



With the participation of the beneficiary countries Republic of Moldova, Romania and Ukraine.

The project is managed by the secretariat of the United Nations Economic Commission for Europe Convention on the Transboundary Effects of Industrial Accidents.

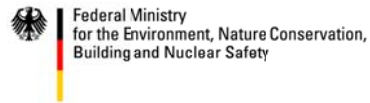
This project was funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety with means of the Advisory Assistance Programme for Environmental Protection in the Countries of Central and Eastern Europe, the Caucasus and Central Asia. Technical supervision for the project was provided by the German Federal Environment Agency.

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On behalf of:



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List of Abbreviations

BSC	Black Sea Commission
EC	European Commission
ECE	United Nations Economic Commission for Europe
ENPI	European Neighbourhood and Partnership Instrument
EU	European Union
ICPDR	International Commission for the Protection of the Danube River
PMG	Project Management Group
PPRD East	European Union Programme for the Prevention, Preparedness and Response to Man-made and Natural Disasters in the ENPI East Region

1 Introduction

Risk reduction and the application of adequate safety standards are a priority when trying to prevent industrial accidents. Yet, no matter how stringent the safety standards are, accidents will occur, with some of them also having the potential to cause severe transboundary effects. Riparian countries must be prepared and work together to be able to deal effectively with the (transboundary) consequences of industrial accidents.

After more than 2000 km, the Danube flows into the Black Sea where it forms one of the largest and most preserved river deltas in Europe. The area stretches over more than 600'000 ha and is famous for its unique ecosystems that host over 5,000 animal and plant species. Since 1991, the core of this nature reserve is a designated UNESCO World Natural Heritage Site. The outstanding environmental value and sensitivity of the region requires particular efforts for its protection.

While the entire Danube basin encompasses thirteen countries of Central and Eastern Europe, making it the most international river basin in the world, Romania, Ukraine and the Republic of Moldova have the most immediate impact on the Danube Delta.

Aware of the need for establishing effective cooperation, the Republic of Moldova expressed its interest to work with Ukraine and Romania to improve joint hazard and crisis management in the Danube Delta, an environmentally sensitive region requiring particular efforts for its protection.

Ukraine and Romania welcomed the proposal from the Republic of Moldova and the three countries requested jointly a project under the United Nations Economic Commission for Europe (ECE) Convention on the Transboundary Effects of Industrial Accidents and its Assistance Programme.

To cooperate effectively, countries need to focus on both crisis management and hazard management regarding the establishment of a hazard spots map in the region of the Danube Delta with the hazards identified in a harmonized way, introduction of procedures for hazard notification, in particular for hazardous activities, development of practical recommendations/actions for national authorities to strengthen hazard and crisis management, improvement of cooperation between the authorities and the industry, harmonization of the facilities' on- and off-site contingency plans and of off-site contingency plans between the project countries through the establishment of a contingency plan for the Danube Delta, introduction of procedures for crisis notification and joint response and strengthening of public awareness on hazard and crisis management.

This interim report outlines the completed activities and results achieved until 30 November 2013.

1.1 Introduction in the Project on hazard and crisis management in the Danube Delta

The project focuses on the need for effective cooperation on industrial safety between Romania, Ukraine and the Republic of Moldova, especially on the management of situations when major hazardous industrial facilities are located along transboundary waterways, as in the case of the Danube Delta. It seeks to enhance, and where possible harmonize, the mechanisms and approaches for efficient and effective hazard and crisis management.

In terms of hazard sources, the project focuses in particular on oil terminals, which are located in Romania, Ukraine and the Republic of Moldova directly upstream of or within the Delta: Giurgiulesti (Republic of Moldova); Galati (Romania); and Reni/Izmail (Ukraine). These terminals generate an increased hazard potential for the ecosystem and natural heritage of the Danube Delta, because according to data from the ICPDR, oil spills are the most common risk of transboundary water pollution, for which the Emergency Warning System (AEWS) of the Danube River Basin has been activated¹.

The project promotes cooperation between the relevant authorities in the project countries (mostly authorities responsible for the environment protection, civil protection, transport, regional and local authorities, etc.) and between authorities and industry, e.g. operators of oil terminals. The project recognizes the importance of transparency and public communication and participation by integrating communication and information methodologies and tools into the overall project result. As a consequence, one of the priorities of this project is also to strengthen public awareness of hazard and crisis management.

1.1.1 Hazard management

Romania, Ukraine and the Republic of Moldova have a common interest in understanding and improving the hazard identification and prevention undertaken by each of them. To this end, they committed to cooperate under the Danube Delta project and inform each other of the legal acts, procedures and standards they had put in place in order to identify hazardous activities and to assure their safe operation. They also committed to share good practices in order to improve their industrial safety policies.

The three countries also expressed their interest to learn from good practices in conducting inspections of hazardous activities during the project. To this end, they requested joint inspections to be carried out during the project using different training activities and checklist methodologies translated into their national languages.

1.1.2 Crisis management

Romania, Ukraine and the Republic of Moldova also have a common interest to engage in a process to harmonize their off-site contingency plans and establish a joint contingency plan for the Danube Delta. Furthermore, they are interested to establish

¹ Data taken from the website of ICPDR (<http://www.icpdr.org/main/activities-projects/aews-accident-emergency-warning-system>, retrieved December 2013)

and implement procedures allowing for effective cooperation during emergency situations. To this end, the countries committed to work together under the Danube Delta project and inform each other about the legal basis and procedures they had put in place for preparedness and response to industrial accidents. They also committed to develop a joint contingency plan for response to emergency situations in the Danube Delta region.

In order to properly assess the preparedness and response procedures, including early warning, notification and response actions, the countries agreed within the implementation plan of the project to organize table-top and field exercises. These exercises will be followed-up through the identification of shortcomings and areas for improvement in joint crisis management and in order to make an action plan to address them.

1.1.3 Project organization

The project was designed to be implemented through national groups working on hazard and crisis management. For each country national groups for hazard management and crisis management are foreseen. Representation in these groups varies according to the specificity of the tasks each of these groups has to tackle. In particular the national groups, as set up, are flexible so that the project benefits the most relevant target groups. .

The national groups cooperate with industry and coordinate their work through hazard management and crisis management groups. In September 2012, the countries decided to merge these two groups to form a single technical group on hazard and crisis management. The technical group consists of representatives of the project countries who will assume responsibility of leaders and coordinators for the work on the national level.

A Project Management Group (PMG) was established under the project to ensure that the project objectives are followed and that appropriate support to the work on the national level is provided. It should further safeguard that the technical group on crisis and hazard management works in the most effective way and uses the most relevant approaches to reach the project goals for the crisis and hazard management components. The PMG consists of representatives of the competent authorities of the Danube Delta countries, representatives of Germany and the Netherlands as main donor countries and representatives of the ECE Convention secretariat.

1.2 Hazard and crisis management approach

Effective cooperation on industrial safety between neighbouring countries is essential. This is even more important when major hazardous industrial facilities are located along transboundary waterways, as for example in and upstream of the Danube Delta.

The project recognises that effective cooperation can only be successful if it addresses hazard management (prevention) and crisis management (preparedness and response), as well as aftermath management, and when feedback is shared between the countries and their authorities dealing with the different risk management areas.

