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EVALUATION REPORT

BARENTS RESCUE 2015 EXERCISE



April 2016

Evaluation report

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Barents Rescue 2015 Exercise, main event 2A bus accident, chemical leak - Kittilä 30 September 2015.

Foreword

Thinking back about all the work done for the Barents Rescue 2015 Exercise, we hope that the two-year work is reflected in this document.

I am glad to see that many of the improvements from the previous exercises were included in the planning process for the Barents Rescue 2015 Exercise. Maybe in some cases just a short step forward was taken, but it was a step in a direction that benefits the Barents Euro-Arctic Region on Cooperation within the field of Emergency Prevention, Preparedness and Response and preparedness for large-scale accidents in the Barents Region.

Some big steps were also taken, but even bigger ones are still to be taken to ensure that we can work together effectively in real situations. Because of many new challenges, above all climate change, we must be aware and prepare for the need for enhanced cooperation in the Barents Region.

The scenarios evaluated in this report can happen anytime and anywhere in our region. The present evaluation report provides an objective assessment of how the methods chosen and the equipment used worked in the Barents Rescue 2015 Exercise. It is important to carefully examine the results of the evaluation and consider the best suggestions for improvement to be implemented in our cooperation.

Esko Koskinen, Director General

Department for Rescue Services, Finnish Ministry of the Interior

Summary

The main challenge facing the Barents Region is to provide rescue services in a wide area with limited regional and national resources. In severe disasters, rescue services with the special skills required may be more readily available in neighbouring countries and hence arrive at the scene faster than national actors. This is why international cooperation in rescue services in the Barents Region is needed and *the Agreement between the governments in the Barents Euro-Arctic Region on Cooperation within the field of Emergency Prevention, Preparedness and Response* (hereinafter 'the Agreement') was concluded and Barents Rescue exercises established. The Agreement and the exercises show that Finland, Norway, Russia and Sweden share an interest in acting together to provide joint rescue services on request.

To enhance the existing cooperation between the authorities responsible for emergency preparedness and response in Finland, Norway, Russia and Sweden, more training in joint activities between the countries is needed to ensure effective cooperation in case of a large-scale disaster. The need for training is also stated in new regulations affecting cooperation. With this in mind, the Barents Rescue 2015 Exercise (BR15) aimed at testing the implementation of new national Host Nation Support (HNS) guidelines in Finland. The evaluation of the activities revealed that the guidelines had been drafted well and that they supported the actions. Nevertheless, there are still issues that need to be addressed to ensure effective emergency response.

The Barents Rescue 2013 Exercise tested the functionality of Nødnett in Norway, whereas the BR15 tested the TETRA radio network in Finland. The results of both of these exercises showed that the coverage of the network is good and that communication via the network is easy. This reveals that the basic material support for information sharing and cooperation is functional and supports the joint rescue activities.

The BR15 exercise related to the following scenarios: mine accident with chemical leak and fire in the mine; bus accident, including one with chemical leak; landslide due to heavy rains and evacuation of people surrounded by water. In general, the exercise showed that the cooperation is good, the actors are skilled and the equipment is of high quality. Nonetheless, some weaknesses resulting from lack of information sharing were recorded, especially in cold protection of victims and the level of precision of actions. It was also observed that participants' skills to use English or communicate in a shared language partly prevented cooperation and timely information flow. This reveals that good English skills should still be emphasised as a key factor for successful cooperation and joint actions.

Interaction with media was emphasised in the BR15 Exercise by arranging a full-scale media play including information flow in social media. This reminded all actors that sharing information on emergency response takes place in a wider context than that of the competent authorities and, therefore, further training in interaction with other actors is needed. The authorities also observed that regular briefings on the ongoing situation and forthcoming activities are valuable and strongly support joint activities.

Rapid and accurate information delivery and sharing is crucial in Host Nation Support activities. The BR15 showed that further improvements are still needed especially in receiving information via e-mail. In addition, confirmation on receiving alarm should be made through several channels instead of only one (e-mail, SMS) to guarantee 24/7 preparedness.

The BR15 Exercise also included exercising how to generate cooperation between public authorities and volunteer organisations and private sector actors. This reminded the authorities of the possibility to also use the capabilities and capacity of other actors in the case of a large-scale emergency. Further training on this, at both international and national level, could be organised during the next exercises. In addition, the regional knowledge of actors could be more highlighted.

The BR15 Exercise made room for training that provided both success stories and lessons for the future to enhance the effectiveness of joint rescue activities. They are valuable for future development needs in the national and international cooperation under the Barents Agreement.

1. Introduction

The BR15 Exercise was carried out in Kittilä in Western Lapland, Finland between 28 September and 1 October 2015, hosted by Finland. The exercise scenario was a real possibility of a severe flood requiring different rescue activities simultaneously (water rescue, landslide, traffic accidents) and a mine accident. Rescue teams from Finland, Norway, Russia and Sweden participated in the exercise which included the following main sub-scenarios:

- bus accident and chemical leak
- landslide accidents
- mine accident and vehicle fire
- evacuation, water and mountain search and rescue

The BR15 Exercise participants comprised over forty organisations from Finland and key rescue and medical actors from the neighbouring countries. The exercise tested various aspects of the Barents Agreement regarding requesting assistance from neighbouring countries, dealing with border crossing formalities, managing international rescue operations, sharing and communicating information and handling the media. The main focus was on Host Nation Support, which refers to functions needed to ensure support to the assisting country and effective reception of assistance in the country which has requested assistance.

The BR 15 Exercise was organised by the Crisis Management Centre Finland (CMC Finland) and the Ministry of the Interior Department for Rescue Services in collaboration with the Lapland Rescue Department and Agnico Eagle Goldmine Finland. Laurea University of Applied Sciences from Finland was named to be responsible for the BR15 Exercise evaluation. The evaluation was conducted by over 30 evaluators from Finland, Norway, Russia and Sweden, who followed and reported on all exercise events. The participating agencies and organisations also evaluated themselves and sent their exercise evaluation reports to the Finnish Ministry of the Interior and to Laurea University of Applied Sciences. All the material has been analysed, and the key findings are presented in the BR15 Exercise Evaluation Report.

1.1. Framework

Barents Rescue Exercises have been implemented within the framework of the Barents Cooperation since 2001. A Barents Rescue Exercise is arranged every second year. The exercise is intended, among other things, to strengthen the resources of countries in the Barents Region, an area with long distances and limited resources. With this in mind, the exercises have focused on strengthening and maintaining

preparedness for mutual assistance in case of major disasters in the Barents Region. This was also the objective of the BR15 Exercise. The previous exercise was hosted by Norway in 2013, and the next one will be held in Russia in 2017.

1.2. Scenario

The BR15 Exercise was developed by and prepared for the participating countries, government agencies and other stakeholders through planning conferences and working group meetings. The core of the BR15 exercise scenario was that the Kittilä region in western Lapland, Finland had experienced a series of heavy rainfalls that caused floods and raising water level. The flood scenario is based on a real incident in Kittilä about ten years ago.

According to the scenario, floods caused serious damage to the road infrastructure in the region and lead to evacuation of people surrounded by water. Due to the damaged road infrastructure, a tourist bus accident and an accident with a chemical truck were reported. Furthermore, heavy rains caused landslide accidents where people were buried in cars under the soil. Simultaneous mine and bus accidents and a chemical leak were reported. This all lead to a situation where the resources of the Lapland Rescue Department and other rescue services in northern Finland were not sufficient to deal with the situation in the region and assistance needed to be requested from the neighbouring countries.

It was agreed that the BR15 Exercise would involve an Alarm Exercise (ALARMEX), a Table Top Exercise (TTX), a training day, a Field Training Exercise (FTX), Host Nation Support (HNS) and a media play. The FTX consisted of five main events: mine accident and vehicle fire (ME 1), bus accident and chemical leak (ME 2A and ME 2B played twice), virtually played disruption of electricity supply (ME 3), evacuation of an assisted living facility (ME 4A, part of the framework for exercise, not rehearsed), island evacuation, water SAR, mountain SAR (ME 4B) and landslide (ME 5 played twice).

In addition, the BR15 Exercise included a seminar with lectures, a programme for visitors and observers and an exhibition.

1.3 Objectives

The evaluation of the BR15 Exercise is based on the following definition of exercise aims and objectives provided in the document Exercise Planning Instruction (EXPI):

The Barents Rescue 2015 exercise aims at improving communication, cooperation and coordination between countries that may become involved in an emergency in the Barents Region. The Exercise is intended to improve preparedness and coordination of civil protection authorities and joint emergency response as well as other actors. Through a scenario overwhelming the capacities of the Host Nation, the Exercise also aims at testing the implementation of the Host Nation Support arrangements, especially the EU's Host Nation Support guidelines, in a regional setting.

Objectives

- To define, test and evaluate Barents Rescue agreements for assistance and the applicable legal and administrative framework;
- To test relevant national and international warning and alarm routines;

- To test procedures and practical activities for requesting, sending and receiving assets and familiarize participants with the Host Nation Support (HNS) concept;
- To test coordinated crisis communication and coordinated information flow to different target groups;
- To improve and test Tetra-radio communication;¹
- To facilitate co-operation in medical evacuation, severe burn victims included;²
- To develop cooperation in rescue service actions;
- To improve knowledge and network building between participating countries and organizations.

2. Evaluation method

The entire planning and execution process of the BR15 Exercise was based on the Barents Euro-Arctic Council (BEAC) Exercise Planning Guide. This was taken into account in planning and conducting the evaluation.

CMC Finland appointed Laurea University of Applied Sciences to conduct the evaluation of the BR15 Exercise. According to CMC Finland and the Finnish Ministry of the Interior, the aim of the evaluation was to see how the exercise fulfils the expectations set in the EXPI (Chapter 4: Exercise Aims and Objectives), which was used as a basis for the evaluation.

