

The responses of Republic of Lithuania to the questionnaire on issues relating to the environmental effects related to waste originating from chemical munitions dumped at sea

Situation

1. Is there an environmental risk for your country/region to be affected by waste originating from chemical munitions dumped at sea (WOCMDS)? If so, what are the environmental challenges and effects posed by WOCMDS?

Part of the chemical munitions dumpsite in the Gotland Basin lies within the Exclusive Economic Zone (EEZ) of the Republic of Lithuania (70 nautical miles from the shore). The closeness of the area poses a potential risk for Lithuania to be affected by waste originating from chemical munitions dumped at sea (WOCMDS). Chemical warfare agents like sulfur mustard, Tabun and arsenic-containing substances were designed to trigger severe biological effects at very small doses. All of them are extremely toxic to humans and higher forms of life. In many cases also the degradation products show some degree of toxicity, while some compounds have the potential to be bio-accumulated by organisms within the food chain.

2. Does the scientific community in your country/region examine the environmental effects related to WOCMDS? If so, what are the findings of such scientific researches?

A part of the chemical munitions dumpsite in the Gotland Basin within the western part of the Lithuanian EEZ, 70 nautical miles (approx 130 km) from the Lithuanian coast (on the Klaipėda-Venspilis plateau slope), was investigated in the frame of national Lithuanian projects. Expeditions in October 2002 (scanning of the dumpsite bottom by the Lithuanian naval vessel „Kuršis“), June 2003 (chemical weapon dumpsite) and August 2004 (national monitoring stations) were organized by the Ministry of National Defense of the Republic of Lithuania, the Ministry of Environment of the Republic of Lithuania, the Center of Marine Research (since 2010: Department of Marine Research of the Environmental Protection Agency) and the Institute of Geology and Geography. The aim was to determine if chemical munitions were dumped in the waters of the Lithuanian EEZ and to perform an environmental impact assessment by evaluating the conditions of the environment and biota in the area under investigation. In this regard, hydrological, hydrochemical, biological and sedimentological parameters were investigated. Arsenic in sediment samples from the chemical munitions dumpsite was assessed together with scientists from Marine Environment Laboratory, International Atomic Energy Agency, Monaco (TC project RER/0/016). Studied parameters did not show any changes of the environment at the chemical munitions dumpsite.

The conclusion of the research was that water depth, north direction bottom water currents, bottom currents velocities and bottom relief prevent chemical munitions from reaching the Lithuanian coast. Further studies still would be necessary to make unequivocal conclusions about the risk of leakage of chemical munitions at this dumpsite.

The results of the research were published in two scientific publications:

- Garnaga G., Stankevičius A., 2005. Arsenic and other environmental parameters at the chemical munitions dumpsite in the Lithuanian economic zone of the Baltic Sea. Environmental research, engineering and management, 3 (33): 24-31.

- Garnaga G., Wyse E., Azemard S., Stankevičius A. and de Mora S., 2006. Arsenic in sediments from the southeastern Baltic Sea. Environmental Pollution, 144 (3): 855-861.

The project “Chemical Munitions Search & Assessment” (CHEMSEA), funded by European Regional Development fund in the framework of the Baltic Sea Region Program, was launched in 2011. This currently on-going project concentrates on the Gotland dumpsite and dispersed unverified and unregistered dumps. Lithuanian Environmental Protection Agency is one of the partners of the

project. During the project Lithuanian part of the Gotland dumpsite of chemical munitions will be visited by Lithuanian scientific research vessel "Vėjųnas". The detailed scanning of the bottom of the dumpsite for objects on the seafloor will be made. Water and sediment samples will be taken near the identified objects. Chemical analysis of sediment samples for chemical warfare agents will be made by qualified laboratories. The state of the environment at the chemical munitions dumpsite will be evaluated and compared with the previous investigations.

Response to incidents

3. Does your country/region have the experience in responding to incidents related to WOCMDS?

No

4. Does your country/region have the capacity to respond to incidents related to WOCMDS?

No

5. Has your government/organization developed an action plan or built capacities to respond to incidents related to WOCMDS? If not, does your government/organization intend to do so in the future?