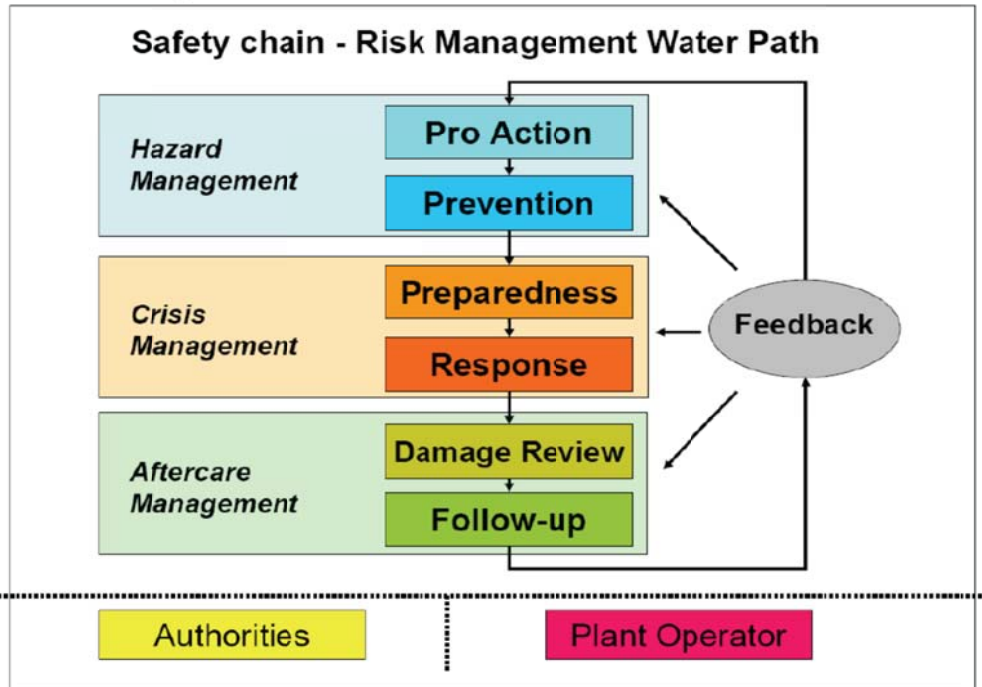
Generally speaking cooperation is possible if countries have established legislation on industrial safety, providing the basis for hazard, crisis and aftermath management. Additionally, effective cooperation relies on bi- or multilateral agreements that specify in more detail the responsibilities of the neighbouring countries and their authorities vis-à-vis each other. As part of the project, the three countries committed to concentrate their efforts on the preparation of bilateral or trilateral agreements related to hazard and crisis management.

In order to improve the hazard and crisis management in the project countries, using the most effective approach is of the utmost importance. Applying the concept of the safety chain as defined at the Safety Chain Workshop in The Netherlands, Rotterdam, 8 and 9 November 1999 (see Figure 1 below), appears to be useful in order to reduce the risk of occurrence of an industrial accident and to guarantee a high level of safety through identifying, and where possible, correcting shortcomings in both hazard and crisis management.

The safety chain consists of three components: (1) hazard management; (2) crisis management; and (3) aftercare or aftermath management. Each component is divided into two subcategories: For hazard management these are (1a) pro action and (1b) prevention; for crisis management these cover (2a) preparedness and (2b) response; and for aftercare management these include (3a) damage review and (3b) follow-up. Although aftercare management is an important issue to be addressed in the safety chain, it is not within the scope of this project. These components and subcategories are all coherent and interlinked. They provide the framework for specific actions that should be taken in order to achieve an optimal level of both hazard and crisis management.

The concept is broadly accepted and frequently applied in policymaking and evaluation processes. Compliance with the requirements (by industry) and monitoring (by the authorities) in each component is crucial.

Figure 1: The Safety Chain²



For hazard management, it is important that neighbouring countries are able properly to identify sources of hazard, maintain relevant databases and exchange information on hazards.

Within crisis management, neighbouring countries should develop and harmonize off-site contingency planning for industrial facilities with possible transboundary effects, preferably based on bilateral or trilateral agreements. This harmonization should include, especially for the response planning along waterways, agreement on the use of alert and warning systems, establishing sectors for response and procedures and schemes for providing each other mutual assistance.

Another important part of crisis management is the continuous joint training of the response forces to verify that agreed procedures and systems are well-known and easily applicable by the national emergency services.

Aftermath management also requires relevant cooperation. Countries should first of all help each other, when needed, in identifying the causes of major accidents. In the event of accidents in border areas, they should evaluate the joint response and identify any ineffective procedures. They should share with each other lessons learned from different incidents and accidents so that similar events can be prevented or more effective response can be prepared for them. However, aftermath management is not within the scope of the current project.

² Figure by the German Federal Environment Agency.

2 Project context

2.1 Project countries

Over the past decade, several industrial accidents occurred in the lower and middle Danube River basin region that revealed deficiencies in industrial safety. The transboundary effects of the accidents in Baia Mare (Romania, 2000), Prahovo (Serbia, 2006) or Kolontar (Hungary, 2010) highlighted the need for transboundary cooperation between countries in order to prevent, prepare for and respond to these kind of industrial accidents effectively.

In addition, there are major deficiencies in the legal framework for prevention, preparedness and response to industrial accidents in Ukraine and the Republic of Moldova. Due to the fact that both countries are neither EU member nor official candidate countries, they are not obliged to implement the Seveso II Directive. Furthermore, only the Republic of Moldova and Romania have ratified the Convention on the Transboundary Effects of Industrial Accidents (4 January 1994 and 22 May 2003 respectively). The Republic of Moldova and Ukraine are beneficiary countries under the Convention's Assistance Programme and have committed to make the necessary efforts to implement the Convention. The Assistance Programme aims at supporting Parties and ECE countries with economies in transition to improve industrial safety through the implementation of the Convention.

One of the project benefits for both the Republic of Moldova and Ukraine is to increase their knowledge on and approach the applicable EU and international environmental standards in order to improve industrial safety and transboundary cooperation. Although national procedures for the prevention of, preparedness for and response to industrial accidents are in place in the respective countries, there is a lack of enforcement as well as a lack of transboundary mechanisms and procedures in the legislation. Thus, in case of an industrial accident in the Danube Delta, joint intervention or accident notification cannot take place or would be limited and with significant time delay.

2.2 Project partners

Within the project on hazard and crisis management in the Danube Delta, the International Commission for the Protection of the Danube River, the Black Sea Commission, the European Commission and industry representatives (e.g. oil terminal operators, such as the Giugiuilesti Oil Product Terminal, owned and operated by Danube Logistics) from the project countries are crucial project partners.

International Commission for the Protection of the Danube River (ICPDR)

The general objective of ICPDR is to ensure the protection of waters and freshwater resources and their quality in the Danube River Basin, as well as to ensure that these are used in a sustainable and equitable way. The Convention on Co-operation for the

Protection and Sustainable Use of the River Danube, also known as the Danube River Protection Convention (see section 2.3), serves as the legal framework for mutual cooperation as well as transboundary water management in the region.

Important element is the cooperation with the Accident Prevention and Control Expert Group (APC EG). It develops strategies to prevent or manage accidents, works with pollution prevention and precautionary controls including inventories of accident risk spots, old contaminated sites in areas liable to flooding and mining sites. The APC EG supports the operation and development of the Danube Accident and Emergency Warning System, and the communication of alarm/warning messages in the event of accidents, which will be used when designing and implementing the table-top and field exercises.

All three project countries are Contracting Parties to the Danube River Protection Convention. The cooperation with ICPDR will allow the application of the project results in the whole Danube River catchment area. The project results will also find application elsewhere in the ECE region, in particular in the transboundary river basin areas.

Black Sea Commission (BSC)

BSC promotes cooperation between different stakeholders, such as governments, non-governmental organizations (NGOs) and other regional actors, to protect the Black Sea region against pollution. BSC manages and implements the Convention for the Protection of the Black Sea Against Pollution (see section 2.3). Romania and Ukraine are Contracting Parties to the Convention. The Republic of Moldova has observer status for some BSC activities.

The environmental situation of the ecosystem of the Black Sea reflects a serious concern in the BSC countries and for the international community. Via the tributaries of the Black Sea – among which the main one is the Danube River – hazardous substances from the coastal countries enter the Black Sea and threaten biodiversity. Increased transportation of hazardous substances, in particular of oil and oil products, by pipelines, tankers, etc. increases also the potential risk of pollution. Joint efforts within the project are necessary to prevent and reduce environmental pollution and degradation.

