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Note that this document was submitted after the established deadline. It will be decided by the Meeting whether the document can be discussed or is postponed to the next meeting.

Background

The HELCOM BALEX 2021 exercise was held on 24-25 August 2021 near the city of Kotka in the Eastern Gulf of Finland.

Attachment 1 to this document contains the BALEX 2021 Lead Country Exercise Report.

Attachment 2 to this document contains a report by WWF Finland on the involvement of volunteer organizations in the oiled wildlife response exercise, which was part of the national shoreline response exercise of BALEX 2021.

Action requested

The Meeting is invited to take note of the information and make use of it as appropriate.



Report

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Gulf of Finland Coast Guard District
Headquarters

23.09.2021

Balex Delta Lead Country Exercise Report

1. DESCRIPTION OF THE EXERCISE

Aim and objectives

Balex 2021 exercise was focused in commanding, planning and executing a long term and largescale environmental response operation at sea and on the shore line.

Specific goals for the HNS part were:

- Total performance long-term action
- National and international cooperation
- Communication and management
- Situation picture and awareness

Specific goals for the OIL part were:

- Practice co-operation in multinational oil spill response operation
- Communications in an international scenario with other vessels and regional CC
- Oil recovery tactics and methods
- Use of underwater and aerial resources

Scenario

The Scenario of the Balex Delta was collision of an oil tanker and a chemical tanker in a fairway on coast of South-East Finland, outside of city of Kotka. As the chemical tanker could proceed her voyage towards Kotka the oil tanker suffered serious hull damages and had to anchor on position further inspections. Large amount of released oil from the tanker has been observed to drift towards the coastline. On her voyage towards Kotka the chemical tanker report of an incident on board. The bulkhead of one cargo tank was damaged causing a leak of a hazardous substance. Released substance from the tank could endanger the crew and environment as well as population on shore. Crew of the vessel has started the actions to find out the severity of the leak. The chemical tanker is advised to anchor on position and wait for further instructions. On the following day, 20 000 t amount of heavy fuel oil is floating at the open sea. From the previous days, oil

has already reached shore where rescue services are responding to it in the coastal waters as well as on the shore. Oiled wildlife organization had been alerted as well. The oil tanker had sunken on Monday, the 23rd of August around midday, and the hull is not visible on scene. Leakage from the wreck had been observed on aerial surveillance flight, on Tuesday, the 24th of August. The exact amount of wreck leakage was not known. In Alpha Table Top exercise on March, exercise weather was similar as August conditions for practical reasons.



Picture 1. Incident scenario area for the Balex 2021 exercise.

Names of participating Parties and organizations

This table is shown only units which were taken part of Balex Delta open sea exercise.

Country	Organisation	Participants	HNS / OIL / Shore / Diving	Name of the vessel
Finland	The Finnish Coast Guard	four vessels, one aircraft, command centre, patrol boats	HNS / OIL / Diving / Shore	Turva, Tursas, Grisslan, Otava
Finland	The Finnish Navy	two vessels	HNS / OIL / Shore	Louhi, Hylje
Finland	The Helsinki rescue department	MIRG team, Chemical diving team, one vessel	HNS / OIL / Shore	Miina
Finland	The Kymenlaakso rescue department	Leader and the organizer of the shoreline exercise, chemical diving team	HNS / OIL / Shore / Diving	
Estonia	The police and Border guard	one vessel, one aircraft	OIL	Kindral Kurvits, aircraft
Sweden	The Swedish Coast Guard	one vessel	HNS / OIL	KBV-031
Latvia	Latvian navy	one vessel	OIL	Varonis
Poland	Maritime Search	one vessel	OIL	Kapitan Poinc

	and Rescue service			
Germany	German Coast Guard / German Navy	two vessels	HNS / OIL	Arkona, Ever-sand
Denmark	Denmark Navy	four vessels	OIL	Holger Danske, Sabotoeren, Boba, Carina
	EMSA	EAS, Vessel Norden, Mar Ice, Satellite service	HNS / OIL	Norden

Date and place of the exercise

Exercise was started by Balex Bravo alert exercise on Sunday 22nd of August at 05:00 (Local Time, LT). Live Balex Delta was held on 24th-25th of August. It started with HNS scenario and moved next day to the oil scenario.

The exercise had three different location, one at sea (N 60°22,8' E 026° 51,1'), one at the Kotka harbour (N 60° 27,8' E 026° 57,7') and the shore exercise area coast of Pyhtää (N 60°25,9' E 026° 38,9').

2. PLANNING AND PREPARATION OF THE EXERCISE

Planning of the exercise can be found on document "Balex 2021 Exercise Plan".