CHEMSEA project intends to prepare an action plan of response to the incidents related to WOCMDS. Lithuanian Environmental protection agency is actively participating in this process.

Raising awareness and other actions

6. Does your government/organization provide information on WOCMDS to civil society and industry? Does your government/organization raise awareness on WOCMDS and how?

Over the past few years Lithuania has hosted a few international conferences and workshops on this topic, presented the issue in various international organizations and informed the public via the media. The events organized in this framework: HELCOM Monitoring and Assessment Group 15th Meeting Vilnius, Lithuania, 4-7 October, 2011; International seminar on environmental effects related to waste originating from sea-dumped chemical munitions, Vilnius, Lithuania, 20 September 2011; IEEE (Institute of Electrical and Electronics Engineers) /OES (Oceanic Engineering Society) Baltic 2012 International Symposium May 8-11, 2012 Klaipėda, Lithuania (Theme of the symposium Ocean: Past, Present and Future. Climate Change Research, Ocean Observation & Advanced Technologies for Regional Sustainability).

The problem of chemical munitions presented during other conferences and seminars:

- Garnaga G., Wyse E., Azemard S., Stankevičius A. and de Mora S. Arsenic in sediments from the Southeastern Baltic Sea. EU-USA International Symposium „Integrated Ocean Observation Systems for Managing Global and Regional Ecosystems Using Marine research, Monitoring and Technologies“, Klaipėda, Lithuania, 2006.

- Garnaga G. Chemical munitions in the Lithuanian economic zone of the Baltic Sea. Baltic Sea Breeze International Conference "Baltic Sea for future generations", Palanga, Lithuania, 2007.

- Stankevičius A., Garnaga G., Kubiliūtė A. Risks of chemical munitions in the Lithuanian economic zone of the Baltic Sea. International seminar on sea-dumped chemical weapons. Perspectives of international cooperation, Vilnius, Lithuania, 2008.

- RYBAKOVAS A., Nature research centre, Lithuania “Environmental genotoxicity levels in CW dumping zones” International seminar on environmental effects related to waste originating from sea-dumped chemical munitions, Vilnius, Lithuania, 20 September 2011.
- Garnaga G., Beldowski J. Chemical Munitions Search and Assessment (CHEMSEA). IEEE/OES Baltic International Symposium. Klaipėda, Lithuania, 2012.
- Garnaga G., Beldowski J. Chemical Munitions Search and Assessment (CHEMSEA). Presentation of the CHEMSEA project during the Steering Group on priority area 3 (EU Strategy for the Baltic Sea Region) meeting. Ryga, Latvia, 2012.
- Garnaga G., 2013. Chemical munitions in the Baltic Sea and CHEMSEA project. EU Strategy for the Baltic Sea Region seminar “The State of the Baltic Sea: Priorities and Solutions”, Klaipėda, Lithuania.

Moreover, the webpage <http://www.seadumpedcw.org/> was created to facilitate discussion among different actors on the issue of sea-dumped chemical weapons. Also it is worth to mention interviews to the newspapers and radio (<http://www.chemsea.eu/press.php>).

7. Are there any partnerships between government, industry and civil society in your country/region on raising awareness, reporting and monitoring of WOCMDS?

No

8. Does your government cooperate with other States, regional and/or international organizations to assess or increase awareness of WOCMDS?

Lithuania uses existing regional arrangements such as an intergovernmental organisation of nine Baltic coastal countries and the EU, protecting the marine environment from all sources of pollution (HELCOM), International Scientific Advisory Board and other platforms to encourage international cooperation regarding WOCMDS issue. Currently HELCOM ad hoc expert group on dumped chemical munition (HELCOM MUNI) is preparing a report, which will provide updated and reviewed information on dumped chemical munitions in the Baltic Sea. The report will present available knowledge about dumping and recovery activities in the Baltic Sea in particular reflecting recently found archive material and research findings, and will draw conclusions on that basis.

