the first Russian vessel on site. At 0757 UTC a large oil slick was confirmed and reported in position 70 02,9N 031 02,1E.

At the time of confirmation of large amounts of oil on water, the NCA notified Russia about pollution, in accordance with procedures, and shortly after requested for Russian assistance.

The last crewmember of Barentsfish/LAAL was rescued at 0844 UTC. At 0847 UTC the P3 Orion transferred the ACO role to CGV Jarl and left the area. Some cross-deck operations were conducted by the helicopters. At 0941 UTC the SAR operation ended.

Aerial resources involved in SAR contributed to information about observed oil slick positions before leaving the area.

A handover telephone-meeting between JRCC NN and NCA was conducted, where relevant status and information about resources was exchanged. Many of the resources involved in SAR were also OSR equipped and were assigned new roles under NCA lead. At 0950 UTC, the NCA took the lead of the operation. CGV Jarl was assigned the role of SOSOC.

The SOSOC gave tasks to subordinate units involved in the OSR. Three groups were established, focusing on the three main oil slicks detected. Two groups operated on the Norwegian side of the border, and the third group on the Russian side of the border.

The OSR operation was supported by a pollution control aircraft, as well as one NCA drone operated from the CGV Farm.

The OSR operation, and thereby the Exercise Barents ended at 1347 UTC.

Best practices
Language barriers must be surpassed.
Safety of participating assets are taken most seriously.
A protocol planning meeting must be held to define the framework of the exercise. In addition, a safety meeting is conducted separately before the exercise.
Respect for national legislations must be upheld.
ACO needs to be practiced and personnel assigned the role needs to be prepared and trained to take on the tasks assigned in IAMSAR vol. III.
Proper handover coordination between SAR and OSR is very valuable

Closing words

Exercise Barents 2021 has shown that it is possible to conduct live exercises involving multiple assets from different countries in the context of a worldwide pandemic. The adoption and use of virtual tools have allowed to organize an exercise that goes back over three decades.

Both the Russian Federation and the Kingdom of Norway believe that conducting this type of exercises is extremely valuable to enhance the preparedness of SAR and OSR assets and the collaborative dynamics between the two countries in furtherance of being able to offer the best possible help to save lives and to combat pollution in the Barents Sea.



Cross-deck hoisting operation, MI-8 and CGV Jarl
(Stian Roen, Forsvaret)