3. EXECUTION OF THE EXERCISE

Balex Bravo 22nd of August

The exercise started on Sunday 22nd August by Balex Bravo Alert exercise. MRSC Helsinki send the situation report to MRCC Turku, which made international alert via Polrep. Participating countries were asked to acknowledge the names of the units participating in the exercise and the time of their arrival in the accident area. MRSC Helsinki alerted units from national authorities and border guard.

Balex Delta HNS 24th August

Weather wind 350° 5 m/s, 13 °C.

Chemical vessel M/S Norden was anchored in position N 60°22,8' E 026° 51,1', area called Kaunissaarenselkä. One cargo tank of 1200 m³ was leaking out of xylenes.

First OPV Turva chemical diver approached to Norden with their chemical suit on. Then they turned Norden to downwind together with Germany MPV Arkona. After turning, Arkona continued to hold Norden in good position during exercise. When the leaking was heading to downwind, the Finnish MIRG team landed to OPV Turva by SAR helicopter and they were transferred to Norden by boat. Onboard Norden, MIRG set up a fire station on the open deck. After that, chemical divers from Helsinki and Kymenlaakso fire departments arrived to Norden. At Norden there were built different kind of task for the chemical divers. The same

tasks were also given to KBV and Finnish navy chemical divers. One task was also rescue Norden crew members from the ship to shore. The crew was played by a group of 20 volunteers.

Other ships were tasked with isolating the accident area to secure rescue operations.

Balex Delta OIL 25th August

Weather wind 180° 10-15 m/s, 12 °C

In the night between 24th and 25th wind first decreased. Then it turned and began to increase rapidly. In the morning the wind was already more than 10 m/s and it was still increasing. In the evening of 24th, exercise operative manager decided, that open sea exercise area was not used due the heavy weather. Two strike team (Bravo and Charlie) were putted practising the same area as HNS exercise area and the third strike team (Delta) was moved to further into the archipelago. The foreign vessels were put on strike team Bravo and Charlie and all Finnish vessels were moved to Delta. This was due to the fact, that the Delta area was not located in the area according to the original plan, and only Finnish vessels could operate there. Reason for that was shallow waters and the pilot regulations. Striketteam Bravo leader was Arkona (GER), Charlie was Kindral Kurvits (EST) and the Delta Tursas (FIN).

The exercise was used popcorn instead of oil. It was in use for a total of 42 m3. Popcorn behaved very similarly like oil and could also be collected from the sea. The height of the wave was still high in the modified training areas when the exercise was started. Significant wave high was about 1,5 m and the biggest waves were approximately 2,5 m high. As a result, the most of the units were unable to use their oil spill response equipment safely. Due to the circumstances, ship to ship operation could not be practiced either.

Finnish Navy Vessel Louhi has onboard Current Buster oil recovery system provided by EMSA. Instead of the high waves, the operation of the Current buster system was successful.

The communications

The communication was done by maritime VHF. There was a thought to use tetra standard radios, but it was switched to VHF one month before exercise. Reason for changing was practicalities and crews are used to use maritime VHF-radios. The common structure for communication is attached.

More details of the exercise

More details for the exercise can be found on document "Balex 2021 Exercise Plan".

The practical info for participants

The visitors and media programmes, logistics, public information, communications support, personnel and organizers support contacts and much more practical info can be founded and listed on document: "BalexDelta 2021 practical information for Participants."

Specific aspects on importance

Balex Delta organization was divided into three different areas of responsibility. They were an operational exercise, an observer and visitors, and a shoreline protection. Of these, Gulf of Finland Coast Guard District led the operational exercise, The Border Guard headquarters was in charge of observers and visitors. The Kymenlaakso fire department on the other hand, was responsible for shore line protection. All parties had a good understanding of what was their responsibility. Naturally, there was some overlap of responsibilities, but these common issues were resolved in joint meetings.

4. COMMENTS FROM THE PARTICIPANTS

Due the Covid situation most of the get together program was cancelled. It might say, that the Balex2021 were total of operational exercise. Captains meeting and the hot wash up were arranged on Maritime Centre Vellamo. The Auditorio of max 120 person were only 25 persons at place.

Many participants thought it was good that the exercise could be organized at all. Also, participants liked HNS part, that was something new on Balex exercises. The weather wasn't good at OIL exercise day. There was possibility, that hole oil exercise would have been cancelled. But the organizers changed planning and the exercise could be organized. This decision was appreciated by the participants. The striketeam leaders Bravo and Charlie were foreign vessels. Leaders thoughted that that was very good idea and it really works. It was challenging be a leader in abroad, but discussion and with MRSC worked.