The Finnish Ministry of the Interior also wanted to know how the exercise had achieved the set goals and what could be the next steps to be taken, including cooperation between government officials and third sector actors. These topics are discussed in Chapter 4.1 of this evaluation report.

2.1 Frames for evaluation

The BR15 evaluation is based on the EXPI's definition of exercise aims and objectives and on the eight main strategic themes for the evaluation specified in the EXPI. Each strategic theme is discussed in the respective chapter of the present evaluation report. The themes for the evaluation specified in the EXPI are:

Leadership

: The commanding of rescue operation during Field Training Exercise shall follow the procedures of each rescue authority as well as volunteer organization. **Evaluation focus on** screening the coordination and cooperation between rescue personnel involved in Main Events. Much concern is putting on cooperation and contribution between Barents Region nations on each level of leading construction. It is also in focus how to handle consequences of the scenario over time.

Communication

: Exercise language is English. **Evaluation focus on** using English in commanding between different nations participating in exercise as far as using English between each nations own participants during rescue operations.

¹ This was a national goal of the BR15 Exercise for Finland.

² This was not tested at international level.

Cooperation

: The aim of exercise is to promote cooperation between authorities in the Barents Region as well as at national and international level. Much emphasis shall be put on the cooperation between authorities and volunteer organizations.

Preparedness and emergency response

: The exercise is intended to improve preparedness and co-operational effectiveness of civil protection and joint emergency response as well as developing responder's network. **Evaluation focus on** emergency response upon request in international and national level.

Host Nation Support

: The aim is to use and test the new Finnish Host Nation Support Guidance during Exercise. **Evaluation focus on** border-crossing procedures, procedures of the receiving organizations for the international teams as far as the implementation of response teams in the emergency area.

Media

: The aim of the communication is to inform about the exercise itself but also in general about the cooperation between rescue authorities in the Barents countries. Information shall be delivered through social media there will be an online press room with practical and background information, press releases and photos. Exercise **evaluation focus on** media procedures during the exercise how they meet the needs of press and the exercise public.

TETRA-radio communication

: The Finnish TETRA radio network shall be used during Field Training Exercise for commanding purposes, part of which is to assess radio network to gather information for situation picture. **Evaluation focus on** the common usefulness of radio network, its speech group architecture and cooperation between rescue authorities and voluntary organizations. Great importance is put on cooperation and contribution between Barents Region countries.

Medical evacuation

: The main issues in major incident within Barents Region are alarming the right rescue personnel depending on incident, response time, cold protection, triage and casualties transportation to hospitals. **Evaluation focus on** procedures during rescue operations, assessment on cold prevention and casualties transport chain from accident scene to triage and treatment places and further to hospitals.

The chapters of the present report discussing the above themes present the key findings on the themes. The main events of the BR15 Exercise are not analysed in their own chapters, but observations on the main events are mentioned when relevant for the scope of the evaluation and recommendations to be made for future activities.

Recommendations and ideas for future Barents Rescue exercises and other activities related to the Barents Agreement are discussed in Chapters 4 and 5. Chapter 6.1 includes a list of key suggestions to be considered for the improvement of Barents Rescue exercise activities.

To highlight the key findings, the evaluation report includes charts based on the evaluation material, pictures of the exercise activities, and evaluation measures.

The purpose of the evaluation is to show where the crucial need for development lies. The present report makes reference to improvements suggested in the evaluation of the Barents Rescue 2013 Exercise in points where a change or similarity was recorded. The aim is to show the improvements made in the past two years, and support the findings of the BR15 evaluation so that they can be considered in the forthcoming two years and included, as appropriate, as evaluation themes for the Barents Rescue 2017 Exercise. This will ensure continuity of the efforts to enhance joint actions under Barents Rescue exercises and the Barents Agreement.

Future development and success of joint rescue operations is based on the shared interest of all parties to the Barents Agreement in joint activities. The Barents Rescue 2017 Exercise in Russia will be the next occasion for evaluating whether the good practices and lessons learnt from the previous exercises, especially the BR15 Exercise, have been implemented and wanted progress made.

2.2. Data collection

Laurea University of Applied Sciences conducted the evaluation with an evaluator team consisting of civil protection professionals from Finland, Norway, Russia and Sweden. Laurea's students finalising their studies in a master's level security degree programme also acted as evaluators as part of the evaluation team of over thirty members. The evaluators were given guidance on the evaluator's tasks. Their professional background, differing from that of emergency medical technicians and civil protection experts, for example, supported their ability to act as evaluators.

The evaluation questions were entered into an electronic questionnaire platform which Laurea had tailored for civil protection evaluations. The function of this evaluation tool was to expedite the process of collecting and processing data by making it easier and faster to give feedback to the participants during the exercise. This is a remarkable improvement compared to the traditional procedure based on paper questionnaires. The electronic evaluation tool has been of fundamental assistance in the compilation of the evaluation report. It also contributes to more concrete improvement in rescue services. Therefore, it is recommended that a similar system should be adopted as a standard in the evaluation of Barents Rescue exercises in the future.



Barents Rescue 2015 Exercise, evaluation - Kittilä 30 September–1 October 2015.

Laurea's evaluators used an electronic evaluation tool to record the progress of the exercise events. The data was used for the evaluation report.

In spite of the fact that the evaluation tool, evaluation questions and 29 evaluation targets were carefully selected during the four days on the spot (during ALARMEX on 23 September, the training day on 28 September and the exercise between 29 September and 1 October), the evaluators still found it necessary to interview the exercise participants, especially the key actors. Therefore, many actors were interviewed after the exercise to gain more information on the success of the exercise and to get more precise answers to the evaluation questions. Thus, the evaluation data consists of both interviews and observations.

Although the evaluation material is comprehensive and was collected with actors familiar with the field, it does not rule out the possibility of some misunderstandings during the evaluation. Hence the results of the evaluation may differ from the observations of other people involved in the activities on the site. With this in mind, and as there is always room for competing opinions and different perspectives, the findings presented in this evaluation report are tentative and open for discussion.

3. EVALUATION

3.1. Leadership

*The commanding of rescue operation during Field Training Exercise shall follow the procedures of each rescue authority as well as volunteer organization. **Evaluation focus on screening the coordination and cooperation between rescue personnel involved in Main Events. Much concern is putting on cooperation and contribution***

between Barents Region nations on each level of leading construction. It is also in focus how to handle consequences of the scenario over time.

In general, the expectations related to leadership were reached, even though improvement needs were recorded for some main events.

Leadership and cooperation were recorded to be of high quality especially among Local Emergency Management Authorities (LEMA), largely because the chain of command was clear to all the authorities and volunteer organisations. This contributed to the timely and accurate work of everyone in the Finnish leadership. The fact that the head of the LEMA stood out clearly and that there was a deputy officer providing assistance for the leadership was observed to carry over to the accuracy of coordination. Successful cooperation and coordination was supported by regular briefings on the ongoing situation to provide a clear and shared understanding of the needed actions. It is thus recommended for future exercises that special attention should be paid to regular information sharing on the activities in the English language. This enables the liaison officers with the LEMA representing international respond teams to follow the decision making and give recommendations about the capability and capacity of their resources.

To give LEMA liaison officers a clear overview of the coordination as a basis for strategic recommendations, the projected log and state boards should be in the English language.

This is supported by the fact that in cases where communication and information sharing between the LEMA and actors on site faced lack of information sharing or delays regarding commands, the teams had to wait for assignments. This led to noticeable delays in action. However, such situations were quickly solved through joint briefings and double-checks of ongoing actions. These measures were seen to improve the communication between the LEMA, liaison officers and on-site actors.



Barents Rescue 2015 Exercise, LEMA - Kittilä 30 September–1 October 2015.

The LEMA led the work of 15 organisations and their teams consisting of four nationalities.

The LEMA displayed the accuracy needed in the coordination of actors and actions by deciding to cease the ME 4B in the middle of the exercise when a Swedish mountain rescue unit was sent to the mountain too early. This made the work of SAR dogs extremely challenging. The same accuracy was followed by the on-site Directing Staff (DISTAFF) when delivering the LEMA's decision immediately to the head of the exercise. These actions underline the effective cooperation and coordination between the actors leading the exercise. The importance of cooperation and communication was highlighted at the beginning of the exercise (ME 4B) when the participants were given an in-depth briefing on expectations for their work and the course of the exercise. As a result of the decision to cease the exercise, it was concluded that the activities did not proceed according to the scenario plan. This means that stronger coordination is needed between actors on the site and the leaders of the exercise. The analysis of the situation shows that the fact that the actions were not in line with the scenario resulted from the lack of accuracy of the situational awareness provided by the chain of command.

The ME 5A exercise was also ceased at an early stage, because only one out of three teams got instructions in such a manner that they could proceed as planned. This shows that there were weaknesses in the flow of communication and coordination in the chain of command. It was also recorded that field actors' actions were not in line with the instructions given on the training day, and this influenced the decision to cease the ME 5A. On the one hand, the decision to cease the ME 5A shows that decision making in the chain of command was timely and worked out well because problems were noticed quickly and decisions on the next steps made. On the other hand, team leaders must have faced some challenges in explaining and indicating the required actions to rescue actors in the field at the beginning of the exercise.

In the ME 5A exercise, the second start paid itself back, and the exercise was conducted in time without a need to cease it again. Although it could have been conducted successfully with just one try, restarting it improved coordination and cooperation between different actors, and the chain of command eventually worked out as planned. This is a good example of the learning experience that such exercises can provide. In addition, training together being one of the main goals of Barents Rescue exercises, the exercise seems to have fulfilled the expectations. Furthermore, it is recommended that the exercises should leave some room for possible errors in actions to provide learning experiences.