The Oil Spill Preparedness Regional Initiative for Caspian, Black Sea and Central Eurasia (OSPRI)

The OSPRI has been established by a group of oil companies to promote proven, credible, integrated and sustainable oil spill response capability in the Black Sea region. It could provide support in the crisis management phase of the project.

European Commission (EC)

The prevention and control of major industrial accidents is also a major issue in the European Union (EU). Regarding major accident control, the EU has adopted the Seveso II Directive, details of which are given below in the report.

With regard to prevention of water pollution arising from industrial accidents, the EU Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (EU Water Framework Directive) plays also a crucial role.

Regarding major accident response and the need of transboundary cooperation, the EU has set up and funded the Programme for the Prevention, Preparedness and Response to Man-made and Natural Disasters in the ENPI East Region (PPRD East). Its goal is to contribute to the development of the Partner Countries' civil protection capacities for disaster prevention, preparedness and response through regional cooperation and to bring the Partner Countries progressively closer to the EU Civil Protection Mechanism and improve cooperation among themselves.

The cooperation with EC within the project on hazard and crisis management is important. Although of the project countries only Romania is an EU member State, the EU has also a great interest in closer relations with its neighbouring countries, Ukraine and the Republic of Moldova, as expressed in the framework of the European Neighbourhood Policy.

2.3 International legal framework for hazard and crisis management

The international legal framework for hazard and crisis management in the ECE region is in first instance provided by the ECE Convention on the Transboundary Effects of Industrial Accidents (1992) and the EU Seveso II Directive (1996). Other agreements, such as the BSC Convention on the Protection of the Black Sea Against Pollution (1992) and the ICPDR Danube River Protection Convention (1994) also play an important role.

ECE Convention on the Transboundary Effects of Industrial Accidents

The Convention on the Transboundary Effects of Industrial Accidents (adopted in Helsinki on 17 March 1992 and entered into force on 19 April 2000) is designed to protect people and the environment against industrial accidents. The Convention aims at preventing accidents from occurring, or reducing their frequency and severity and mitigating their effects if required. It also promotes active international cooperation between countries, before, during and after an industrial accident.

The Convention requires its Parties to identify or establish competent authorities to supervise its application. It also obliges its Parties to identify hazardous industrial operations and assess the risks so as to ensure that they operate safely and that precautions are taken to prevent accidents. Moreover, neighbouring countries need to be informed about such hazardous activities, in order to draft cross-border contingency plans. The Convention's framework also includes a system of notification, the ECE Industrial Accident Notification System that assures that countries which might be affected will be informed immediately in case of an industrial accident.

In addition, the Convention promotes sharing of information and technology to improve emergency preparedness and industrial safety in countries with economies in transition. At its third meeting on 27-30 October 2004 in Budapest, the Conference of the Parties to the Convention adopted an Assistance Programme to support the

countries of Eastern Europe, the Caucasus and Central Asia and South Eastern Europe in implementing the Convention.

EU Seveso II Directive (Council Directive 96/82/EC)

Council Directive 96/82/EC (Seveso II Directive) regulates the control of major-accident hazards involving dangerous substances (adopted on 9 December 1996 and entered into force on 3 February 1997) and aims at improving industrial safety within the European Union member States. The Directive includes an annex lists with named and categorised hazardous substances and their threshold quantities. Companies, where quantities of dangerous substances above the lower threshold contained in the directive are present, will be covered by the lower tier requirements. Companies where quantities of dangerous substances are above the upper threshold contained in the directive, will be covered by all the requirements contained within the Directive (upper tier establishments). All establishments that are in the scope of the Directive are obliged to take all necessary measures to prevent industrial accidents and to limit their consequences for human health and the environment.

According Council Decision 98/685/EC of 23 March 1998 concerning the conclusion of the Convention on the Transboundary Effects of Industrial Accidents, it is a legal tool for the implementation of the Industrial Accidents convention.

The Seveso II Directive replaced the Seveso I Directive 82/501/EEC by introducing new requirements for, among others, safety management, emergencies, land-use planning and inspections. In addition, on 16 December 2003, the Seveso II Directive was amended by Directive 2003/105/EC. This amendment reflects another extension of the Directive's scope by including certain industrial activities, and modifying some threshold quantities. The EU Seveso III Directive, adopted in 2012, will apply from 1 June 2015.

BSC Convention on the Protection of the Black Sea Against Pollution

The Convention on the Protection of the Black Sea Against Pollution (adopted on 21 April 1992) was ratified by all six contracting parties of the Black Sea Commission (Bulgaria, Georgia, Romania, Russian Federation, Turkey, Ukraine) in 1994. The Convention and its three Protocols³ constitutes the legal framework for cooperation between the countries in order to decrease pollution of the Black Sea and to protect the marine environment.

ICPDR Convention on Co-operation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention)

The Convention on Co-operation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention) was signed on 29 June 1994 by Austria, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Republic of Moldova, Romania, Slovakia, Slovenia, Ukraine and the European Community. Currently there are 15 Contracting Parties who have committed themselves to

³adopted on 21 April 1992 and entered into force on 15 January 1994, include: (1) Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land Based Sources; (2) Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations; and (3) Protocol on the Protection of the Black Sea Marine Environment Against Pollution by Dumping.

implement the Danube River Protection Convention. The Convention provides the legal framework for the parties' cooperation in the field of transboundary management in the Danube River Basin and aims at ensuring that waters and freshwater resources in the Danube River Basin are used in a sustainable and equitable way. All three project countries signed the Danube River Protection Convention that entered into force on 22 October 1998.

3 Goals of the Project

3.1 General objective

The general objective of the project is to improve cooperation between Ukraine, Romania and the Republic of Moldova in the Danube Delta region through enhancing, and where possible harmonizing, the mechanisms and approaches for efficient and effective hazard and crisis management. The cooperation is to result in joint agreements on these topics between the three project countries. Understanding and cooperation between authorities and industrial operators should also improve.

To reach the general objective the project consists of three phases: 1) preparation, 2) hazard management and 3) crisis management. Phase 1 is complete; phases 2 and 3 of the project are still on-going.

3.2 Objectives per phases

3.2.1 Phase 1 – preparation

The objective of the preparation phase was to kick off the project by agreeing on the implementation plan and committing to apply it.(see section 5.2).

3.2.2 Phase 2 – hazard management

Taking into account the interest and commitments of the project countries, they should be able to implement a sound strategy on hazard management during the duration of the project. The strategy should cover national “pro action” and prevention measures.

With regard to pro action, the project countries will establish inventories of potential hazard sources, in particular fixed installations. Regarding prevention, the project countries will focus on area-related measures, especially in respect of technical instruments and flood protection, as well as on plant related measures, for which they will discuss and agree minimum common safety standards.

The objectives for the hazard management phase are:

- To identify areas for enhancing and possibly harmonizing procedures for hazard management, including hazard assessment;
- To discuss and to the extent possible harmonize the safety standards at the major hazardous facilities located in the Danube Delta region, especially oil terminals;
- To enhance cooperation between competent authorities and operators of major industrial facilities;
- To draft safety guidelines for oil terminals;
- To train inspectors, in particular on enforcing safety;
- To draft action plans for improving hazard management;

- To help in preparing bi- or trilateral sectoral agreements related to hazard and crisis management; and
- To create public awareness about the importance of hazard management through contact with the media.

3.2.3 Phase 3 – crisis management

Also in crisis management, taking into account the countries' interest and commitments, they should be able to implement a sound strategy on crisis management, covering issues of preparedness and response.

