

Volunteers as an integrated part of the oil spill response capacity in Finland

Emmi Rantavuo¹, Justiina Halonen¹, Teemu Niinimäki² & Tytti Seppänen¹

¹ *South-Eastern Finland University of Applied Sciences Xamk, Kotka, Finland name.name@xamk.fi*

² *World Wide Fund for Nature (WWF) Finland, Helsinki, Finland name.name@wwf.fi*

ABSTRACT: Responding to a major oil spill is a labour intensive operation and involves several governmental and regional authorities, agencies and voluntary organisations. In Finland, The Finnish Border Guard is the competent pollution response authority that conducts the response measures in the event of an oil spill on the open sea. The RFRSs are in charge of oil spill response operations both in coastal and inland waters. The environmental agencies assist the RFRSs in executing the response operation e.g. by providing expertise in nature protection prioritisation. Along with the authorities, several non-governmental institutions as well as voluntary organisations are involved. Especially the Voluntary Oil Spill Response Troops of the World Wide Fund for Nature (WWF) Finland are prepared to assist in responding to an oil spill contaminating shorelines. The response capability of the WWF voluntary troops is based on long-term training and pre-education. Today, the troops consist of over 9000 volunteers, 3000 of which have completed response training and can easily be integrated into an authority driven operation. The collaboration between authorities and volunteers is regularly tested by means of co-operation exercises and real spill response cases. This paper studies the collaboration framework of the voluntary troops and the RFRSs and the benefits of the pre-established system.

1 INTRODUCTION

Finland is neighboured by Russia, Estonia and Sweden along the Gulf of Finland (GoF) as presented in picture 1. GoF has a high amount of maritime traffic. The traffic consists of both cargo and passenger vessels. The cargo traffic is mostly east-westbound, and the passengers are mainly travelling in a north-south direction. In 2017, the seaborne foreign transport to and from the Finnish ports was approx. 100 million tonnes, 18 million tonnes of which were oil products and chemicals. In addition, Russia has large ports located at the eastern GoF and has developed new ports to serve the oil industry. (Traffic Management Finland; Väylä. 2017.)

The Finnish Environment Institute (Syke) has measured the length of Finland's sea shoreline to be 46 200 kilometres (28 700 miles), 6 300 kilometres (3 900 miles) of which is on mainland and over 39 000 kilometres (24 200 miles) in archipelago. The density and vulnerability of the archipelago combined with moderately shallow waters and busy traffic compels the authorities to perform comprehensive oil spill contingency planning. In Finland, voluntary associations have a long history of assisting the Regional Fire and Rescue Services (RFRSs). Shoreline cleaning is performed with the help of pre-trained volunteers with a pre-established system.



Map data ©2020 Google, GeoBasis-DEBK

Picture 1. Map of Gulf of Finland. ©Google.

The focus of this paper is on RFRSs' collaboration specifically with Voluntary Oil Spill Response Troops of the World Wide Fund for Nature (WWF) Finland, although Finland has an extensive network of volunteer organisations assisting RFRSs in various tasks. The other volunteer associations often used by RFRSs are rather indirectly connected with oil spill response.

2 ORGANISATION OF OIL SPILL RESPONSE IN FINLAND

Oil spill response management in Finland fall under the Ministry of the Interior. In Finland, The Finnish Border Guard is the competent pollution response authority and conducts the response measures in the event of an oil spill on the open sea. The Regional Fire and Rescue Services (RFRS) are in charge of oil spill response operations both in coastal and inland waters. Each RFRS is also responsible for the procurement and maintenance of regional oil spill response preparedness. (Rescue Act 1353/2018.)

European Civil Protection Mechanism has an objective to strengthen cooperation between EU Member States. It aims towards a stronger and coherent collective response. The

development of the mechanism is in progress and is implemented in degrees. The plans also include pooling and unifying the use of volunteers. (EU Civil Protection Mechanism 2020.)