In general it can be concluded that the on-site leadership commanding and coordinating the activities reached its goals. It gave instructions and guidance on time and clearly to guarantee coordination and cooperation. It also explained emergency instructions precisely. In the ME 5, the on-site DISTAFF did not even have to give instructions in the final phase because the actors identified the need for action on their own and spontaneously coordinated actions together.

The on-site DISTAFF for the ME 5 followed spontaneous actions closely. They observed the need to direct the exercise once and gave instructions to ensure the planned progress of the exercise. However, in the ME 2A, the chain of command faced challenges to coordinate the activities when the exercise was delayed. This is seen to result from the unsuitable location of the leaders and hence the lack of information on the ongoing activities that was necessary to support coordination and cooperation. Nevertheless, after the delays the exercise continued according to the planned schedule.

The chain of command for the ME 2B also lacked situational awareness to coordinate the actors because the leaders were themselves located in their own vehicle. The location and other challenges in coordination resulted in the lack of cooperation. This is underlined by the fact that rescue units were not used for the tasks assigned to them, and two out of three units were mostly without assignment. With this in mind, in future exercises attention should be paid to the location of leaders.

Cooperation seemed to be especially challenging in the ME 2A. The briefing was perceived as incomplete, which resulted in a situation where “no one really knew what, where, or when”. It was also argued that this had an effect to the cooperation and coordination between rescue and medical actors.

Another challenge to cooperation was that a lot of information was given only in Finnish, and from time to time foreign delegations needed more accurate information on coordination and cooperation.

It was also observed that cooperation between volunteer organisations was challenging in some cases where, for example, the leadership position and responsibilities were not fully clear. However, this encourages volunteer organisations to continue to participate in joint exercises. This exercise provided them with a valuable opportunity to learn and improve activities not only with public authorities but also with other volunteer organisations. Their good performance in providing support and carrying out cooperation also underlines the importance of the exercise – such exercises are valuable opportunities for training in joint activities.

Coordination and leadership in the command centre of the Voluntary Rescue Services were recorded to be of high quality. The leader responded to the situations on time and accurately, and the actions were carried out following the chain of command. The fact that those responsible of the leadership gave regular briefings on the ongoing situation and forthcoming activities contributed to the success of the activities and coordination and cooperation between actors.

National and international actors gave opposite feedback especially on the actions of the DISTAFF, which indicates some challenges in the cooperation. According to national actors, the leadership reached its goals because the leaders could always be reached via radio and their non-stop presence at site was thus considered unnecessary. However, international actors considered that the lack of presence, especially the lack of regular situational awareness briefings, hindered communication. International teams also missed the short briefings on the expected progress held at the beginning of all exercises. The aim of the briefings was to support and increase cooperation between members in the DISTAFF. Because of little information sharing, international DISTAFF members considered that no accurate overview of scenarios was given at any stage and this made the cooperation challenging.

To summarise, the Finnish and the international teams had different working methods, not only in the DISTAFF but also in the field, which presented challenges for cooperation. International exercises provide an excellent opportunity to learn how different methods work together and how the cooperation can be improved in the future. The BR15 Exercise provide valuable opportunities for learning different national working methods promoting enhanced cooperation in the future.

In the majority of the exercise events, national and international actors were recorded to work well together; especially air craft support was valuable. International actors mainly provided good support to rescue activities. This shows that the implementation of response teams in the emergency area was successful. However, it was considered that in some events too many actors were requested, and many of

them were not able to participate in the exercise events to as great an extent as they wished and could have been able to participate. It is recommended that the size and number of participants in future exercises should be considered so that cooperation between national and international actors can be guaranteed and optimal results gained from the exercise.



Suggestions for improvement

- ▶ Regular briefings on the situation and forthcoming activities should be held to support joint activities
- ▶ Leaders on site should be visible and easy to recognize
- ▶ Leaders should be used among the actors
- ▶ English should be used when foreign liaison officers are present at the command centre
- ▶ Decisions to cease and restart the exercise event should provide a good learning experience
- ▶ The size of exercise events should be planned to ensure that all actors have enough tasks and training

3.2. Communication

Exercise language is English. Evaluation focus on using English in commanding between different nations participating in exercise as far as using English between each nations own participants during rescue operations.

It was observed that during the exercise the actors preferred their own national languages to English. Although it is logical that people speak their mother tongue when working with their fellow countrymen,

this prevents them from gaining practice in working in English. In some cases, however, actors on the site encouraged their countrymen to speak English when international actors were present.

In some exercise events it was recorded that poor skills in communicating in English or communication only in one's mother tongue posed significant challenges to communication and cooperation, which prevented the achievement of the set goals.

It was also stated that too much information was given only in Finnish, which made it difficult for foreign actors to receive information in general. In addition, English instructions to conduct activities were found to lack accuracy and be incomplete, resulting to situations where "no one really knew what, where or when". This was seen to hinder cooperation between all actors on the site.

As Barents Rescue exercises aim to make all the actors involved to work together, the use of shared language should be encouraged. The use of English in the exercises supports international cooperation between parties to the Barents Agreement and provides efficient practice for possible cooperation in real-life rescue actions. It is defined in Barents Rescue exercise official documents, which provide basic guidance on how to use English and mother tongues in the exercises. According to the Joint Manual 3.8, English is the working language for Barents Rescue exercises.

Suggestions for improvement

- ▶ **At least the basic commands should be given in English**
- ▶ **English should remain the official language of the exercise**



Barents Rescue 2015 Exercise, Medical evacuation - Kittilä 30 September 2015.

Aslak, the Arctic Rescue Helicopter of the Arctic Rescue Helicopter Foundation, participated in the Barents Rescue 2015 Exercise.

3.3. Cooperation

*The aim of exercise is to promote **cooperation between authorities** in the Barents Region as well as at **national and international level**. Much emphasize shall be put on the cooperation between **authorities** and **volunteer organizations**.*

Cooperation between national and international authorities and volunteers and other actors was reported to work well in general. It was seen highly important to have an opportunity to train how to cooperate in full-scale accidents. This supports cooperation between different actors on a larger scale and helps to identify needs for improvement, such as new recommendations or revision of agreements. This is also seen to enhance cooperation in the future while getting familiar with the methods of operation of other actors and the provision of mutual assistance.

It was also recorded that the exercise provided valuable experiences in operational rescue methods and information sharing. In addition, private sector actors were pleased to participate in the exercise because they could train rescue activities and test new equipment not only among their own staff but also with public authorities. This underlines the importance of Barents Rescue exercises in terms of providing various actors with training in a variety of actors, activities and tools.

Cooperation at the LEMA was recorded to be fluent, even if there were some language challenges with representatives coming from 15 organisations and four different nationalities working together. Exercise participants were also pleased with the cooperation with the LEMA. The high quality of cooperation is seen to result from the high expertise of all actors and from clear leadership position at the LEMA. These elements were already recorded during the table top exercise at the LEMA between the national and international teams representing public authorities and volunteer organisations.

In the table top exercise, communication measures were well taken into account. This enabled all actors to have a common understanding of the ongoing situation, which was important because international teams did not have their own role players on the site to give information on ongoing activities. In this sense cooperation between different nationalities worked out well, and among international authorities the Finnish and Swedish Police were especially pleased with working together. Smooth communication flow was recorded as a key to fluent cooperation, and it should also be taken into account in future exercises.

During the exercise week it was noticed at the LEMA that the more work was done together the smoother the cooperation became. This was also observed for exercise events that were repeated – although the management of international resources required additional efforts, cooperation between different actors worked out well. This underlines the importance of the exercise; cooperation can only be enhanced by working together so that international and national actors can become more familiar with each other's working methods. It was also considered that the chain of events, with improved cooperation, demonstrated the importance of practising joint actions. It was observed that timely information sharing on forthcoming actions improved cooperation; it is hence recommended that it should be taken into account in the next exercises.

Cooperation both between international and national authorities and with volunteer organisations was primarily recorded to work well, and all actors were in general satisfied with it. Additional professional

support from volunteer organisations was valuable for the authorities, and the local knowledge also provided welcome additional support. This should be noted in the plans for forthcoming Barents Rescue exercises.

Cooperation between volunteer organisations also provided valuable training on supportive cooperation, creating a good basis for cooperation in the future. However, some challenges for the cooperation were observed. This speaks in favour of training possibilities between volunteer organisations. Nevertheless, the organisations praised the support that they received from each other.

During the Barents Rescue exercise, especially in the ME 4A, the authorities and volunteers – rescue and SAR actors, in particular, and police officers and medical workers as well as international actors – were satisfied with the joint activities, because the actors provided support for rescue activities as requested. However, the ceasing of the exercise indicated that there were some challenges in the cooperation between different actors and the leadership. After that the exercise was running well and on time, which shows that communication between actors became more accurate. During the ME 4B, cooperation between all actors was registered to proceed as expected. Especially fire and water rescue teams as well as SAR dogs were satisfied with the joint activities.

However, cooperation with volunteers, such as students, was recorded to face some minor challenges related to the planning of the exercise. In some cases, the tasks planned for some volunteers changed unexpectedly to tasks that did not correspond to their skills, which led to a waste of resources. With more thorough planning of the role of volunteers, especially students, the exercise can benefit a larger number of specialists on the sites.

In the evacuation, hospital cooperation between international actors and different Finnish organisations faced no challenges. The evaluators felt that the common professional background between the actors had a key role to play in the success of the cooperation. The roles of the staff were also clear and all were experts in their work, which undoubtedly contributed to professional cooperation.