Regarding preparedness, the project countries would have further strengthened their early-warning systems to improve, for instance, the detection and assessment of incidents. Moreover, the countries would have enhanced their warning and emergency plans, especially with regard to their warning and alert technology and criteria. They would have also fostered their protection planning, in particular, the stockpiling of technical equipment and the assignment of responsibilities.

Regarding response, the project countries would have strengthened their alarm management and reaction measures, such as disaster assistance, and measures related to objects requiring protection or recovery.

The objectives of the phase aimed at crisis management are:

- To identify areas for improvement in working together in an event of an emergency (i.e. warning, notification, response actions, consequence modelling, etc.);
- To identify areas for improvement when requesting and receiving assistance, in particular in the event of major oil pollution in the Danube Delta;
- To review the compatibility of off-site emergency plans;
- To draft action plans for improving crisis management;
- To include a part on crisis management in bi- or trilateral sectoral agreements;
- To create public awareness about the importance of crisis management through contact with the media.

3.3 Expected results

By reaching all the above objectives the project phases will lead to the following results:

- Establishment of a hazard spots map of the Danube Delta region with the hazards identified in a harmonized way;
- Introduction of procedures for hazard notification (in particular hazardous activities) as well as for crisis notification and joint response;
- Development of practical recommendations or actions for national authorities to strengthen hazard and crisis management;
- Improvement of cooperation between authorities and industry;
- Harmonization of off-site contingency plans or establishment of a contingency plan for the Danube Delta;
- Harmonization of on- and off-site plans;

- Establishment of bi- or trilateral sectoral agreements related to hazard and crisis management;
- Strengthened public awareness on hazard and crisis management.

The project is expected to achieve the goals of hazard and crisis management as set out in the table below.

Figure 2: Overview of how project activities address or contribute to the hazard and crisis management approach, with reference to the safety chain

	Measures	How addressed or contributed to by the project	
Hazard Management	Pro Action	Reviewing/creating the necessary legal basis	Identification of areas for enhancing the project countries' national legislation during two technical workshops on hazard management with the aim to draft action plans and help establish bi-/trilateral agreements for improving hazard (and crisis) management
		Reviewing/creating the necessary assessment criteria	Review international agreements for hazard (and crisis) management, such as the ECE Convention on the Transboundary Effects of Industrial Accidents, the Seveso II Directive, the Water Framework Directive or the ICPDR Danube River Protection Convention, in the preparation of and follow-up to the workshops
		Reviewing/creating basic safety requirements	Initiation of an expert group for the elaboration of safety guidelines for oil terminals
		Establishing/engaging competent institutions and bodies	Establish expert groups, such as for the elaboration of safety guidelines, and cooperate with project partners, such as the ICPDR, BSC and EU
		Analysis of potential hazards	Preparation and exchange of inventories on hazardous activities with possible transboundary effects in the project countries and, based on that, preparation of a hazard map for the Danube Delta
Prevention		Provision of technical (planning) instruments	Checklists, prepared within the project
		Area related measures, such as technical instruments, land-use planning and flood protection (by authorities)	Discussion of safety standards to be applied at installations with the aim to agree on minimum common safety standards among the project countries
		Plant related measures (by operators and authorities)	Organization of joint visits to Galati (Romania), Giurgiulesti (Republic of Moldova), and Odessa (Ukraine) ⁴ , including the application of the German checklist methodology for basic and

⁴ At its third meeting, the project management group decided to organise a joint visit to the oil terminal in the port of Odessa instead of Reni and Izmail. The decision was taken due to logistical and organisational reasons. The joint visit was organised as part of the workshop on safety guidelines and good industry practices for oil terminals that was held on 23–25 September 2013.

	Measures	How addressed or contributed to by the project
	<p>Involvement of the public</p>	<p>advanced safety measures,⁵ training of trainers</p> <p>Publications, newsletters</p>
<hr/> <p>Crisis Management</p> <hr/>		
<p>Preparedness</p>	<p>Design and establishment of emission-related (river- and plant-related) early warning systems linked to measurement and communication network</p> <p>Design and implementation of warning and emergency plans, disaster control plans, accident management plans etc.</p> <p>Provision of technical facilities and equipment for protective measures and damage containment (at public and plant level)</p> <p>Ensuring readiness and functioning of crisis management instruments</p> <ul style="list-style-type: none"> • at public level • at plant level • crisis communication (at all levels) 	<p>Not addressed yet, but the project will enhance the utilisation of the Warning and Alert System of the ICPDR</p> <p>Enhancement and harmonisation of on- and off-site emergency plans, introduction of procedures for crisis notification and joint response through establishing a joint contingency plan for the Danube Delta. Exchange of information on procedures for emergency preparedness (and response) at a technical workshop on crisis management, including the identification of areas for improvements at the public and plant level</p> <p>Not within the scope of the project</p> <p>Testing (transboundary) procedures for crisis notification and joint response during a table-top and a field exercise with a realistic scenario</p>
<p>Response</p>	<p>Process of giving an emergency alert</p> <p>Immediate responses (such as damage containment, measures for the protection of uses and other objects of protection, immediate damage remediation, mobilisation of human and material resources etc.)</p>	<p>Improved cooperation for strengthening alarm management and disaster assistance</p> <p>Response measures have to be taken for a concrete incident and are, more specifically, not management planning measures. Their effectiveness is largely subject to the measures taken for pro-action and prevention (hazard management) and preparedness (crisis management).</p>

⁵See, for example, the checklist for safety reports available on the website of the Convention at www.unece.org/env/teia.

4 Implementation mechanism

4.1 Organizational structure

The project is implemented by the work of national groups as described in Chapter 1.1.3 with regard to both hazard and crisis management. The national groups cooperate with industry.

The national groups coordinate their work through the technical group on hazard management and crisis management⁶, which consists of representatives of each project country who take the positions of leaders and coordinators for the work on the national level. The work of the technical group on hazard and crisis management is supported by industry representatives and the PMG.

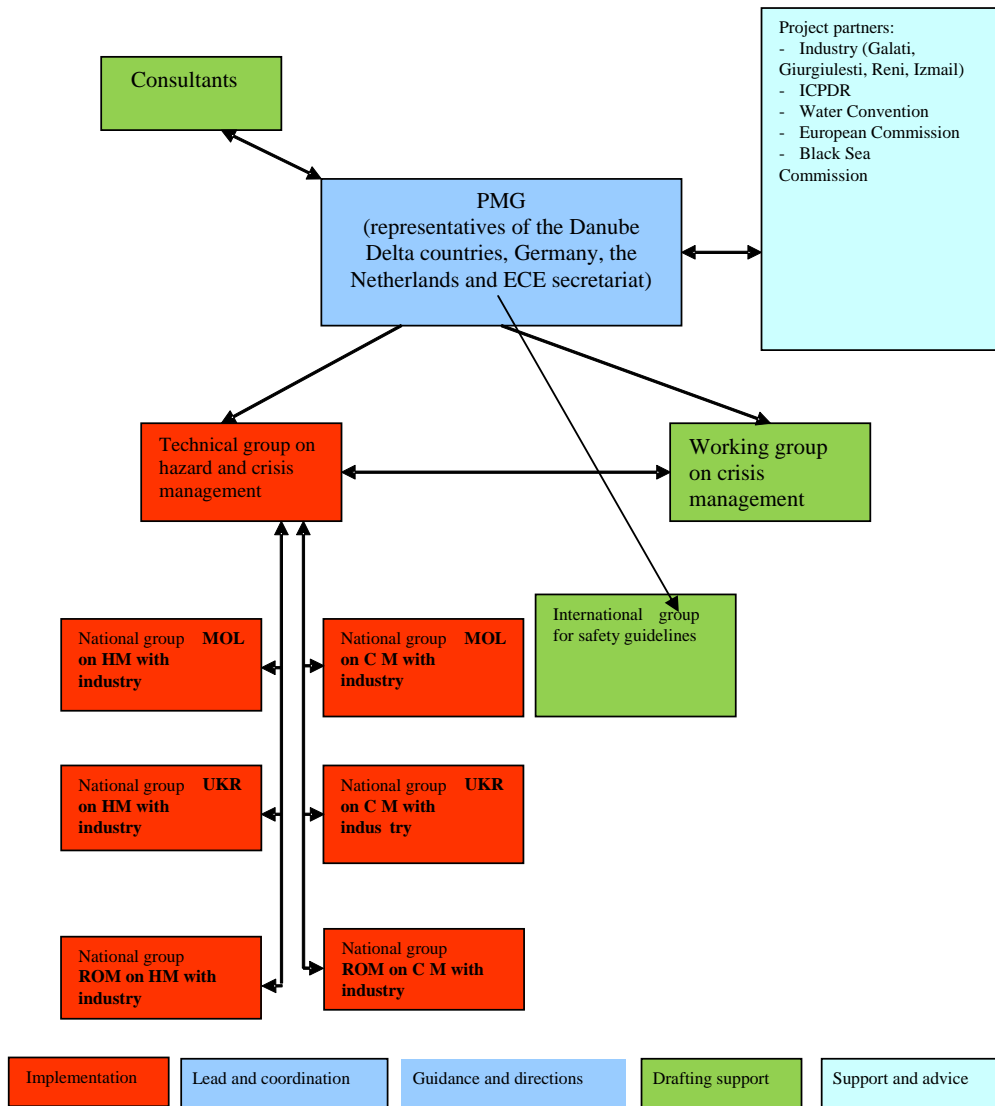
A crucial role in supporting the project is through its partners (international organizations and industry), who facilitate and contribute to ensuring that the project results strengthen compliance with international framework agreements, to which the project countries are party and improve understanding between the authorities and industry.