The Ministry of the Interior has initiated a project to guide RFRSs on how to implement volunteer input in contingency planning. The results and guidelines will be ready by the end of 2020. The Ministry's definition of volunteers covers only affiliated and organised volunteers and urges not to use unaffiliated, spontaneous volunteers in order to avoid untrained and potentially risky participants. Future guidelines will also present and emphasise contractual relationship, which will ensure collaboration as well as state the responsibilities clearly. (Haake 2019.)

2.1 Use of volunteers

The use of volunteers in an oil spill recovery process can be manifold. All volunteer parties are under RFRSs' command and supervision and will only participate on authorities request and only on appointed duties.

In their report, the Ministry of the Interior sees the role of volunteer organisations, or "third sectors", in public authorities' security functions as an essential part of enhancing crisis tolerance. This is due to the variety of options to learn, take action and make an influence, since the organisations act near and are run by the people (Prime Minister's Office 2017, 40-42).

The Ministry of the Interior also points out in their RFRS strategy 2025 that utilising all resources, including voluntary associations, and strengthening their abilities will increase the rescue services' preparedness (Ministry of the Interior 2016, 14-15).

Organised or affiliated volunteers in oil spill recovery tasks in Finland comprise of voluntary associations such as the World Wide Fund for Nature Finland (WWF), National Defence Training Association of Finland (MPK), The Finnish Air Rescue Society (SLPS), The Finnish Lifeboat Institution (SMPS) and Finnish Red Cross (SPR). All above-mentioned affiliated volunteer

associations are members of the Voluntary Rescue Service of Finland (Vapepa), which is a cooperation network of over 50 organisations. This network of NGOs gives assistance to authorities in various incidents and activities. Volunteers can also be utilised in several assignments indirectly connected with the oil spill response, such as traffic or access control, guarding or inventory accounting. (Volunteers in Oil Spill Recovery.) In this paper, the focus is on the use of WWF Voluntary Oil Spill Response Troops in oil spill response tasks and defined indirect tasks.

In Finland, unaffiliated, “spontaneous” volunteers are rarely involved in the response operations as such, but rather by joining a voluntary association in order to take part in the operations. This ensures a better controllability and safety of both the well-intentioned outsiders and the recovery process itself. (Rantavuo 2018, 69.) This principle also complies with the guidelines of the Ministry of the Interior.

In the case of an oil spill incident, the voluntary associations are usually alerted after the immediate response measures are completed by the authorities. The alerting is always performed on the responsible authority’s initiative and through an established system. Oil Spill Recovery Troops can be alerted directly through Oil Spill Recovery Responder of WWF Troops or through the Duty Officer of Vapepa. Vapepa has on-call duty 24 hours a day, and through this one contact, assistance from all the affiliated volunteer organisations can be alerted.

A call from the RFRS Incident Command initiates the process of alerting the voluntary troops. After receiving necessary information about the accident and its circumstances accompanied with an evaluation of the type of assistance needed, the WWF Oil Spill Recovery Responder contacts the registered volunteers via email and SMS. The volunteers that are available at that moment, will give their response and receive instructions from the Oil Spill Recovery Responder. The first voluntary responders will join the operation within 24 hours. This has been

considered as suitable time, allowing the authorities to make adequate preparations and arrangements. (Niinimäki 2015; SPEK; Rantavuo 2018, 72.)

3 OIL SPILL RESPONSE TROOPS TO ASSIST IN SHORELINE CLEANUP

3.1 The origin of pre-trained troops

The Baltic Sea is vulnerable and prone to changes, and the impacts of a large-scale oil accident would be serious and long lasting. To reduce this kind of environmental impacts, WWF Finland founded Volunteer Oil Spill Response Troops in 2003. In oil spill response work, good and competent preparedness is always an asset. Further restoration may take months and requires well-organised teams to help the authorities. Countless pairs of helping hands are required for the cleaning, once the oil has reached the shore after an accident. This is when the voluntary WWF oil spill response team is ready to help the authorities. The principle of the operation is to save the authorities' resources and be as self-guiding as possible, but acting only on the RFRSs' request.

Experiences in other regions and countries have taught that the mass of volunteers may be large, but without effective training and management, they are redundant or can even cause further damage. (Niinimäki 2015; Barreras-Biesot et al. 2018.)