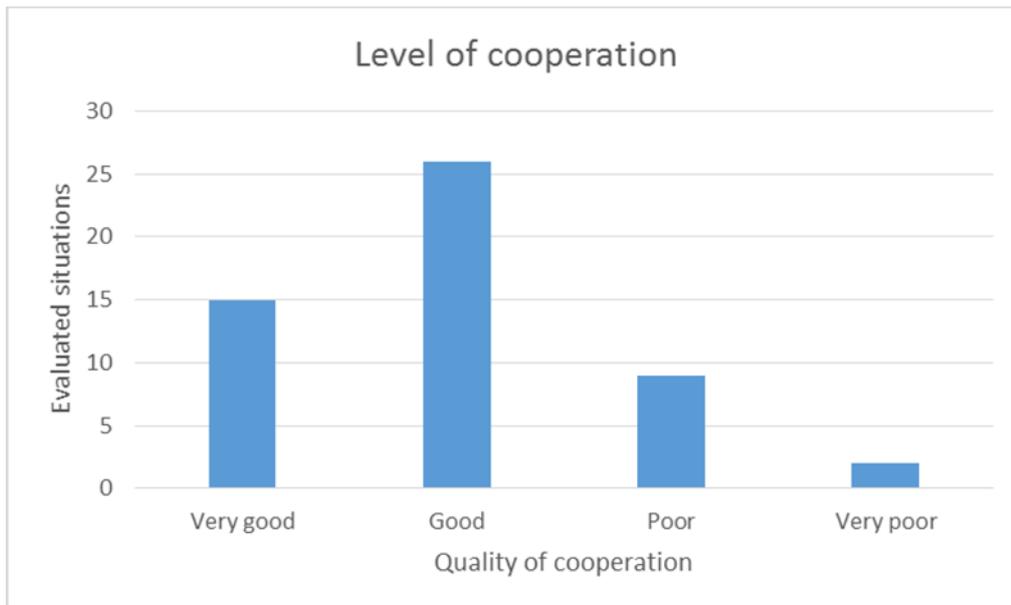
An unnecessary challenge for the cooperation was caused by facilities, especially too small rooms or lack of suitable space to act or to wait forthcoming actions on site. Eventually this resulted in unwanted lack of information sharing and challenges in interaction between actors. The room for the DISTAFF, for example, was too small for joining the inject cell joining with other DISTAFF actors. International and national actors at the DISTAFF also shared only little information together because of the lack of staff procedures and briefings on ongoing situations, or because the shape of the room was such that each national team had to work separately from each other.

Small room size also made the work challenging during the table top exercise; it was difficult to identify different actors in a small room. Furthermore, according to psychosocial support (PSS) actors, the small size of the room prevented information sharing at the LEMA, as there simply was no space for comprehensive situational awareness sharing. It is recommended that in future exercises attention should be paid to the functioning of working space and premises to ensure that they do not prevent information sharing and joint activities.

It was recorded that cooperation between the participants during the training day was not very extensive. This is seen to result from passive training methods where the majority of training sessions concentrated on giving background information and lectures rather than actual training in concrete actions. Some teams

showed concrete actions, but the participants could not practise their skills on site except for SAR dog team members, who had the possibility to test flying with dogs in a helicopter. They considered that it was very valuable.

It is recommended that during the training day all exercise participants should be divided into event-based working groups so that they can discuss together their expectations on the upcoming exercise, and their roles and joint activities in the exercise. This could strengthen cooperation between national and international authorities and volunteer organisations before the exercise and encourage all actors to use English while working together.



Suggestions for improvement

- ▶ **To enhance cooperation, different nationalities could form a mixed unit to act as a team on site**
- ▶ **Every scenario should be planned with the aim of enhancing cooperation**
- ▶ **Volunteer organisations should be encouraged to participate in the exercise because they can provide support for the authorities**
- ▶ **Assistance from local actors should be recognised due to their expertise to act in the region and potential to provide support**
- ▶ **Barents Rescue exercises aim to increase cooperability in the Barents Region by enhancing cooperation between national and international authorities and volunteer organisations at different organisational levels, and this should be emphasised in the exercises**
- ▶ **Barents Rescue exercises stress the unique nature of rescue activities in the north and provide possibilities for training in the field – the unique nature should be taken into account in the exercise scenarios**

- ▶ **The Barents Rescue Manual or general documents on main activities should be revised further to clarify the goals of cooperation**
- ▶ **Barents Rescue exercise participants should be encouraged to use English during the exercise to contribute to high-quality cooperation (according to the Joint Manual 3.8, English is the working language for Barents Rescue exercises)**

3.4. Preparedness and emergency response

*The exercise is intended to improve preparedness and co-operational effectiveness of civil protection and joint emergency response as well as developing responder's network. **Evaluation focus on emergency response upon request in international and national level.***

The scope of the evaluation being to “focus on emergency response upon request in international and national level“, the observations below mainly present findings on the ALARMEX. Overall it was stated especially among Finnish participants that the ALARMEX provided an important opportunity to train the functioning of the national alarm system. It showed that the alarm procedure has some weaknesses; for example, it is not fully clear how to request third sector actors to provide assistance on a large scale. In Finland, the authorities decide which volunteer organisations are requested to provide assistance; the organisations do not sign up for tasks independently. This issue will be investigated in Finland, bearing in mind the role of Barents Rescue exercises in developing the mechanism of emergency response. The same observation of the role of the Barents Rescue ALARMEX at national level was made during the Barents Rescue 2013 Exercise in Norway.

The first part of the ALARMEX focusing on the early warning system was held on 22 September. This part of the exercise faced some difficulties. It took, for example, a few hours before the emergency response centre in Oulu received the information that the request for assistance had reached its destination. The second day of the ALARMEX went off much better. It is therefore recommended for future exercises that the same scenario should be trained twice.

The ALARMEX on 23 September started at 08.00 at the emergency response centre in Oulu, with two duty officers designated for the exercise. At the beginning of the exercise, the duty officers started to send requests for assistance via fax and e-mail. Fax is the official and e-mail the unofficial way of requesting assistance. The emergency response centre IT system (ERC IT system) was also used to send SMS and TETRA radio network messages to Finnish authorities and to report that a major accident had happened and more information would be found in the e-mail.

Overall the communication between countries worked as expected, although using fax as a means of communication proved to be problematic. The use of fax was also problematic in the ALARMEX in the Barents Rescue 2013 Exercise.

In the 2015 ALARMEX, there were practical difficulties in using fax. A fax from the Oulu Emergency Response Centre, for example, never reached Russian authorities. However, all the countries and relevant organizations and actors received the request for assistance within 15 minutes of the alarm. For test purposes, a fax message to Russia was sent successfully via the emergency response centre in Vaasa.

The SMS and Virve messages reached the Finnish authorities and actors within a few minutes of sending. The e-mails also reached everybody, and the Oulu Emergency Response Centre started to receive confirmations. Helsinki University Hospital also confirmed the receipt of the major accident message by phone.

During the day (23 September), Sweden and Norway asked for more details about the nature of assistance requested by Finland. The questions were directed to the Finnish Point of Contact (POC), who forwarded them to the rescue authority in charge. The answers were given via the Finnish POC or directly to the country requesting information. The information to and from the Finnish POC was delivered without delay. However, it was observed that representatives of different nationalities had a different understanding of the tasks of the POC, which led to misunderstandings between international participants. The position and core tasks of the POC need to be clarified for the next Barents Rescue exercise. In Finland, it is the task of the LEMA to maintain a joint situation report and inform the participants, whereas the POC assists the LEMA.

All requested countries offered assistance to Finland by 17.30. This indicates that the procedures for requesting assistance from national and international actors worked well. However, there is still room for improvement.

It was recorded that it is important to use at least two different means of communication to request assistance and to confirm the receipt of the request by phone. In the Barents Rescue 2015 Exercise, this could have prevented the fact that the municipality of Kittilä never received any alarm message. With this in mind, it is recommended for future exercises that since the information system at the emergency response centre allows the user to create contact groups consisting of all necessary organisations and actors, these groups should be created and used to shorten the time needed to send out requests for assistance. In addition, Helsinki University Hospital suggested that the organisations should have an organisational e-mail account for messages reporting disasters; It is important that the e-mails are not sent to individuals so that the personnel on duty can access the messages 24/7. In general, it can be stated that the minor difficulties bring out the need for such alarm exercises. They provide good practice for personnel and a possibility to test communication systems and other equipment.

Even though the information delivery was primarily conducted very accurately, the official contact point of the Finnish Customs never received information on forthcoming activities at the border between Finland and Russia. The information was delivered to the POC via unofficial channels. Therefore, it is recommended that HNS guidelines and actions based on them should be part of future exercises and their evaluation.

As in the ALARMEX, cooperation on emergency response between the authorities and volunteers during the exercise days was recorded to be of high quality, although there were some delays in requesting and eventually sending actors to their tasks. It can be concluded that the exercise provides valuable opportunities for training and testing mutual assistance and joint activities. Because these issues still present some challenges, they could be themes of future training.

Suggestions for improvement

- ▶ **Fax could be replaced by e-mail or SMS, with confirmation on reception**
- ▶ **Confirmation of receiving the alarm should be made through several channels, not by e-mail or SMS only**

- ▶ Ready-to-use e-mail forms and contact groups should be created to speed up the alarm procedure and added as appendices to the Barents Rescue Exercise Manual
- ▶ Organisations should have an e-mail account for emergency response communication – to ensure 24/7 preparedness, no e-mails should be sent to or from personal e-mail accounts. The e-mail accounts of the organisations should be monitored 24/7.
- ▶ The position and core tasks of the national POC must be clarified and agreed for all international exercise participants to avoid misunderstandings and misleading expectations
- ▶ The national POC should be left aside at some point when the organisations discuss emergency response activities and plans



Barents Rescue 2015 Exercise, main event 5A landslide - Kittilä 30 September 2015.