More detailed comments can be found from the HEDMOT report.

5. CONCLUSIONS

General

Organizing this year's Balex Delta exercise was particularly challenging due to Covid 19 conditions. The weather conditions were not on the side of the organizers this year either. Despite these challenges, the exercise was attended by several hundred people and was able to pass through safely. Also, there was no Covid 19 infections were also observed during exercise.

Balex exercise was part of the Finnish Border Guard strategy for 2027. According to the strategy, FBG develops situational awareness and surveillance at sea, and management of environmental accidents. Due the fact that this year Balex exercise was the first exercise since the leading of the environmental accidents has moved to Finnish Border Guard, the aim was to make the exercise as multifaceted as possible. Good co-operation between authorities is one of the typical features of Finns. Therefore, it was natural that co-operation was also involved in this year's exercise.

One notable finding was that the available oil spill response equipment is capable of operating at its maximum in a wave of about one and a half meters. The another finding was, that the striketeam leader can be from the foreign vessel.

First time in history, popcorns were used as an oil at exercise in Finland. Because of that, use of popcorns required a lot of prior work, clarification and discussions between different authorities. However, the final result was good, as the use of popcorn clearly made the exercise more interesting for the participants. This is also importance thing in real tasks when the exercises have been closer in nature to the real tasks.

Suggestion

Weather for the exercise can be very heavy. Thanks to the exercise, we now the limits of the capacity of oil recovery systems. However, the weather conditions can be even worse in the real accident. We should have a better capability to use oil recovery system at the heavy weather conditions. In the exercises, there should be possibility to change area or make movement for the exercise planning.

The use of popcorn was success. We recommend that next exercises there will be also popcorn as an oil on water.

Covid 19 pandemic made a lot of work to do. Nevertheless, the tradition of Balex training was not broken. In our view, this is a testament to the strong commitment of the Hellcom States to a common goal.

More detailed analyses and recommendations can be found from the HEDMOT report

Commander of the Gulf of Finland Coast Guard District
Captain (CG)