3.2 The training of the troops (WWF)

WWF organizes basic courses in oil spill response annually to train its volunteers. After the basic course, the volunteers may deepen their skills through group and team leader courses. Over 400 volunteers participate in the courses annually.

Basic WWF Oil Spill Response Troop Training includes instructions for and training to use the personal protective and recovery equipment as well as information about handling oil and operating on site. The volunteers also complete a practical exercise session.

A group leader will manage two to nine people depending on the needs of the given situation. A team is comprised of two to five groups, following the universal principles of volunteer management. The formations and organisation are based on the management model used in the Finnish rescue services. (SPEK 2019, 22.)

WWF is also prepared to give accelerated instant training in shoreline clean-up quickly on site, if the scale of the accident so demands. As the amount of help required during the first days of the accident is not necessarily very large, WWF Finland has decided in their strategy to increase the number of volunteers only after a successful launch of clean-up process. The first team to arrive at the site is comprised of the group leaders and they are there to set up the recovery work sites and prepare for the continuation. (Niinimäki 2015.)

In addition to shoreline clean-up, WWF has also trained troops for oiled wildlife response. Those participating in the treatment of animals will work as a separate team. They are provided with applicable training concerning the handling and cleaning of animals. WWF Finland is a part of the European Wildlife Response Assistance Module, which is an international team of oiled wildlife responders, and their equipment is ready for cross-border assistance also, if needed. Special clean-up containers for oiled animals have been set up and they are on standby at coastal Finland.

This pre-established system has given Finland a reserve of over 9 500 registered volunteers to assist in shoreline clean-up during oil spill incidents (situation in 2019). From those volunteers, approximately 3 000 have completed the training. Voluntary Oil Spill Response Troops have also acquired their own equipment and insurances, thus they are able to maintain the operation

for at least three days with 100 volunteers. This gives the response authorities time and extra resources, which are valued especially in the case of a prolonged shoreline clean-up operation.

3.3 Integration

RFRSs are prepared for the use of volunteers in advance: the procedures are described in the contingency plans and the needs and required equipment have been taken into account. Active co-operation between RFRSs and other operators enables a fast and comprehensive reserve of equipment.

The responsible authority attends to the volunteer troops regarding their health care, provisioning and housing. The volunteer groups are considered almost as employees and must be provided with similar occupational safety measures. The use of volunteers and suitable tasks are carefully considered and allocated, as recommended in IPIECA Volunteer management manual (IPIECA 2015, 2-6). Nationally, Finland has extensive competence in various tasks in the volunteer field, but the situation varies locally. In case of an accident, the RFRSs' knowledge of local competence is necessary. The Ministry of the Interior's forthcoming guidelines will entail this, and hence deepen the cooperation and integration of the RFRSs' and NGO's. To able the contracts, there will be a risk assessment regarding the tasks and conditions, which will form the basis in defining suitable tasks to volunteers.

As mentioned earlier, Oil Spill Response Troops are prepared to send the first clean-up teams on site 24 hours after the alert. The oil spill response authorities have considered that the timeframe is adequate, since the first hours or days are needed to prevent the oil spill from spreading and to take the needed measures to prepare the working sites for the recovery.

Even though the RFRS is the responsible and the supervisory authority to the volunteers, the Incident Commander can rely on trained teams and group leaders to manage their teams of volunteers in operation safety and security.

4 DISCUSSION AND CONCLUSIONS

4.1 Benefits

Pre-trained, competent voluntary troops enable quick response measures. Functioning, well-organised troops save the authorities resources, both human resources and time, as they can rely on well-planned volunteer management. The response organisation management can allocate forces to other significant duties, as the volunteers work almost self-guided.

Benefits can be also seen from an environmental perspective. There might be situations, in which limited resources can lead to the use of more invasive clean-up techniques. The use of trained voluntary troops gives the opportunity to use manual recovery techniques, which are labour intensive, but usually more gentle for the environment and thus they preserve nature values.