Kiruna Räddningstjänsten taking care of a patient during the landslide accident.

3.5. Host Nation Support

The aim is to use and test the new Finnish Host Nation Support Guidance during Exercise. Evaluation focus on border-crossing procedures, procedures of the receiving organizations for the international teams as far as the implementation of response teams in the emergency area.

Host Nation Support (HNS) was evaluated at different stages of the Barents Rescue exercise, and information on the theme is primarily presented in Chapters 2 and 4 of the present evaluation report. Border crossing of international actors is strongly connected to HNS, and the key observations about border crossing procedures are described below.

One of the main goals of the Barents Rescue 2015 exercise was to test the new Host Nation Support instructions. They were recorded to function well, and participants were pleased to have the opportunity to test them in a large-scale international exercise.

According to international actors, border crossing to Finland went fast and according to normal procedures. The need for an interpreter was however observed as in earlier Barents Rescue exercises. On arrival of some delegations, there was no customs service present.

Border crossing procedures must be clarified for response teams passing a country en route to the destination country. It must also be decided whether notifying the customs is the responsibility of HNS. Correct customs forms must also be distributed.

Border crossing measures related to HNS procedures were conducted without problems. Nonetheless, it was recorded that the actions did not fully follow the procedures stated in the HNS guidance at all border crossing points. Information on the HNS request never reached the Finnish customs officer named as the contact point in the case of alarm, and the Finnish Customs at the border received the information on forthcoming activities through unofficial channels. The same was recorded for the delivery of the equipment lists for arrivals. This explains the fact that there were some delays in border crossing on the other side of the Finnish border, which delayed the arrival of the teams. Therefore, it is recommended that the implementation of HNS procedures should also be tested in future Barents Rescue exercises.

After border crossing, information on the next steps and the location of the exercise was provided accurately. However, all the needed equipment was not delivered, which presented some challenges to cooperation during the exercise. There were also some delays in border crossing on the other side of the Finnish border. For this reason, it is suggested that HNS measures related to border crossing should be followed up in future exercises.

Suggestions for improvement

- ▶ **Testing the new national HNS guidelines should be continued to improve the procedures**
- ▶ **Border crossing procedures and practicalities should still be trained to guarantee fast border crossing when both leaving and entering a country**
- ▶ **Border crossing procedures must be clarified for response teams passing a country to the destination country. It must be decided whether notifying the customs is the responsibility of HNS. Correct customs forms must also be distributed**

3.6. Media

The aim of the communication is to inform about the exercise itself but also in general about the cooperation between rescue authorities in the Barents countries. Information shall be delivered through social media there will

*be an online press room with practical and background information, press releases and photos. **Exercise evaluation focus on media procedures during the exercise how they meet the needs of press and the exercise public.***

Interaction with media was well taken into consideration in the exercise, and the media play cell clearly contributed to this. It is recommended that media play should also be part of the future exercises. The media play trained the participants in interaction with the media well. It emphasized the need to deliver accurate and timely information to the public via different channels in order to provide reliable news on the ongoing situation and the authorities' activities.

The press conferences arranged by the LEMA were well scheduled and provided accurate information. Press releases were also issued to provide updates on different cases and actions. This shows that the LEMA took charge of information flow, and that contacts with the media were well taken into consideration and promoted smooth cooperation in information sharing. The same was recorded for contacts between psychosocial support workers and the media. However, there could have been more fact-based communication with the media to guarantee the provision of comprehensive situational awareness of the cases to the public via the media.

The unofficial information sharing in social media was very active. Although the LEMA tried to update the news feed on time, in some cases the latest news was released on Twitter before the authorities. This reflects reality, and hence the exercise fulfilled the need for training on the issue.

The importance of the involvement of social media in the exercise is also emphasised by the fact that by following social media the DISTAFF gained more information on ongoing events than by just following press releases and official information sharing channels.

The DISTAFF also benefited from information gathering and live stream broadcasts on rescue activities on sites provided by the Finnish Red Cross via a quadcopter. This novel way of sharing information could be also considered to be used in future exercises especially for LEMA because live stream videos provide additional information on ongoing situations and hence support decision making and information sharing for all actors, including the media.

Information sharing on ongoing situations in Finnish and English was of high quality, but no news was provided in any other languages. In future exercises, provision of information in other languages could be considered in order to guarantee accurate official news feed on a larger scale, especially on social media.

Suggestions for improvement

- ▶ **A media play is recommended to be part of exercises to support the training on how to deal with the media, including social media and it should be organised in English**
- ▶ **A media module should be part of scenarios**
- ▶ **Exercises could include training on how to use social media in a more comprehensive manner to deliver information**
- ▶ **Exercises could include training on providing official information in the media in other languages besides English**

- ▶ **Live-stream broadcasts on the site could be provided for LEMA**
- ▶ **Exercise visitors could act as press role players in media conferences to provide the authorities with more training on press conferences and the visitors with accurate information on the ongoing situation**

3.7. TETRA Radio Network Communication

*The Finnish TETRA radio network shall be used during Field Training Exercise for commanding purposes, part of which is to assess radio network to gather information for situation picture. **Evaluation focus on the common usefulness of radio network, its speech group architecture and cooperation between rescue authorities and voluntary organizations.** Great importance is put on **cooperation and contribution between Barents Region countries.***

The TETRA radio network demonstrated its usefulness during the whole exercise. It worked well and supported the cooperation strongly. Only in few cases problems with mobile phones in the reception were recorded.

The TETRA radio network was used in the ALARMEX and the results were good – messages were easy to deliver and they reached the actors. Good results were also recorded in the table top exercise, although with only a few players and TETRA radios involved, which is why the total load of the TETRA network was not achieved. TETRA was however well tested during the Barents Rescue exercise's main events.

In general the TETRA radio network coverage was good and communication via TETRA was accurate. There were some difficulties in finding the right TETRA radio frequency in a few cases, but apart from that the use of the TETRA radio network was recorded to support communication.

The TETRA radio network also worked well in simultaneous exercise events where it was challenging to follow information sharing and communication flow. The importance of information sharing via TETRA was especially underlined by the national DISTAFF, who considered that without their own TETRA radios it would have been challenging or even impossible to communicate and gain coherent situational awareness. This underlines the usefulness of the TETRA radio network and the need to provide international actors with access to a similar radio network during the exercises.

Even during the most hectic times of the exercise, the TETRA radio network supported well the communication of both national and international actors when there was a failure to deliver enough radios for international actors. Sweden (Rakel) and Norway (Nødnett) have a roaming service in their new communications systems. It is an excellent basis for digital communication systems used in international contexts which would also enable each delegation to use their own radios. However, communication in the TETRA radio network mainly took place in Finnish. If the communication was conducted fully in English, it would support all exercise participants.

It was recorded that the TETRA radio network provided a common platform for information sharing that supported the work of the DISTAFF and the authorities and volunteer actors on site. The use of the VIRVE network was recorded to be very valuable especially among some authorities, such as psychosocial support actors, for possible real-life cases in the future.

The TETRA radio network was also important for the successful work in the field hospital. The person who was responsible for triage had access to the TETRA radio network. This person relayed the message regarding arriving patients to the rest of the staff. Overall this arrangement supported the work at the evacuation hospital. Inside the evacuation hospital, the participants' own handheld radios were used to organise the work. It is difficult to tell whether the use of two different radio systems simultaneously is recommended. On the one hand it can create gaps in information sharing, but on the other hand it also helps the staff to get unnecessary information on other activities under discussion in the TETRA radio network, which helps them to concentrate only on their own activities.

The Norwegian Civil Defence used their own handheld radios for internal communication and supported other personnel with radios. Repeaters were mounted to carry communication on two different frequencies from the incident areas to the liaison officers at the LEMA.

Suggestions for improvement

- ▶ **Radio communication should take place in English to enable participants from all countries to follow the information**
- ▶ **The host nation should also provide radios for participants from assisting countries to facilitate cooperation**
- ▶ **Assisting countries' communications equipment must be used in addition to the host country's communication systems**

3.8. Medical evacuation

*The main issues in major incident within Barents Region are alarming the right rescue personnel depending on incident, response time, cold protection, triage and casualties transportation to hospitals. **Evaluation focus on procedures during rescue operations, assessment on cold prevention and casualties transport chain from accident scene to triage and treatment places and further to hospitals.***

The results of the evaluation of medical evacuation and related procedures vary depending on the exercise event.

Triage measures were primarily reportedly to be carried out with accuracy. In some exercise events the cooperation between rescue and medical actors was timely and triage was well conducted: victims were quickly analysed and taken care of according to the needed procedures. However, for some events the opposite was observed.

In the evacuation hospital, triage procedures were handled quickly, which resulted in a good patient flow. It was only when plenty of patients were brought to the field hospital at the same time that there could have been more staff to help with the work.

Transport of patients from accident sites to medical care worked without delays and in good cooperation between international actors. There were a few cases where helicopter transportation was delayed due to delays in patient transportation on the site. Nevertheless, cooperation between actors on the site and the rescue helicopter primarily proceeded as expected.

However, it was recorded that informing hospitals on the amount and status of patients on the site who needed hospital care presented some challenges. Firstly, it was not fully clear for the Finnish exercise participants who was in charge of the provision of information on patients who needed hospital care. Another challenge was related to an unclear chain of command for information delivery in general. In conclusion, the Barents Rescue 2015 Exercise revealed that the Finnish actors followed different information sharing procedures than international actors and that there is hence a need to agree on measures to improve the cooperation.