Risto Jääskeläinen

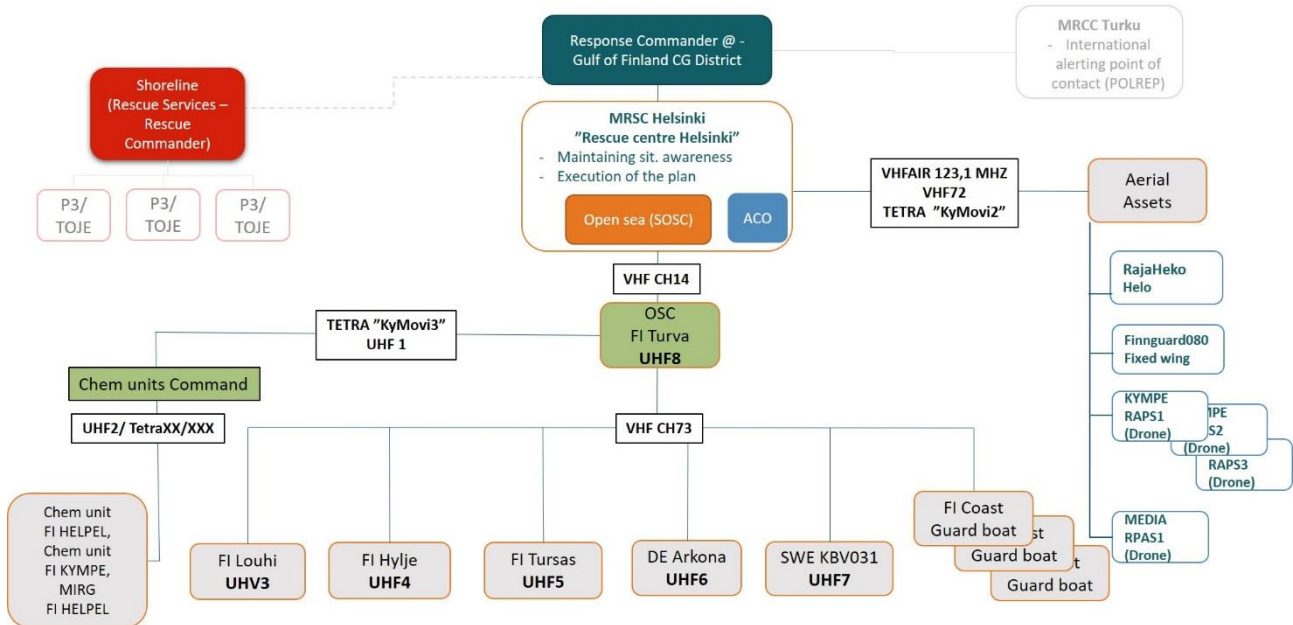
Head of operation
Lieutenant Commander

Tuomas Luukkonen

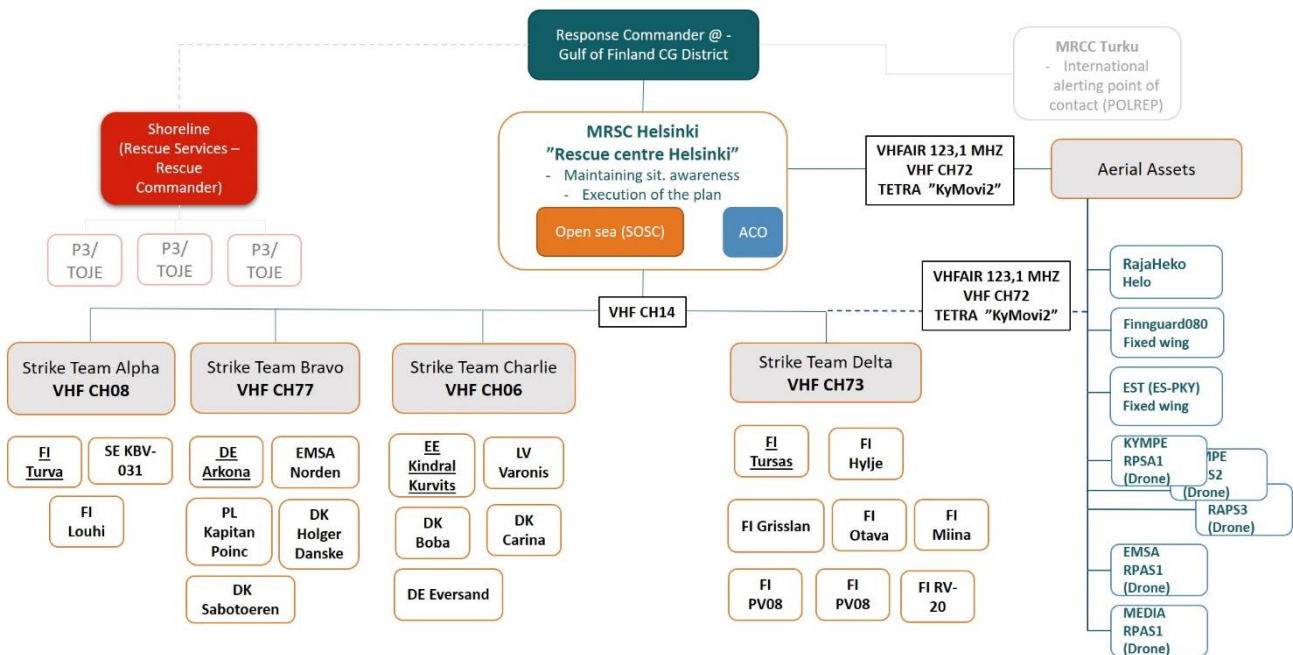
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Attachment nro 1

Command structure HNS exercise



Command structure oil exercise



VOLUNTEER ORGANISATIONS IN BALEX DELTA 2021

The Balex Delta 2021 oil spill response exercise was held in Kotka, Finland from the 23rd to the 25th of August. The transnational exercise was led by the Finnish Border Guard, and the exercise included a national shoreline response exercise which was coordinated by Kymenlaakso Rescue Services. The Finnish Voluntary Rescue Service network, including the WWF voluntary oil spill response troops, participated in the exercise, and volunteers were used for shoreline assessment, search and collection of oiled wildlife, for conducting an oil collection simulation, and for supporting functions like management and coordination, transport and healthcare. An oiled wildlife rehabilitation facility was set up around the Finnish mobile bird cleaning unit, which was transported to a warehouse in Kotka harbour.

Volunteer organisations' aims for the exercise:

The aims of the oiled wildlife response exercise were:

- To establish a wildlife rehabilitation centre and make it ready to receive oiled birds from the field within the first day
- To test oiled wildlife search and rescue in an archipelago setting
- To test transport of oiled birds from islands to the rehabilitation centre
- To assess if and how the building of opportunity in Kotka harbour could be used in a real large-scale oil spill incident

All in all, the aims of the exercise were met. 11 experts affiliated with 4 different organisations were involved in the practical work. The Finnish mobile bird cleaning unit was transported to the site by the Eastern Uusimaa rescue services on Monday 23rd of August, and the oiled wildlife rehabilitation centre's stabilisation section was set up and ready to receive oiled animals on the afternoon of Tuesday the 24th of August. In the field, a number of teams were working on Tuesday the 24th to secure the capture and transport of 21 oiled birds (hunting decoys), which were subsequently taken into care. Rough weather prevented a remaining 25 decoys from being caught and transported during the exercise.