As IPIECA Volunteer Management Manual states, “Inadequate planning for, and management of, volunteers can lead to adverse public and political relations” (IPIECA 2015, 1). The preparing and training of people also has important image value to the whole oil spill response operation and gives assurance of preparedness to the public. Volunteer activities engage people and organisations to work together. This is also in accordance with the Finnish Governments’ objectives.

4.2 Experiences

Very fortunately, no large oil spill accidents have occurred in the Baltic Sea during recent years. However, WWF Troops have participated in the clean-up work of a few minor spills in Northern Finland. For example, an oil spill from a steel factory in Raahe in 2014 contaminated the nearby shores and over 100 WWF volunteers worked for eight days collecting over 200 tonnes (kg) of oiled waste from nature conservation areas nearby the factory. (Niinimäki.) As there are few real occasions to keep up the skills and test the multi-organisational operations, exercises are organised regularly over the Finnish coast.

4.3 Conclusion

Since real-life experiences of oil spills in the Baltic Sea Region and Gulf of Finland are limited and comprise mostly of smaller spills, there is a risk of shortages in resources during major spills, if the operation is prolonged. To prevent this, measures are taken in SÖKÖSuomenlahti project (see acknowledgements for details) and other projects conducted by the Ministry of the Interior as well as in the international Interreg project Oil Spill. SÖKÖSuomenlahti project updates the joint oil spill response contingency plan of the RFRSs situated on the coast of the Gulf of Finland and, as a part of that work, also the guidelines for the involvement of volunteer organisations are updated.

As a part of the guidelines related to the use of volunteers, an Instruction card on alerting and attending to the volunteers is prepared. It will include necessary steps and a checklist to aid the Incident Commander of the RFRS. In addition, a timeline shown in figure 1 is introduced to highlight the most necessary points of interaction between the RFRS and NGOs. The timeline starts from the emergency call and ends at the point, where the response authority announces the operation to be at an end. The timeline and its contents are extremely simplified, and actions taken

in between points can be extensive. The timeline includes the matters that are considered essential from the point of view of the RFRSs and it is intended to work as a reminder in situ.