The implementation structure, including interlinks between the different project groups, is shown in Figure 3 below. The tasks of the groups and their membership are provided in the periodically-updated implementation report.

The international expert group for drafting the Safety guidelines and best practices for oil terminals was established in March 2012. The expert group consists of national and international experts from Belgium, Germany, Romania, the Russian Federation and the United Kingdom, including the representatives of national authorities and operators. It works closely with the PMG and the ECE secretariat.

⁶Merged into a single technical group in September 2012.

Figure 3: Organizational structure



4.2 Planned Project activities

To reach the overall and specific project objectives, a number of activities have been designed in each of the project phases. These are described, together with the work to be carried out between activities, in more detail in the periodically-updated implementation report. The planned and implemented activities and their objectives are listed below.

4.2.1 Phase 1 – preparation activities

Kick-off meeting (implemented)

- Presentation of the project's implementation plan;
- Formal acceptance by each project country of the implementation plan;
- Formal establishment of project's technical group on hazard and crisis management;
- Formal establishment of national groups.

4.2.2 Phase 2 – hazard management activities

Technical workshop 1 (for review of legal basis) (implemented in July 2011)

- Discussion on the national legal bases and procedures for the identification of hazardous activities and ensuring their safe operation, requirements arising from ECE Industrial Accidents and Water Conventions, Danube Convention and Water Framework and Seveso II Directives (basic and advanced safety regulations/requirements);
- Identification of deficiencies in hazard management within the countries with use of indicators and criteria under the Convention's Assistance Programme;
- Sharing of information on adopted control regimes for enforcing safety, review of good practices.

Joint Visit 1 to ports of Galati and Giurgulesti (implemented in September 2011)

- On-site review of safety standards with use of safety assessment criteria provided by ICPDR;
- Review of deficiencies identified in hazard management (national control regimes and safety standards) through application of safety assessment criteria;
- Setting up basis for development of safety recommendations and guidelines for ports handling hazardous substances.

Joint Visit 2 to the port of Odessa (implemented in September 2013)

- On-site review of safety standards with use of safety reports/documents of the ports and of the safety guidelines, good industry practices for oil terminals and the short checklist (see chapter 5.3.4)⁷;
- Review of the applicable safety standards for oil terminals;

⁷The Joint visit was organised as a part of the workshop on the safety guidelines and good industry practices for oil terminals that was held on 23–25 September 2013.

- Discuss the environmental impact of and lessons learnt from past accidents at oil terminals;
- Review of the draft safety guidelines and good industry practices for oil terminals.

Technical workshop 2(planned for 2014)

- Presentation of action plans or recommendations for improving hazard management (improvements to legislation, standards, etc.);
- Setting basis for bi- or trilateral sectoral agreement on hazard and crisis management in the Danube Delta (hazard management part);
- Finalization of the draft safety guidelines and good industry practices for oil terminals.

Training for inspectors (phase 1 implemented during the joint visits 1 and 2 in 2011, respectively 2013, ongoing)

- Training of trainers in carrying out effective inspections of hazardous activities.

Meetings of expert group for the elaboration of safety guidelines for oil terminals (four meetings organised between March 2012 and September 2013)

- Elaboration of draft safety guidelines for oil terminals.

4.2.3 Phase 3 – crisis management activities

Technical workshop (implemented in December 2011)

- Discussion on national procedures for emergency preparedness and response, analysis of approaches to crisis management, and identification of deficiencies with use of Convention’s indicators and criteria.

Table-top exercise or serious gaming with results evaluation (planned for 2014)

- Review of the crisis management procedures through top-table exercising or serious gaming.⁸

Field exercise with results evaluation (planned for 2014)

- Review of the crisis management procedures through field exercising;
- Review of reports with deficiencies identified in crisis management and setting up basis for an action plan or recommendations for elimination of deficiencies in crisis management (local, national and international context).

Final workshop (planned for 2014)

- Presentation of project’s implementation and achievements;

⁸ A “serious game” is a game designed for a primary purpose other than pure entertainment, e.g. for problem solving or teaching.

- Presentation of action plans or recommendations on hazard and crisis management and the status of implementation;
- Formal approval of bi- and/or multilateral sectoral agreements;
- Sharing of lessons learned from the project with representatives of other Assistance Programme beneficiary countries.

5 Interim implementation and results

5.1 Overview of the implementation

There have been a number of activities organized to date for both the hazard and crisis management components. The national groups assumed the responsibilities for preparing the substantive inputs and for the follow-up of the workshops on national level. The work was coordinated by the technical group on hazard and crisis management. In addition, the PMG met three times (on 11 August 2011, 14 September 2012 and 18 April 2013) in order to support the work of the technical group.

Hazard management component: activities and follow-up

A technical workshop on hazard management and a joint visit to the ports of Galati (Romania) and Giurgiulesti (Republic of Moldova) took place in July and September 2011. At the technical workshop, the countries analysed the existing legal framework for hazard identification, prevention and public participation, identified areas for improvement and discussed opportunities for cooperation. During the joint visit, the participants discussed basic safety aspects and standards to be ensured at installations such as oil terminals, applied a checklist methodology on basic safety standards at the oil terminals in Galati and Giurgiulesti and reviewed the results of the assessment.

As part of the workshop on safety guidelines for oil terminals (23–25 September 2013), a second joint visit to Prista Oil terminal and the oil and gas terminal loading facility within the Port of Odessa was organised. During the workshop participants, facilitated by international experts and the secretariat, discussed applicable safety standards for oil terminals, the environmental impact of and lessons learnt from past major accidents at oil terminals and they reviewed the draft safety guidelines and good industry practices for oil terminals. During the site visit, participants met with the facilities' managers, technical staff and loading operators and examined different aspects of the hazard and risk assessment, emergency planning, inspection and maintenance of mechanical integrity, applicable design standards, competence assurance for the personnel, auditing procedures, management of operations and the management systems applied onsite. The questions were based on a short checklist on the safety guidelines and good industry practices for oil terminals. Participants also had access to technical documentation such as emergency plans, national standards, internal standards and operating procedures and discussed basic safety aspects and standards to be ensured at oil terminals. At a plenary session at the end of the workshop, participants reviewed the results of the site visit, discussed the feedback on the draft safety guidelines received from participants during the workshop and identified the way forward.