Although the transport of patients on the site worked well, cold prevention measures were in many cases recorded to be conducted too late or carelessly. For example, some victims had to wait for blankets in the cold or their cold protection was not taken care of at all. One of the reasons for this was that the cooperation between emergency medical and rescue services seemed to lack communication in some cases. This improved, however, thanks to leadership that was abreast of the situation, which led to more accurate control of measures and better timing of the evacuation. In addition, unclear instructions on how to proceed with patients caused delays in cold protection measures and other treatment. All these challenges show that the Barents Rescue exercise provided welcome training on information sharing measures related to emergency medical care and cold prevention of patients.

It was observed that more training is needed on how to rescue trapped victims, carry patients to emergency medical care on the site and treat those who have lost their lives with utmost respect. These themes should be included as part of the forthcoming Barents Rescue exercises.



Suggestions for improvement

- ▶ **Transport chain of patients should be trained to avoid delays**
- ▶ **Cold protection of victims should be trained to avoid delays in the protection**
- ▶ **Attention should be paid to communication between hospitals and on-site medical actors**

- ▶ **Close cooperation between rescue and medical actors should be taken into account in planning the exercises to ensure that they support the cooperation**



Barents Rescue 2015 Exercise, evacuation hospital - Kittilä 30 September 2015.

Finnish Red Cross volunteers established and ran the evacuation hospital.

4. Final comments

4.1. General comments about the Barents Rescue 2015 Exercise

The following chapters present general comments about the Barents Rescue 2015 Exercise and the implementation of the Barents Agreement to be considered while planning future activities.

Views for the future and the present state of affairs - the Agreement and its functioning

The Barents Rescue Exercises and the Barents Agreement are important to both public authorities and volunteer organisations. First of all, Barents Rescue exercises are seen valuable in familiarising organisations with the Barents Agreement. Secondly, they make organisations update their contingency plans to respond to the requirements of new national and international agreements, rules and guidelines

on emergency response. This enhances preparedness for emergency response and cooperation in the Barents Region.

Furthermore, since preparations for the exercises last two years, the participating organisations have an opportunity to integrate the focus points of both the last and the forthcoming exercise into their own activities. This is expected to reduce the need to tackle the same problems year after year.

Moreover, the long preparation stage also supports the planning and development of practices and technologies shared by countries parties to the Barents Agreement. The exercises eventually serve as a testing ground for new practices and, as a result of the lessons learned, promote the development work and joint activities further. With this in mind, it is recommended that the exercises should be used to test a shared communication network between the countries.

Finally, it was recorded for the Barents Rescue 2015 Exercise that it provided valuable lessons for local actors, for example. They pointed out that the exercise enabled them to gain profound knowledge of possible actions that they may have to take due to their experience to act in the region. This shows that Barents Rescue exercises also raise the knowledge of emergency response capabilities and special skills in the Arctic region on a larger scale.

Cost-effectiveness

When evaluating the overall value of the exercise, its success should be measured not only in terms of the money invested in it but also in terms of the level of cooperation and training experience. The evaluation should also examine potential alternatives to the exercise or different approaches to collaboration in the Barents Region.

Although the training of participants during the exercise was successful, the actors made mistakes during the actual activities. However, mistakes provide valuable learning experience and encourage the actors to practise their skills. Therefore, the value of the exercise is measured in terms of the learning experiences gained and joint activities conducted. In addition, the value of the Barents Rescue exercise lies in testing and finding new solutions. The exercise provides a large-scale international setting for testing not only cooperation between the authorities and volunteer organisations and other participating actors but also new equipment, regulations and procedures, including media procedures. The Barents Rescue 2015 was recorded to provide a comprehensive setting for all these issues. Therefore, the cost-effectiveness of the exercise should be considered in relation to the possibilities it provided for hundreds of actors in a variety of issues. This underlines the importance of arranging the exercises in the future.

The Barents Rescue exercise was recorded to raise the level of cooperation in the Barents Region. This is seen as important because activities in the Arctic region are increasing and new ways to cooperate are needed. The Barents Agreement provides a solid basis for this.

Planning phase

At present, Barents Rescue exercises are extremely large-scale exercises that are planned for two years. Considering the large amount of resources devoted to the planning phase, it can be questioned whether all exercise participants were committed to the process at every stage and whether the organisations were familiar with the goals of the exercise set in the Barents Agreement. The unfortunate downside of a long planning process is that it can easily revolve around a few key players, and a number of other actors are

inactive. To avoid ineffectiveness of planning in larger groups, it was suggested that the exercise scenarios should first be drafted in a small group consisting of actors from different ministries in each country that is a party to the Barents Agreement. After that, the first draft of the scenarios would be submitted for comments to other actors involved in the Barents exercise. This would save time in the planning phase. Close cooperation between various actors in the planning phase is one of the main goals of the Barents Agreement and the Barents Rescue Exercise.

However, it is suggested that only one actor should be in charge of the planning of the exercise to ensure coherent results for the whole exercise.

The strategic goals of the exercise should be decided at an early stage. All national and international participants should be clearly informed of these goals to ensure that they understand the core of the training and what the exercise and its main events are targeted at.

Finally, it is suggested that the earlier recommendations of Barents Rescue Exercise evaluations should be implemented before the forthcoming exercise and their implementation recorded to see whether progress has been made in the key issues.

Size of the exercise and main events and their support for training and the implementation of the Barents Agreement

It can be argued that the large-scale events may not represent real-life scenarios in the best possible way, or that the exercise only provides regular training in an international context. This is not the case, of course, but there might be some truth to that.

The main principle of the Barents Agreement is to provide a country with assistance when its national emergency response resources are not sufficient or cannot reach the accident site fast enough. When it comes to the Barents Rescue 2015 Exercise, there were some reports that neither of these situations was properly exercised. In fact, it was observed that in some events there were too many participants so that some of them had to wait for their turn to act. To avoid this, the events or the whole exercise should be planned so that the host nation simply does not have enough personnel, which would force the participants to cooperate more intensively.

Taking into account the large-scale planning process that may affect the cost-effectiveness of the exercise – with long processes of scenario building and agreement on the scenarios – and the disparities between the exercise type and the response required in real-life accidents, Barents Rescue exercises could be organised in a different manner. Smaller and more frequent exercises could be a valid alternative. This would enable the planning of the exercises in smaller groups, which could encourage all organisations to take part in the planning process. Smaller exercises would also provide more opportunities to concentrate on the details and to repeat the exercised tasks. These ideas are also discussed in the Barents Joint Committee. The landslide event in this exercise was a great example of how repeated training improves quality of work. The logistical requirements for smaller exercises would also be less stringent, which would save resources and possibly enable faster arrival to the exercise site.

Smaller exercises may have some advantages over larger ones, as explained above, but they cannot promote the Barents Rescue concept in a similar manner. The Barents Rescue 2015 Exercise was well presented in the media as an international event. This cannot be achieved with a series of small exercises.

It was also stated that the participants should not know exercise activities too well beforehand to avoid the exercise becoming merely a play where everyone performs their roles and acts that are already familiar to them, as this is seen to prevent learning and training experience. This happened in a few activities, such as border crossing and guidance to helicopters. In general, exercise events could be conducted so that the actors does not constantly know how the situation is evolving and what clearly needs to be done next. This would enable the participants to have the desired real-life experience.

In conclusion, it is considered that at present the size of the exercise should not be any larger. Smaller-scale exercises would save time and costs and still support the cooperation between Finland, Sweden, Norway and Russia in emergency response. In addition, large-scale exercises present challenges in deciding the themes, such as a traffic accident or a mine accident, and the organisation of smaller or more frequent exercises could help alleviate these challenges. With this in mind, Barents Rescue exercises should be updated and smaller exercises organised in the future, while maintaining the quality and interoperability achieved during previous exercises.

Success of exercise focus points

Based on the evaluator's observations, it is safe to say that the focus points for the exercise - cooperation, leadership, media and communication - were well chosen. These issues also presented challenges in previous exercises, so it is reasonable to tackle them. This also means that since the exercise concept has remained quite similar throughout the years, further progress is expected. There are, of course, differences between the sub-fields of the exercise, but certain issues remain challenging and should be approached in a new way or given more resources.

4.2 General comments about improvements during the Barents Rescue 2015 Exercise

All main events during the Barents Rescue 2015 Exercise resulted in new recommendations on how to improve activities not only in minor issues but also on a larger scale. The recommendations are set out below.

Barents Rescue Exercise Manual

It was suggested that a manual for Barents Rescue exercises should be compiled. The purpose of the manual is to provide a shared view of the goals of the Barents Agreement to be achieved in the exercises. A rescuer's manual was also seen useful, as it would define the specific targets for the actors. It should be written in English to better familiarise the participants with the exercises. The suggested improvements are seen to contribute to ensuring that exercise activities are conducted according to commonly agreed procedures.

Barents Rescue Handbook

It was suggested that a Barents Rescue Handbook should be compiled. The handbook would describe how rescue operations are conducted in each member country and how both the host and assisting nations should interact. Each nation should describe the responsibilities and rank of officers in charge of rescue operations. The handbook should also include a list of common phrases to be used in the exercises as well as describe how briefing and familiarisation should be organised when foreign rescue units arrive to

provide assistance. The suggested improvement is seen to increase interoperability for emergency response.

Size of the exercise

Instead of large exercises, the participants wished to have smaller exercises that would be organised more frequently. It was considered that these could provide the participants with more opportunities to practise their skills. However, less complex exercises might prevent large-scale cooperation between different nationalities and actors representing different authorities and volunteer organisations during the exercise events.

Evaluation

Exercise evaluation should cover the whole process from planning to the end of the exercise. Besides revealing issues that need to be improved, the evaluation should include concrete proposals on how to improve them and how to implement the improvements. This would contribute to further development in the issues and underline the importance of the Barents Agreement and Barents Rescue exercises in promoting the needed future development.