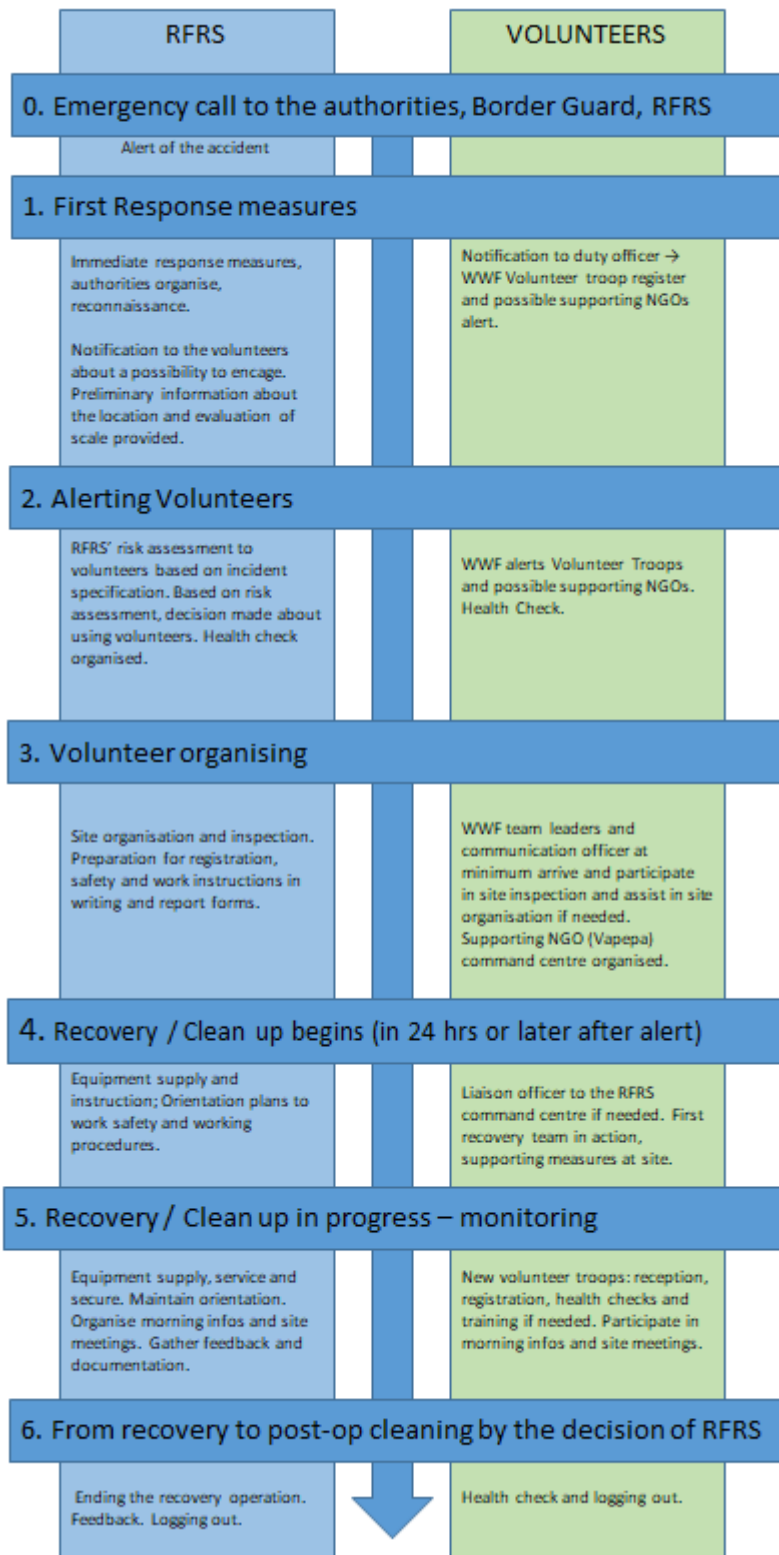


Figure 1. Timeline of the minimum points of interaction between RFRS and NGOs in the case of volunteer involvement in an oil spill response operation. The timeline was produced in collaboration with the RFRS and NGOs in a joint development workshop held in November 2019. Also, to assist the RFRSs’ in evaluating regional applicable assignments for volunteers other than WWF troops in contingency planning, a form was built to establish the co-operation contracts with the NGOs and the actual incident managing.

Applicable assignments for volunteers in Oil Spill Recovery

	Managing NGO at the area	Standbytime	Operating time	General person and equipment volume	Required assistance	Required person and equipment volume	Risk assessment	Taken measures
Operative functions								
Reconnaissance								
SCAT								
Aerial								
Marine								
Recovery/Clean up								
Onshore cleanup								
Shoreline recovery								
Oiled wildlife response								
Sampling								
Supporting functions								
Founding/Volunteer centre set up and disassembly								
volunteer registry								
team assembly								
informing volunteers								
canvassing expertise								
Provisioning								
Housing								
Land transportation								
Water transportation								
First Aid and emotional support								
Communicational activities								
Port operations								
Supply inventory maintenance								
Traffic control								
Access control and guarding duties								
Waste management								
Fire prevention								

Figure 2. Applicable assignments for volunteers in Finland in case of an oil spill incident.

The possible functions and assignments (Figure 2.) are gathered from Voluntary Rescue Services of Finland’s various associated NGOs (Waara, R. Lönnqvist, I. 2015). The assignments are divided into operative and supporting functions. Because of regional variation, it is important to map out the available expertise. All operators/NGOs are selected based on risk assessments both in contingency planning and again in situ. In addition, the required expertise and/or background education in certain assignments must be determined. The form is compliant and considers the guidelines coming later in 2021 from Ministry of Intermin.

All above mentioned tools are aimed to work as reminders and as easy, compact summaries of the subject. Since oil spills in Finland have luckily been infrequent, practical experience among RFRSs' personnel may be sparse. These tools are practical, since, during a sudden incident, the commander may not have time to go through extensive material but must initiate processes swiftly. Simplified instructions relieve pressure in an already laborious and consuming situation. These summaries also work as a basis for contingency planning and training.