As follow-up to the activities in hazard management, the project countries held three hazard management group meetings (12 May, 14 July and 30 September 2011). They agreed to establish inventories of hazardous activities in the Danube Delta that were later exchanged between the countries. The inventories served also as a basis to

prepare a first draft of a hazard spots map in August 2012. Further, the project countries agreed to establish an expert group for the elaboration of safety guidelines for oil terminals. The expert group consists of national and international experts from Belgium, Germany, Romania, the Russian Federation and the United Kingdom, including the authority and operator level. The group has met four times to date (March and June 2012 as well as January and September 2013) to prepare and further develop the draft version of the safety guidelines. An advanced draft was distributed in August 2013 to the project countries for discussion at the workshop on safety guidelines for oil terminals in September 2013 in Odessa (Ukraine). The feedback from participants was very positive and several aspects were discussed to improve the safety guidelines (for more information, see chapter 5.3.4). At its fourth meeting held back-to-back with the workshop, the expert group agreed on the way forward for the finalisation of the safety guidelines, including the distribution of the revised draft version to partners and focal points of the Industrial Accidents Convention for comments before presenting the safety guidelines for endorsement at the eighth meeting of the Convention's Conference of the Parties in autumn 2014.

Crisis management component: activities and follow-up

The crisis management component of the project started in December 2011 with a technical workshop on emergency preparedness and response. This had been decided during a pre-meeting of the crisis management group on 30 September 2011 in Galati, Romania. At the second PMG meeting (14 September 2012), the project countries further agreed that: (i) the Republic of Moldova would lead the preparation of the table-top exercise which was scheduled for October 2013, including the development of an exercise scenario; and (ii) Romania would lead the elaboration of a joint contingency plan for response to emergency situations in the Danube Delta region presumably by May 2013. The project countries exchanged information on their emergency procedures, but no significant progress has been made.

At its third meeting (18 April 2013), the PMG decided to hold the table-top and field exercises back-to-back in order to save costs. As there was no funding available for those activities the PMG decided to postpone the exercises to 2014. It encouraged all group members to seek for funding to support the implementation of the before-mentioned activities.

During the initial stage of the project, it was agreed that legal assessments should be prepared allowing to compare the existing legal systems between the project countries as well as to identify shortcomings, if any. For Ukraine and the Republic of Moldova, this assessment will also help them to fulfil their obligations as beneficiary countries under the Assistance Programme to prepare a self-assessment and an action plan based on the Assistance Programme's indicators and criteria. It should also serve as a basis for the establishment of bi- and/or trilateral sectoral agreements to improve hazard and crisis management between the project countries in the Danube Delta. The ECE Industrial Accident Convention secretariat succeeded in receiving additional funds to cover the expenses for a consultant to undertake this activity. In addition, a consultant was chosen by the PMG to elaborate the comparative analysis of the national legal frameworks of the project countries. The results of the analysis are expected to be delivered in the first half of 2014.

The impact of the project will be assessed in the final project report, for which purpose an evaluation template will be established and presented to the PMG at its next meeting in 2014. Nonetheless, at the PMG meeting held in September 2012, the countries identified some of the project's effects to date (see box for an overview of progress made in the Republic of Moldova).

Progress made to date in the Republic of Moldova

In the Republic of Moldova the project has already led to an increase in the level of awareness and to the identification of relevant players on the national and regional levels. The Republic of Moldova's experiences also affect the cooperation between the three involved ministries: the Ministry of Environment and Natural Resources (State Ecological Inspectorate and Environmental Quality Monitoring Department); Ministry of Interior (Civil Protection and Emergency Service); and the Ministry of Economy (Main Inspectorate for Industrial Safety).

5.2 Kick-off meeting

Date: 11 May 2011

In the kick-off meeting project partners agreed on project objectives and activities through adopting formally the project implementation plan. It was a high-level meeting and hosted by the Ministry of Ecology and Natural Resources of Ukraine in Kyiv.

Furthermore, the meeting concluded that the involvement of the private sector would be a key to the success and sustainability of the project. Therefore, close cooperation with operators of hazardous facilities in the project regions was pursued. Representatives from the ports of Giurgiulesti (Republic of Moldova) and Galati (Romania), as well as Izmail and Reni (Ukraine), thus expressed their full support for the project.

In addition, the meeting decided that the project should be further supported by other on-going initiatives in the region. This is crucial with regard to the compatibility and creation of synergies with activities implemented in the Danube River basin. Key partners in ensuring this accumulated value of the project are ICPDR, BSC and EC.

5.3 Hazard management

5.3.1 First Technical workshop on hazard management

Date: 12 - 13 July 2011

The first technical workshop on hazard management was designed to set the scene for the upcoming work in the project by analysing the existing national frameworks regarding hazard identification, prevention and public participation. It brought together representatives from the three project countries, as well as observers from Belarus.⁹ Furthermore, international experts from various institutions shared experience regarding international standards and good practice for legal frameworks, licensing, and checklist systems in hazard management, aimed, in particular, at protecting international rivers from the effects of industrial accidents.

⁹Participants from Belarus were supported financially by the PPRD East project.

In preparation for the technical workshop, each country analysed its legal basis and procedures for the identification of hazardous activities, the prevention of industrial accidents and public participation. During the workshop the countries presented their self-assessments, conducted according to the indicators and criteria specified in the ‘Benchmarks for the implementation of the Convention on the Transboundary Effects of Industrial Accidents’. As a result, the three project countries acquired basic knowledge of each other’s legal bases, procedures and measures for the prevention of industrial accidents.

Furthermore, the experts from the project countries discussed in working groups differences, similarities and gaps in three focus areas: hazard identification; hazard prevention; and public participation. The exchange showed that the countries generally have legal frameworks in place to support adequate management of hazards to health and environment. These legal provisions, however, need to be supported by effective measures and procedures applied by trained personnel, in particular inspectors, with capacity to identify shortages and enforce technical requirements at industrial facilities.

Regarding the identification of hazardous activities, the project countries found during the work in groups that there was no common basis for the identification of activities hazardous to waters between the three countries, and no protocol on data exchange between the competent authorities. Therefore, they agreed to work towards preparing inventories of hazardous activities in the Danube Delta.

Concerning accident prevention, the project countries took notice of several legal provisions that were formally in force. The project countries emphasized the need to verify the level of implementation of the legislation through capacity building, such as training courses for personnel and inspectors at hazardous installations.

With regard to public participation, Ukraine and the Republic of Moldova found major shortcomings in their existing national frameworks; Romania identified a few areas for improvement. Hence, the project countries emphasized the need to strengthen public participation in hazard prevention and, thereby, learn from examples of good practice from other countries.

As a result of the technical workshop, the project countries concluded that, among others, one priority area for cooperation was information exchange on industrial activities. Furthermore, the countries agreed that the upcoming project activities should focus on the evaluation of the effectiveness of measures and procedures being enforced by state inspectors.

5.3.2 Workshop and joint visit to the ports of Galati, Romania and Giurgiuilesti, Republic of Moldova

Date: 27 - 29 September 2011

Following the more theoretical exercise of the first technical workshop on hazard management, the hazard management component continued with a workshop including a joint visit to the ports of Galati and Giurgiuilesti. The event was held in Galati, Romania, on 27 to 29 September 2011. It was organized as part of the hazard

management component of the DDP. An integral part of the workshop was the joint visits to the oil terminals in Galati and Giurgiulesti (Republic of Moldova) to perform simulated inspections.

The workshop was attended in particular by inspectors from the project countries responsible in their work for assuring safe operation of hazardous industrial installations. Experts from Germany facilitated the workshop.