A Barents Rescue evaluation format should be created for various reasons. Firstly, the themes selected to be evaluated in each exercise would form the basis for further development of the activities and clarify the core of the exercises. Secondly, evaluation themes would support the implementation of the proposed improvements for further development. Thirdly, a Barents Rescue evaluation format would highlight the special nature of civil protection activities in the Arctic and the Barents Region. Finally, the evaluation format would contribute to the development of evaluation tools that would help to better identify the lessons to be learned from the exercises.

Training day – working groups

The training day was recorded to provide new knowledge and opportunities to test the lessons learned from previous exercises. However, it was stated that another training day could strengthen learning and cooperation between participants. It was suggested that traditional lectures could be replaced at least partly by workshops and that training days could include meetings and workshops for each team involved in a main event where the main event participants could discuss their expectations of each other's work and go through the forthcoming scenario. On the one hand, this would support the participants' preparedness for the forthcoming exercise. On the other hand, going through forthcoming activities is considered to undermine the unique nature of the exercise. However, unlike passive lectures, workshops are seen to promote interactive learning and increase the level of learning among different actors and nationalities in the Barents Rescue exercise.

As all organizations and other actors participating in the Barents Rescue exercise do not have comprehensive knowledge of the Barents Agreement, it was suggested that the training day should include a general lecture on the Barents Agreement and its core elements for all exercise participants. This could enhance the cooperation and stress the importance of the overall framework of the exercise and joint activities.



Barents Rescue 2015 Exercise, Kittilä 30 September - 1 October 2015.

The search and rescue dogs from Finland, Sweden and Russia provided valuable support for rescue activities in the main events: bus accident, landslide, island evacuation and water SAR.

Hot wash-up and immediate feedback

After all the events, there could be a hot wash-up for all participants on the site to give them an opportunity for immediate feedback on what was done well and which challenges to tackle in the future. This would raise the level of learning from the exercise, not only for the participants themselves but also for the organisations. Hot wash-ups would also enable the evaluators to gain information on relevant findings that can be used to improve the cooperation in the future.

Volunteer support

Finnish volunteer organisations participating in the exercise underlined that they could provide the authorities with more support in rescue activities in general, and hence their participation in the Barents Rescue exercise was very useful and should be continued in the future as well.

It was suggested that volunteer support could already be utilised in the table top exercise, where volunteers could act as role players in situations where international teams could not provide their own actors on the site. On the other hand, it was considered that the DISTAFF or liaison officers, for example, could take care of international role playing and information sharing during the table top exercise to guarantee the training for international actors and to have actual practice on international emergency response cooperation.

Live video streaming on the site

Live video streaming on the exercise via quadcopters provided by the Finnish Red Cross supported the work of the DISTAFF by giving additional information on the flow of the exercises on the site. Therefore, live video streaming could be considered to be part of future exercises and to be delivered not only to the DISTAFF but also to the LEMA. It was also suggested that there could be video streaming between the LEMA and the DISTAFF to support information sharing and communication between them. In addition, live video streaming could be shown to visitors to provide them with additional information on ongoing events.

Briefing

Regular briefings were considered to be very useful for ministries, and hence they should be part of the exercise. General briefings among exercise actors were also observed to support the actions, whereas the lack of briefings led to delays in actions. Therefore, it is suggested that regular briefings should be held at every level are suggested to give an importance in the future exercises.

Responsibility for hosting visitors at site

The visitors' programme provided the visitors with an understanding of the Barents Agreement and Barents Rescue exercise. Especially the opportunity to see a variety of exercise activities on the spot was much praised by the visitors. However, the responsibility for hosting visitors on the site during the exercise should be shifted from the on-site DISTAFF to a person dedicated to the task, because this would ensure the security and flow of the exercise event. In addition, there should be a coherent plan for each exercise for guiding visitors on where to go and follow the exercise without interfering with the activities.

It was also suggested that visitors could act as role players. For example, the LEMA could hold a press conference for the visitors to provide its personnel with experience in organising an international press conference and answering visitors' questions. This would also give the visitors a greater understanding of the exercise and the work of the participants.

Crisis Centre

The Crisis Centre and psychosocial support (PSS) were seen as an important part of the Barents Rescue exercise. The actors operating the Crisis Centre were very satisfied with the training experience gained in the exercise. The experience was deemed valuable for learning more about the activities, cooperation and communication measures needed in large-scale disasters when it comes to both cooperation with other authorities and the arrangement of the actors' own activities. The actors expressed a wish that the forthcoming Barents Rescue exercise should also include cooperation, communication and information sharing at international level between other national psychosocial actors, crisis centres and competent authorities. In addition, the requirements of the PSS were recorded to be valuable for rescue operations, and they should also be part of the future exercises.

Seminar and exhibition

Both the seminar and the exhibition were well arranged. Seminar speakers were thanked for bringing crucial topical issues into discussion and providing new aspects to consider for future challenges. The exhibition was considered cosy, providing a relaxed atmosphere for valuable discussions between exhibition visitors and exhibitors.

Future research activities

Research should be seen as part of Barents Rescue exercises and the Barents Agreement. It can provide validated information to support decision making on how to proceed at national and international level as well as operating models for the development of targeted issues. Research also provides a way to raise issues for political discussion and gain visibility for them. Furthermore, analysed data and results can be used to support argumentation.

Therefore, it is recommended that research activities should be synchronised with the whole exercise process from the planning and implementation of exercise activities to the evaluation and the implementation of evaluation results. Research should be conducted at the different stages of exercise planning: first, research that studies and answers key questions during the planning and compilation stage; second, research conducted throughout the exercise process and the results of which are released at the end of the exercise; third, research on the implementation of the evaluation results. Such research could support the further development of the whole exercise process and the implementation of the Barents Agreement.

At present, one of the research themes is “Possibilities and activities to increase cooperation between third and fourth sector actors and civil protection authorities in the Arctic region”. The goal is to study volunteers’ possibilities to support public authorities in rescue activities, to create trust between the actors, to identify possible needs for joint training, and to propose how to enhance information sharing on the available and needed resources.

Another research theme is “Compilation of Barents Rescue exercise evaluation methods to estimate the success of the exercises”. The goal is to provide a baseline and a coherent database to record changes in the development of Barents Rescue exercise activities and identify the need for changes.

5. General feedback on the Barents Rescue 2015 Exercise

All exercise participants had an opportunity to answer a questionnaire during the exercise. The questionnaire was made available to all participants as a downloadable smartphone and tablet application and an Internet questionnaire.

Every participant was first informed of the application upon registration for the exercise and then by direct e-mail on 13 October. By 20 October, 20 responses had been received, which is an approximately 3% return rate. Difficulties in getting the application to work and the e-mail being sent during the autumn school holidays most likely affected the response rate negatively.

The respondents represented only two delegations. Out of the 20 respondents, 19 were from the Finnish delegation and one from a foreign delegation (due to the small sample and to protect the identity of the non-Finnish respondent, the delegation of this respondent is kept confidential).

Two main recommendations that were raised were to “Clarify the exercise objectives”, and to “Deliver more information before the exercise”.

Questions Q1 – Q8, and Q10 answers:

Q1. I was informed about the objectives of the exercise

Q2. Exercise reached its' goals

Q3. The tasks in the exercise increased my skills

Q4. I could practice my present skills in the exercise

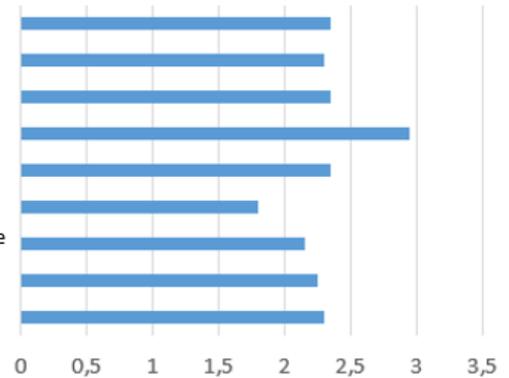
Q5. Tasks in the exercise were challenging

Q6. Activity leader gave support to reach the scenario objectives

Q7. The level of cooperation between delegations supported to conduct the exercise

Q8. The level of cooperation between agencies supported to conduct the exercise

Q10. The role players were realistic

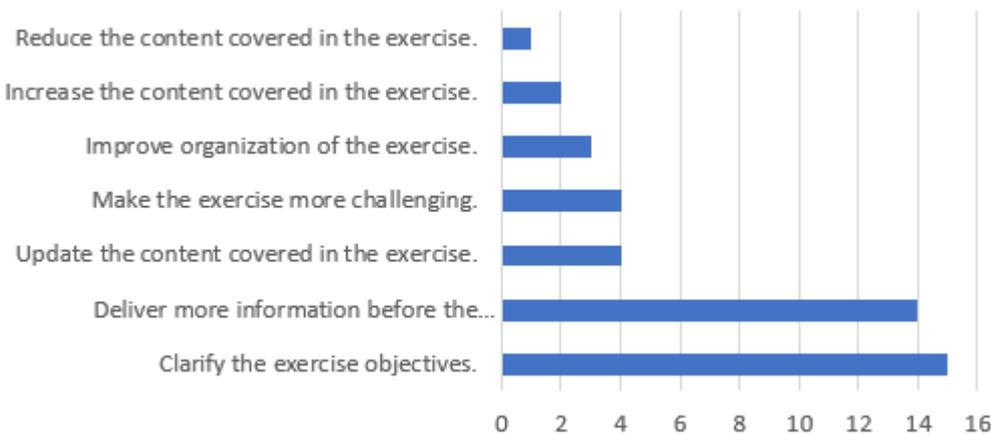


(1 = fully agree; 2 = agree; 3 = disagree; 4 = fully disagree; 0 = no opinion)

Questions 1 to 8 and question 10 were in the declarative mood. To avoid non-committal answers, the response scale had four options, option 1 being in full agreement with the question and option 4 in full disagreement. Option 0 was 'no opinion'. The following two responses stand out:

- Most of the respondents disagreed with question Q4 “I could practice my present skills in the exercise”. This clearly shows that everyone did not have tasks corresponding to their skills. This is difficult to achieve for hundreds of participants and requires careful planning in future exercises.
- Most of the respondents agreed with question Q6 “Activity leader gave support to reach the scenario objectives” were. This shows that on-site leadership was clear and active.