ACKNOWLEDGEMENTS

This study is conducted under the SÖKÖSuomenlahti project funded by the Finnish National Oil Spill Compensation Fund of the Finnish Ministry of the Environment and the participating Rescue Services in the Gulf of Finland coastal area.

The project advisory committee comprises of the designated oil spill response specialists representing the Rescue Services of City of Helsinki, Eastern-Uusimaa, Kymenlaakso, Southwest Finland and Western-Uusimaa and the Centres for Economic Development, Transport and the Environment of Uusimaa and Southeast Finland. Special acknowledgement is made to the contribution of the above-mentioned response authorities and to Finnish Red Cross as an Oil Spill Project representative.

REFERENCES

Barreras-Biesot, D. Montgomery, A. Young, N. 2018. Volunteers and unskilled mass labour management: An OSRO's view. Publication in Interspill 2018. Doi:

<http://www.interspill.org/previous-events/2018/14March2018/5-Training/Volunteers-and-Unskilled-Mass-Labour-D-Barreras-Biesot-Oil-Spill-Response-Ltd.pdf>

EU Civil Protection Mechanism. 2020. Doi: https://ec.europa.eu/echo/what/civil-protection/mechanism_en

Haake, Niki. 2019. Specialist in Ministry of Interior. 2019-09-02. Workshop and Cooperation meeting with Oil Spill Recovery authorities and Volunteer organisations. Minutes n/a.

IPIECA. 2015. Volunteer Management..

Niinimäki, T. 2015. 1600 työtuntia öljyntorjuntaa - kokemukset ja kehittämistarpeet. In Finnish. doi: <https://wwf.fi/app/uploads/2/d/7/sqs4wboz4os8axi9cxifut/wwf-oljyntorjuntajoukot.pdf>

Prime Minister's Office. 2017. The role of the third sector in supporting public authorities' security functions. Prime Minister's Office publication in publications of the Government's analysis, assessment and research activities 76/2017. In Finnish. Doi:

http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160404/76_Loppuraportti%20kolmas%20sektori%20viranomaisten%20turvallisuustoiminnan%20tukena_editoitu%205122017.pdf

Rescue Act 1353/2018. Finlex. Doi:

<https://www.finlex.fi/en/laki/kaannokset/2011/en20110379?search%5Btype%5D=pika&search%5Bkieli%5D%5B0%5D=en&search%5Bpika%5D=rescue%20act>

Ministry of the Interior. 2016. Safe and resilient Finland – Rescue Services Strategy 2025. Ministry of Internal publication in Internal Security. 20/2016. ISBN:978-952-324-101-5

Rantavuo, E. 2018. Öljyntorjuntaorganisaation järjestäytyminen Saimaalla tapahtuvassa öljyvahingossa. In: Öljyntorjunnan toimintamallin kehittäminen Saimaan syväväylälle, SÖKÖSaimaa-hankkeen taustaselvitykset ja loppuraportti. Halonen J. (Ed), 2018. Kaakkois-Suomen ammattikorkeakoulu. [URN:ISBN:978-952-344-138-5](https://nbn-resolving.org/urn:isbn:978-952-344-138-5).

SPEK Finnish National Rescue Association. 2019. Managing and organising volunteers in oil spill response. ISBN 978-951-797-673-2 In Finnish.

Traffic Management Finland. Doi: <https://tmfg.fi/en/vts/vts-centers>

Volunteers in Oil Spill Recovery. Doi: <http://www.vapaaehtoisetoljyntorjunnassa.fi/> In Finnish.

Väylä. 2017. Seaborne traffic statistics 2017. Doi:

<https://vayla.fi/documents/20473/41214/Englanti+2017/3d429989-8f58-4068-9ac1-b01ded9ea89a>

Waara, R. Lönnqvist, I. 2015. Updated 2019. Vapaaehtoisille soveltuvat tehtävät öljyvahingon torjunnassa. ISBN 978-951-797-675-6 (pdf). In Finnish.