The aims of the shoreline assessment, shoreline clean-up and associated support functions were:

- To set up and run a command centre for the voluntary organisations
- To test shoreline assessment in an archipelago setting
- To test oil clean-up methods with real oil (in a test facility/pool)
- To test established volunteer management procedures (coordination and leadership) in a large-scale oil spill
- To ensure smooth transport of volunteers in an archipelago setting in cooperation between volunteer organisations
- To ensure well-functioning first aid and the safety of participants and
- To share and implement good practice from the OIL SPILL project area (Southwest Finland) to volunteer organisations and authorities in the Kymenlaakso area

In general, the exercise ran smoothly, with a total of 56 participants on Tuesday the 24th and 47 on Wednesday the 25th of August (16/9 from the Finnish Red Cross, 37/35 from WWF and 3/3 from the National Defence Training Association of Finland, MPK). All participating organisations joined the exercise as part of the Voluntary Rescue Service network (Vapepa). The Finnish Red Cross was responsible for first aid training, on call first aid, and organizing the command centre for voluntary organisations. MPK was responsible for boat transfers for volunteers, equipment and the transport of oiled animals, and WWF was responsible for volunteer teams working with shoreline clean up, shoreline assessment and oiled wildlife response (search, collection, and transport).

Lessons learned:

- The oiled wildlife response organisation needs to have continuous access to situation awareness tools. Information is needed about the status of oil collection, oil drift forecasts and the extent of shoreline oiling.
- The Finnish oiled wildlife response organisation depends on a few key persons, and the organisation needs to be broadened, with more experts trained for key positions within the oiled wildlife response organisation. This will be especially important in large-scale spills which require a long-lasting response.
- The current gap in identifying the authority responsible for oiled wildlife, and the lack of an officially adopted oiled wildlife response plan, are impairing decision-making and communications during a spill. Internal alerting procedures are unclear, and official protocols for calling on international assistance via for example the EUROWA network need to be put in place.
- Co-operation between authorities and volunteers is on a good basis, with mutual trust and respect.
- A few buildings of opportunity (3-4) need to be identified along the Finnish coast, to make detailed plans for setting up wildlife response facilities (considering air conditioning, heating, waste management, electricity, transport etc.)
- Joint authority-volunteer organisation aims should be set up for all exercises. This would benefit communications, logistics and situational awareness of all actors involved. The lack of joint exercise goals for authorities and volunteer organisations made it difficult to coordinate between different actors. Some organisations had well established exercise aims, while others had none, and these aims were not fully coordinated in the planning stages of the exercise. This also led to volunteer actors not gaining a comprehensive picture of the exercise.
- Rough weather conditions can quickly impede the work of both shoreline clean-up groups and wildlife responders in the field. Communication between field teams and transport teams is essential.
- Communication between volunteer organisations, and between volunteer organisations and authorities should be improved, including communications during the planning phase. During the exercise, agreed communications procedures were not strictly adhered to; there is a need to establish clear communications charts which take the volunteer organisation's structure into account, and to follow these charts. The challenges with communications led to uncertainties regarding the positions and tasks of volunteers, a lack of knowledge about necessary equipment, and a general unawareness of what other groups/units were doing.
- Due to Covid-19, an administrative office for volunteer registration and training could not be set up as part of the exercise. For future reference, oil spill authorities should, in advance and together with the Finnish Red Cross, map available and suitable locations for setting up the volunteer command centre and an administrative office in a spill situation.
- A representative of the volunteer organisations must be allowed to join the authority oil spill command centre. From there, he/she can be in touch with the volunteer command centre which hosts representatives of each organisation/operative section involved.

The exercise feedback from the staff of voluntary organisations was mainly positive, with a mean mark of 8,1 given on a scale from 4 to 10. The exercise was seen as useful, and especially the positive spirit and constructive cooperation between volunteer organisations was seen as a highlight of the exercise. It is worth noting that volunteer organisations have a lot of experience and knowledge when it comes to supporting functions for oil spill response, oiled wildlife response and volunteer management. The leadership structure of the voluntary organisations may need to be better communicated to the national and municipal oil spill authorities.