Question Q9 multiple choice answers:



(Scale 0–16 for number of respondents who selected the choice)

Two choices stand out. Firstly, the participants would like to have more information delivered before the exercise. Secondly, they think that the objectives for the exercise and events should be clearer. This shows that focus must be put on these two issues in the future.



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6. Annexe

6.1. List of key Suggestions for improvement

As a result of the evaluation, the following general recommendations were made for future Barents Rescue exercises:

- Strategic decisions on exercise goals should be made at an early stage and all participants should be clearly informed of the decisions
- Key participants should be engaged in exercise preparations
- Evaluation should focus on the whole process, not only on exercise days
- A Barents Rescue evaluation format could be created to provide guidance on what kind of information to collect. This would contribute to producing coherent data for analysis covering a longer period and creating a baseline for measuring Barents Rescue exercise activities and their results.
- Evaluation should include making concrete proposals for improvements and their implementation. This would help to meet the development needs observed
- Improvements to be made based on earlier exercise evaluations should be implemented during the next exercise planning phase, and follow up on progress made in the implementation should be part of the next exercise evaluation

- Hot wash-ups should be held immediately after every main event to strengthen the learning experience of exercise participants and enable them to gain immediate feedback
- Training day should include joint activities (e.g. training on-site) instead of lectures only
- Training day could include a general lecture on the Barents Agreement for all exercise participants in order to familiarize them with the Barents Agreement and underline the importance and core of the exercise
- Smaller-scale exercises (e.g. smaller but more frequent events instead of a few big ones) could be considered
- A Barents Rescue handbook that describes national codes of conduct could be compiled to increase general understanding. This would support cooperation, coherence and synergies between different actors and actions
- Clear guidance for participating organizations on their tasks and responsibilities during international exercises
- Responsibility for hosting visitors on site should be assumed by persons other than members of on-site DISTAFF or other actors
- Research activities should be synchronized with exercise preparations especially after evaluation; research results would support not only the planning of the exercise but also its implementation
- Research should be seen as a part of evaluation, providing information and operating models on how to proceed at national and international level, including possibilities to increase the involvement of third sector actors in rescue activities in the Barents Region

The Barents Rescue 2015 Exercise evaluation had eight targeted themes for which the following improvements are suggested:

- ▶ **Regular briefings on the situation and forthcoming activities should be held to support joint activities**
- ▶ **Leaders on site should be visible and easy to recognize**
- ▶ **Leaders should be used among the actors**
- ▶ **English should be used when foreign liaison officers are present at the command centre**
- ▶ **Decisions to cease and restart the exercise event should provide a good learning experience**
- ▶ **The size of exercise events should be planned to ensure that all actors have enough tasks and training**
- ▶ **At least the basic commands should be given in English**
- ▶ **English should remain the official language of the exercise**
- ▶ **To enhance cooperation, different nationalities could form a mixed unit to act as a team on site**
- ▶ **Every scenario should be planned with the aim of enhancing cooperation**
- ▶ **Volunteer organisations should be encouraged to participate in the exercise because they can provide support for the authorities**

- ▶ Assistance from local actors should be recognised due to their expertise to act in the region and potential to provide support
- ▶ Barents Rescue exercises aim to increase cooperability in the Barents Region by enhancing cooperation between national and international authorities and volunteer organisations at different organisational levels, and this should be emphasised in the exercises
- ▶ Barents Rescue exercises stress the unique nature of rescue activities in the north and provide possibilities for training in the field – the unique nature should be taken into account in the exercise scenarios
- ▶ The Barents Rescue Manual or general documents on main activities should be revised further to clarify the goals of cooperation
- ▶ Barents Rescue exercise participants should be encouraged to use English during the exercise to contribute to high-quality cooperation (according to the Joint Manual 3.8, English is the working language for Barents Rescue exercises)
- ▶ Fax could be replaced by e-mail or SMS, with confirmation on reception
- ▶ Confirmation of receiving the alarm should be made through several channels, not by e-mail or SMS only
- ▶ Ready-to-use e-mail forms and contact groups should be created to speed up the alarm procedure and added as appendices to the Barents Rescue Exercise Manual
- ▶ Organisations should have an e-mail account for emergency response communication – to ensure 24/7 preparedness, no e-mails should be sent to or from personal e-mail accounts. The e-mail accounts of the organisations should be monitored 24/7.
- ▶ The position and core tasks of the national POC must be clarified and agreed for all international exercise participants to avoid misunderstandings and misleading expectations
- ▶ The national POC should be left aside at some point when the organisations discuss emergency response activities and plans
- ▶ Testing the new national HNS guidelines should be continued to improve the procedures
- ▶ Border crossing procedures and practicalities should still be trained to guarantee fast border crossing when both leaving and entering a country
- ▶ Border crossing procedures must be clarified for response teams passing a country to the destination country. It must be decided whether notifying the customs is the responsibility of HNS. Correct customs forms must also be distributed
- ▶ A media play is recommended to be part of exercises to support the training on how to deal with the media, including social media and it should be organised in English
- ▶ A media module should be part of scenarios

- ▶ Exercises could include training on how to use social media in a more comprehensive manner to deliver information
- ▶ Exercises could include training on providing official information in the media in other languages besides English
- ▶ Live-stream broadcasts on the site could be provided for LEMA
- ▶ Exercise visitors could act as press role players in media conferences to provide the authorities with more training on press conferences and the visitors with accurate information on the ongoing situation
- ▶ Radio communication should take place in English to enable participants from all countries to follow the information
- ▶ The host nation should provide radios for participants from assisting countries to facilitate cooperation
- ▶ Assisting countries' communications equipment must be used in addition to the host country's communication systems
- ▶ Transport chain of patients should be trained to avoid delays
- ▶ Cold protection of victims should be trained to avoid delays in the protection
- ▶ Attention should be paid to communication between hospitals and on-site medical actors
- ▶ Close cooperation between rescue and medical actors should be taken into account in planning the exercises to ensure that they support the cooperation

6.2. List of abbreviations used during the exercise

AAR	After Action Review
AT	Assessment Team
BCP	Border Crossing Point
BEAC	Barents Euro Arctic Council
BoO	Base of Operations
CAB	County Administrative Board
CBRN	Chemical, Biological, Radiological and Nuclear
CCC	Crisis Co-ordination Committee
CCCG	Crisis Communication Coordination Group
CDC	Concept Development Conference
CEP	Civil Emergency Planning
CG	Command Group
CIP	Critical Infrastructure Protection
CIS	Communication and Information

	System
COP	Chief Operations
COREPER	Comité des Représentants Permanents
CPG	Core Planning Group
CPX	Command Post Exercise
DSEC	Detailed Scenario Episodes Catalogue
DISTAFF	Directing Staff
EADRCC	Euro-Atlantic Disaster Response Co-ordination Centre
EAPC	Euro-Atlantic Partnership Council
EMPT	Exercise Management Planning Team
EPG	Exercise Planning Guide
EPT	Exercise Planning Team
ETD	Estimated time of Departure
EU	European Union
EU-CCA	European Union Crisis Co- ordination Arrangement
EU-ICMA	European Union Integrated Crisis Management Arrangements
EXDIR	Exercise director
EXPI	Exercise Planning Instruction
EXSPEC	Exercise specification
FEG	Field Exercise Group
FER	Final Evaluation Report
FIR	First Impression Report
FPC	Final Planning Conference
FTX	Field Training Exercise
GO	Governmental Organizations
HAT	Head of Assessor Team
HDS	Head of Directing Staff
HNS	Host Nation Support
HQ	Headquarters
IAEA	International Atomic Energy Agency
INSARAG	International Search and Rescue Advisory Group
IO	International Organizations
IPC	Initial Planning Conference
JOPG	Joint Operational Planning Group
JRCC	Joint Rescue Coordination Center
LEL	Local Exercise Leader
LEMA	Local Emergency Management Authority
LO	Liaison Officer
ME	Main Event
MIC	Monitoring Information Centre
MPC	Main Planning Conference
NACC	The North Atlantic Cooperation Council

NGO	Non Governmental Organizations
OCE	Officer Conducting the Exercise
OSC	On-Site Commander
OSDS	On-Site Directing Staff (DISTAFF)
OSE	Officer Scheduling the Exercise
OSOCC	On-Site Operations Co-ordination Centre
PC	Press Centre
PIC	Public Information Centre/ Press and information center
POC	Point of Contact
PWG	Project Working Group
PXD	Post Exercise Discussions
RC	Rescue Commander
RDC	Reception and Departure Center
SAR	Search and Rescue
SITCEN	(European Union) Situation Centre
SOP	Standard Operating Procedures
SSAR	Specialized Search and Rescue
TC	Team Commander
TTX	Table-Top Exercise
UNDAC	United Nations Disaster Assessment and Coordination Team
UN-OCHA	United Nations Officer for Co-ordination of Humanitarian Affairs
USAR	Urban Search and Rescue
UTC	Universal Time Coordinated
VOB	Visitors and Observers Bureau
WG	Working group
WHO	World Health Organization
XHNS	Exercise Host Nation Support