During the first day of the workshop the checklist methodology was introduced by German experts. The checklist methodology has a modular design for inspection of safety equipment of installations at industrial facilities. It helps to provide the inspection of simple and complex installations by selecting the relevant checklist. The checklist methodology consists of follow modules:

- Storage and equipment
- Transshipment
- Overfill safety and pipelines
- Sailing system and oil separator
- Fire and flood protection
- Hazard management and plant monitoring

During the second day of the workshop the participants visited the oil terminals of Galati, Romania and Giurgiulesti, Republic of Moldova. The main task of the visit was the application of the checklists. The participants were divided into three groups, each of them received the task to work with concrete checklists and simulate an inspection on indicated unit of the terminal.

During the third day of the workshop the participants working in groups evaluated the visits to the oil terminals as well as discussed the checklist methodology and its future application in their countries.

The participating inspectors appreciated the possibility of getting acquainted with the checklist methodology during the workshop and to apply it in the visits to oil terminals. They highly valued the checklist modular structure to be applied for different facilities units such as e.g.: storage, transshipment; waste water treatment or pipelines. It was also appreciated that the checklist allows for systematic verification of safety standards of each inspected installation of an industrial facility and a simple identification of deficiencies.

The inspectors of the project countries expressed the desire to adopt the checklist into their national existing checklists and procedures for inspecting the industrial facilities dangerous to waters. However, in order to maximize the benefits of such an approach, the checklist should be translated into national languages by the beneficiary countries and be adopted as a good practice accordingly, in order to reflect the national legislation in the countries. There is no information about any progress achieved in the area.

In addition, the participants concluded that the harmonization of the national legal frameworks in the three project countries would be very much desirable to create a common basis and comparable conditions for the application of the checklist methodology, thereby also rendering the checklist results comparable across the region. Against this background, the representatives of the project countries agreed to prepare a study to compare their safety measures, using as a benchmark the standard

contained in the checklist on verification of basic safety standards as used in the event.

At the end of the workshop all participants received a certificate for the joint visit to the ports of Galati and Giurgiulesti, which confirmed their training on the checklist methodology as well as the on-site application of the checklists for surveying industrial plants handling materials and substances hazardous for water.

5.3.3 Workshop on safety guidelines for oil terminals and joint visit to the Odessa port

Date: 23 - 25 September 2013

At its third meeting, the project management group decided to organise a workshop on the safety guidelines and good industry practices for oil terminals in Odessa (Ukraine) and a site visit to the oil terminal to the Odessa port. The goal of the workshop and the site visit were to discuss safety standards and major past accidents at oil terminals and to further improve the content and applicability of the ECE safety guidelines and good industry practices for oil terminals, including via a site visit to the Odessa port. For this purpose, a short checklist on the safety guidelines and good industry practices for oil terminals was developed.

There were participants from the national competent and enforcement authorities, civil protection services, academia and industry representatives from Romania, Ukraine and the Republic of Moldova. They were facilitated by a team of international experts from Belgium, Germany, the Russian Federation and the United Kingdom, as well as the ECE secretariat.

During the event the participants, facilitated by international experts and the secretariat, discussed applicable safety standards for oil terminals, the environmental impact of and lessons learnt from past accidents at oil terminals and reviewed the draft safety guidelines and good industry practices for oil terminals.

For security, safety and logistical reasons, the number of participants in the site visit to the Odessa port was limited to 12 persons. Therefore, the participants were divided in three groups – one site visit group and two break-out session groups who stayed at the workshop. The goal of the two break-out session groups was to discuss and identify areas for improvement of the draft safety guidelines through going through the different chapters. The two groups consisted of representatives from Romania, Ukraine and the Republic of Moldova which were facilitated by members of the international expert group who elaborated the safety guidelines and the ECE Convention secretariat.

The site visit group consisted of representatives of Romania, Ukraine and the Republic of Moldova, mostly enforcement authorities, civil protection officers and oil terminal operators, facilitated by international experts from Belgium and the Russian Federation. Its main goal was to examine the applicability of the ECE safety guidelines and good industry practices for Oil terminals vis-a-vis real oil terminal facilities and to check whether the short checklist would be also appropriate for checking and verifying compliance.

At a plenary session at the end of the workshop, participants presented the findings from the break-out sessions and the site visit. The international experts who elaborated the safety guidelines took note of the suggestions from the countries for the finalisation of the safety guidelines. The main conclusions of the group were:

- Oil terminals at ports are large, complex entities involving sea-going traffic and inland (river, rail and highway) transport of hazardous substances and accidents may have far-reaching consequences for the environment and human health.
- Different safety standards exist worldwide and that different levels of safety exist with regard to cargo, the modes of transport and transport interfaces, therefore, a document is needed to provide a practical overview of the safety precautions needed for competent and enforcement authorities and for oil terminals operators.
- The draft safety guidelines and good industry practices for Oil terminals are useful and needed and should be presented to the Conference of the Parties to the Convention upon finalisation.
- The checklist was useful for the site visit but should not be included into the safety guidelines, since it is intended to be a living document that is subject to constant change and adaptation to national circumstances.

5.3.4 Summary of Results achieved

Since the beginning of the project, four main events were organized within the hazard management component of the project in order to advance towards reaching the set objectives (see subsection 3.2.2):

One of the events was a technical workshop on hazard management at which the countries presented to each other their legal frameworks, procedures and measures applied to prevent industrial accidents including procedures for identification of activities that can be hazardous to waters and for involving public in the prevention.

The second event was a workshop combined with a joint visit to oil terminals in Galati (Romania) and Giurgiulesti (Republic of Moldova). This workshop was an opportunity to discuss basic safety measures to be applied at activities hazardous to waters and to work with the checklist methodology to verify application of the basic safety measures at the oil terminals.

As a third event, an expert group was established in March 2012 to elaborate safety guidelines for oil terminals. To date, the expert group has met four times to develop the guidelines. An advanced draft version was discussed at a workshop on safety guidelines for oil terminals, including a site visit to an oil terminal at the Odessa port, to further improve the content and applicability of the draft safety guidelines. The guidelines are expected to be finalised in summer 2014.

A fourth event was the work initiated for the elaboration of a comparative analysis of the national legal frameworks on hazard and crisis management of the project

countries. The consultant chosen for the elaboration of the analysis is expected to finalise the comparative analysis in the first half of 2014.

With organization of these project events and the national work implemented, the three project countries reached the following results:

- 1) They have basic knowledge of each other's legal bases, procedures and measures for prevention of industrial accidents;
- 2) They have started the preparations for the elaboration of an analysis to compare their legal frameworks, using as a benchmark the standards contained in the checklist on verification of basis safety standards;
- 3) They have agreed on the criteria for preparing inventories with activities hazardous to the Danube Delta and they have exchanged inventories among each other;
- 4) They have prepared, based on inventories with hazardous activities in the Danube Delta, an advanced version of the hazard spots map;
- 5) They have discussed the safety measures for activities hazardous to waters and established an expert group for the elaboration of safety guidelines for oil terminals that has already prepared an advanced draft version.
- 6) A consultant was chosen by the PMG to elaborate the comparative analysis of the national legal frameworks of the project countries with results of the analysis expected to be delivered in the first half of 2014.
- 7) Representatives of the countries participated in the workshop on the safety guidelines and good industry practices for oil terminals and a site visit to the oil terminal to the Odessa port, held on 23-25 September 2013. The participants have discussed the safety guidelines and good industry practices for oil terminals, applicable safety standards for oil terminals and provided input for the finalisation of the draft safety guidelines and good industry practices for oil terminals.

The interim results are a good start in reaching the project goals and advancing towards the implementation of the hazard management strategy.

5.4 Establishment of an expert group for the elaboration of safety guidelines for oil terminals

In March 2012, an expert group was established to elaborate, within one year, safety guidelines for oil terminals. The safety guidelines are expected to promote incident-free operation and to improve understanding among the authorities and operators of the necessary safety standards to be applied at oil terminals.