Lithuania continues actively participate in the International Scientific Advisory Board on Dumped Chemical Weapons (ISAB), which was established under Lithuania's initiative and started its activities in 2010. The ISAB gathers world-known representatives of environmental organizations, scientists and researchers from Australia, Belgium, Canada, France, Japan, Lithuania, Poland, Russia, Sweden, and the U.S.A., working in the fields of environment protection and destruction of chemical weapons. The ISAB provides qualified scientific and technological information, evaluations and analytical recommendations regarding sea-dumped chemical weapons.

Lithuania with other partners from Baltic Sea region (Poland, Finland, Germany, Sweden) is also actively involved in CHEMSEA (chemical munitions search and assessment) project activities. CHEMSEA is a flagship project of the Baltic Sea Region Strategy, financed by the EU Baltic Sea Region Programme 2007-2013. The project was initiated in autumn 2011 and will last through early 2014.

Lithuanian Ministry of Foreign Affairs, Ministry of Environment, Environmental Protection Agency, together with the Polish Navy Academy, Polish Inspection for Environmental Protection organized the International Workshop on Environmental Effects Related to Waste Originating from Chemical Munitions Dumped at Sea (5 November 2012, Gdynia, Poland). The gathered representatives of academia, research institutions, non-governmental organizations, and the private sector focused their discussions on environmental, safety and security challenges and effects posed by sea-dumped chemical

munitions in various parts of the world as well as national and international responses to them. During the workshop it was also highlighted that relevant technology for remediation activities has been developed and some remediation efforts have been conducted on small scale by some countries. Drawing from the conclusions of the seminar Lithuania has elaborated a reporting module in order to facilitate submission of focused information on implementation of the UN General Assembly resolution A/RES/65/149 to the UN Secretariat.

During the Seventeenth Session of the Conference of the State-Parties to the CW (28 November 2012, The Hague) Lithuania and Poland organized the side event “Sea-dumped chemical weapons – recent developments”. The main issues discussed at the side event were: sea-dumped chemical weapons – global problem and need for a joint and global response; chemical munitions search and assessment programme (CHEMSEA) and its implementation; implementation of the resolution A/RES/65/149.

In the margins of the Third Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention (the Third CWC Review Conference) Lithuania in cooperation with Poland, the International Dialogue on Underwater Munitions (IDUM) and the ISAB organised another side event in April 10, 2013, The Hague. The aim of the side event was to encourage states, international and regional organizations to keep under observation and voluntary share relevant information on this matter; strengthen international efforts in raising awareness in order to create a safer, cleaner and sustainable environment. The event was sponsored by the European Union's Baltic Sea Region Programme 2007-2014 and an environmental organisation Green Cross International as well as the environmental engineering companies.

9. What would be, in your view, possible modalities for international cooperation to assess and increase awareness of WOCMDS?

It is important to ensure the continuity of international and regional projects, and activities related with WOCMDS.

Lithuania takes the issues relating to the environmental effects related to waste originating from chemical munitions dumped at sea forward in different international and regional fora, including Organization for Prohibition of Chemical Weapons (OPCW). At the Third CWC Review Conference (April 8 – 19, 2013, The Hague) Lithuania, Poland, Bulgaria and Luxembourg presented joint working paper which proposes to have the OPCW as a venue for voluntary sharing of information, raising awareness and cooperation on sea dumped chemical weapons among the States Parties, academia, the industry and NGOs. Following the initiative of Lithuania, Poland, Bulgaria and Luxembourg the issue of the sea-dumped chemical weapons was reflected in the final Report of the Third CWC Review Conference (RC-3/3, dated 19 April 2013), para.9.147: “The Third Review Conference noted the United Nations General Assembly resolution “Cooperative measures to assess and increase awareness of environmental effects related to waste originating from chemical munitions dumped at sea“, adopted at its 65th session by consensus, and invited States Parties to support voluntary sharing of information, raising awareness and cooperation on this issue”.