The expert group comprising national and international experts from Belgium, Germany, Romania, the Russian Federation and the United Kingdom, including the representatives of national authorities and operators. Their first meeting was organized on 14 March 2012 and hosted by Germany in the Federal Institute for Materials Research and Testing in Berlin. The objective of the first meeting was to brainstorm the need to create safety guidelines for oil terminals and which shape they

would have. The experts found that although a number of guiding materials in this area were already available internationally, they were often too complex for effective use by many operators and authorities or too focused on particular technical elements. Thus, the future safety guidelines for oil terminals aim at overcoming these and other drawbacks by providing a practical overview of the safety precautions needed for those running such a facility.

The second meeting of the expert group took place on 18 June 2012 and was hosted by the GCE Group in St. Petersburg. During their second meeting, the experts discussed and further developed the structure of safety guidelines for oil terminals, as agreed at their previous meeting. They also decided on the steps to finalize the guidelines and agreed that the next meeting of the expert group should take place in 2013.

An advanced draft has been prepared and distributed in August 2013 and has been discussed during workshop on the safety guidelines and good industry practices for oil terminals and the 2nd site visit to the port of Odessa in September 2013. The results from the workshop and the site visit were discussed in detail during the third expert group meeting that was organised back-to-back of the abovementioned events.

5.3.5 First technical workshop on crisis management

Date: 13 - 14 December 2011

Under the lead of the crisis management group the preparations for the first technical workshop on crisis management were carried out. The first technical workshop on crisis management allowed for a good and necessary exchange of information on national procedures for contingency planning and response to industrial accidents, both during the formal sessions with the participants' presentations and in the informal break-out sessions on emergency preparedness and response. It was a first step to advance cooperation under the crisis management component between the three project countries. The workshop was also joined by Belarus experts supported financially by the PPRD East project.

The workshop was facilitated by experts from the Netherlands, Poland and France, who presented on examples of good practices, facilitated the work in groups during the break-out sessions and moderated or participated in the panel discussion at the end of the workshop. With their guidance, the workshop participants described procedures for emergency preparedness and response in their countries and identified areas for further improvement in the national and transboundary context.

As a result of the workshop, the project countries: (i) acquired clear knowledge of each other's legislation, similarities and differences; (ii) got an overview of gaps in their legal frameworks and ideas for improvements, including for transboundary cooperation; and (iii) reached a basic agreement on how to develop and evaluate a scenario for the project's table-top exercise. Through this, the technical workshop helped the project countries to set the basis for the future work under the crisis management component of the project, in particular for the establishment of a joint contingency plan for the Danube Delta and the organization of the table-top and field exercise.

At the second PMG meeting, the project countries discussed how to proceed with the work under the crisis management component of the project. They agreed that: (i) the Republic of Moldova would lead the preparations for the table-top exercise to be held in October 2013, including the development of an exercise scenario; and (ii) Romania would lead the elaboration of a joint contingency plan for response to emergency situations in the Danube Delta region by May 2013.

In November 2012, a working group on the elaboration of the joint contingency plan was established. Romania took the lead and Francisc Senzaconi was appointed as chair of the working group. Each project country assigned national representatives to the group. The working group continues its work on the joint contingency plan, based on the existing national emergency plans and on international experience in this area.

6 Challenges

In the light of the workshops and of the meetings of the hazard management group, crisis management group and PMG held so far in the project, the following challenges have been identified during project implementation:

- (i) Composition of the hazard and crisis management groups
At the beginning of the project, a hazard management group and a crisis management group were created, with the aim to bring together experts on hazard or crisis management in each of the groups. In practice, the same or nearly the same experts attended the meetings of both groups, thus increasing their workload and the budget of the project with additional meetings. In order to address this challenge and to increase efficiency, the PMG decided in September 2012 to merge these two groups to form a single technical group on hazard and crisis management.
- (ii) Work of the national groups
The national groups, according to the agreed implementation plan, have the direct responsibility for preparing the substantive inputs and ensuring the adequate follow-up to the project workshops. Although the national groups were mainly focussed on the conduct of workshops there was also, in some cases, progress in the implementation of workshop outcomes in national procedures and practices. However, the transfer of project outcomes remains a priority for the participating countries in the continuation of the project and work on national level still has to be intensified in order to reach the objectives of the project.
- (iii) Commitment to leading the project activities
The project was designed to encourage and allow the project countries to lead their activities and to give them the possibility to provide in-kind support in particular in those areas that they consider their country could best contribute. Furthermore, it was agreed at the beginning that the lead should be transferred periodically from country to country. In practice, the countries only partly lead activities, therefore the secretariat had to compensate by leading certain project activities, resulting into an unanticipated increase of its workload. One of the possible solutions is to actively encourage the countries to take lead in the different project activities and to formalize their leadership through PMG decisions.
- (iv) Resource and personnel constraints
Some project countries explained that they lacked the resources and, in the case of Ukraine, the mandate to carry out further activities between the workshops and other key project events. Another challenge is related to unforeseen administrative and staff changes in the project countries, which significantly slowed down progress of the project and caused delays in some of the activities planned.

Taking into account the experience of the project implementation so far, the project activities and challenges mentioned above were discussed in the second meeting of the PMG on 14 September 2012 in Kyiv. The national coordinators (PMG members) agreed on the following way forward:

- (i) Rearrangement of the organizational structure of the project
The project countries agreed to merge the hazard and crisis management groups to one technical group that should be responsible for implementing the project activities. The project management group will be maintained to coordinate activities, and to make sure that the project objectives are followed and that appropriate support to the national work is provided.
- (ii) Identification of lead countries for activities
The countries agreed to take the lead for certain project activities. In particular, the Republic of Moldova committed to take the lead in organizing the table-top exercise, Romania committed to lead the elaboration of a joint contingency plan for the Danube Delta and Ukraine committed to take the lead in the organization of the joint visit to the port of Odessa in Ukraine. The identification of lead countries for activities also helps improve the work of the national groups.
- (iii) Follow-up
The countries recognized that the adequate follow-up and delivery of agreed products, as well as the exchange of the necessary information, are as important as the conduct of workshops in order to allow the timely implementation of subsequent activities and to achieve the overall project objectives.
- (iv) Strengthening ties with project partners
The project countries agreed to improve cooperation with project partners as they can provide valuable support to the implementation of the activities and thus play a crucial role in achieving the project objectives. During the second meeting of the project management group, the ICPDR secretariat offered to lead the elaboration of a comparative legal analysis. Also the PPRD East project volunteered to work out a communications strategy for the project.

Progress towards the project objectives

Lead countries identified for specific activities seemed to experience some difficulties with the delivery of assigned tasks. This had an impact on the timely implementation of some project activities. As a result the project had to be extended until November 2014. Nevertheless, good progress in specific project activities was achieved so far, such as the elaboration of the safety guidelines and good industry practices for oil terminals.

7 Next activities

Some project activities could not be carried out in accordance with the initial project schedule. In order to assure the delivery of good quality outcomes, an extension of the project until 30 November 2014 was agreed with the project donor countries. The schedule has been adjusted, accordingly (see Figure below). Further activities will be scheduled, particularly within the crisis management component, once funding is available.

Figure 4: Next Activities to be implemented (October 2013 – November 2014)

2014	Elaboration of a comparative analysis of the legal frameworks in the project countries
2014	Third meeting of the project management group
2014	Field exercise and table-top exercise (subject to funding)
2014	Second technical workshop on hazard management
2014	Training of trainers for inspectors
2014	Finalization of the joint contingency plan for the Danube Delta
2014	Elaboration of a communications strategy for the project
2014	Elaboration of the safety guidelines and good industry practices for oil terminals
2014	Finalization of the hazard map
2014	Preparation of bi- and multilateral agreements
2014	Final Workshop