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## Federal Environment Agency



# **Hazard and Crisis management in the Danube Delta**

## **Safety Guidelines and Good Industry Practices for Oil Terminals**

# UNECE Technical Assistance Project

## Riskmanagement at the Danube Delta



**Deep Water Horizon**

**Danube Delta**



# Danube Delta Project

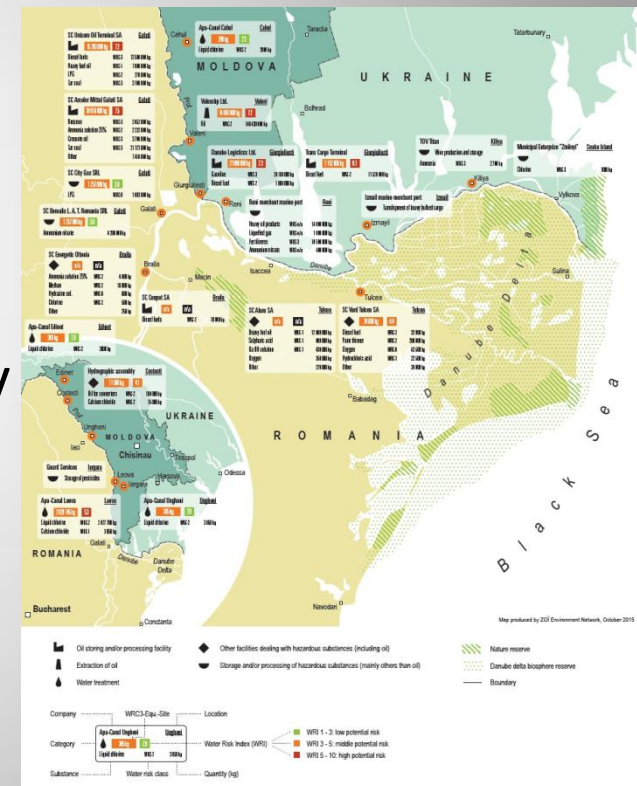
Project to jointly work on:

- I. **Hazard management**  
(prevention of industrial accidents, identification of hazardous industry)
  
- II. **Crisis management**  
(response to accidents, warning systems)

# Phase I – Hazard management

In the first phase the project aims at:

- > getting an overview to hazardous activities in the Danube Delta
- Accidental Risk Site (ARS) Inventory





## Riskmanagement at the Danube Delta

### Hazard Management

- ARS Inventory  
Danube Delta
- Highest Risk:  
3 Oil Terminals
- > drafting safety guidelines for oil  
terminals (to be used by the whole  
UNECE region)



# Safety Guidelines and Good Industry Practices for Oil Terminals

## Worked out by an International Expert Group:

- **Frank Candreva** (Det Norske Veritas Germanischer Lloyd, DNV GL, Oil and Gas, Belgium)
- **Richard Gowland** (European Process and Safety Centre, United Kingdom)
- **Alexey Isakov** (GCE Group, Russian Federation)
- **Eddy De Rademaeker** (European Federation of Chemical Engineering, Belgium)
- **Andy Roberts** (United Kingdom Petroleum Industry Association, UKPIA)

# Safety Guidelines and Good Industry Practices for Oil Terminals

## Content:

- Introduction
- Objective and Scope
- Definitions



**Part 1 – Principles and General Recommendations**

**Part 2 – Technical and Organizational Safety Aspects**

**Part 3 – Sources and Further Reading**



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# **Safety Guidelines for Oil Terminals**

## **Part 1**

### **Principles & General Recommendations**

- **UNECE-Parties**
- **Competent Authorities**
- **Operators**



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# **Safety Guidelines for Oil Terminals**

## **Part 2**

### **Technical and Organizational Safety Aspects**

- 1. Design & Planning**
- 2. Procurement, Construction and Asset Integrity Management**
- 3. Operations**
- 4. Closure & Decommissioning**



## Basic Safety Measures

- WFD (Art.11; 3 I)
- Lessons Learnt (i.e. „Buncefield-Report“)

## Safety Measures

- WFD (Art. 11, 2)
- SEVESO- III (Lower Tier)
- IED (BRef)

## Special Safety Requirements

- SEVESO- III (Upper Tier )

# 1. Design and Planning

**1.1. Environmental baseline and impact assessment**

**1.2. Facility siting, layout and land use planning**

**1.3. Safe design**

**1.4. Hazard management**

**1.5. Emergency planning**

## **2. Procurement, Construction and Asset Integrity Management**

**2.1 Quality assurance during construction and  
commissioning**

**2.2. Asset Integrity and Reliability**

**2.3. Hazard management during construction and  
commissioning**

**2.4. Managing the lifetime of ageing assets**

## 3. Operations

- 3.1. Process Safety in operations**
- 3.2. Leadership and Safety Culture**
- 3.3. Governance System**
- 3.4. Operating procedures and safe work practices**
- 3.5. Management of Change**
- 3.6. Good Industry Practices (GIP) for transport and storage of hazardous materials**
- 3.7. Management of abnormal situations**
- 3.8. Records Management**
- 3.9. Audits and Management Reviews**
- 3.10. Learning from experience**
- 3.11. Maintaining the integrity and reliability of assets**
- 3.12. Hazard Management during operations**
- 3.13. Emergency Preparedness and Response**



## **4. CLOSURE AND DECOMMISSIONING**

### **4.1. Temporary closure (“preservation”)**

### **4.2. Final Decommissioning**

**4.2.1. Obligations of the oil terminal operator prior to decommissioning**

**4.2.2. Obligations of the oil terminal operator during decommissioning**

**4.2.3. Obligations of the oil terminal operator after decommissioning**

### **4.3. Hazard Management during Decommissioning**

# UNECE

## Safety Guidelines for Oil Terminals

### Discussion and Commenting by

- Int. Organisations, NGOs, Stakeholders  
(March 2014)
- UNECE Bureau (June 2014)
- UNECE Member States  
(Aug. 2014)



# 8<sup>th</sup> CoP TEIA Convention

## 3 to 5 Dec., 2014

→The Conference of the Parties took note of the safety guidelines and good industry practices and invited their use by Parties to the Convention and other countries in the ECE region.

→The Conference requested the secretariat, in cooperation with the Bureau, to raise awareness about the safety guidelines among Parties to the Convention and other countries in the ECE region.

# Thank You for Attention

→ The Safety Guidelines should be the basic Standard  
for Oil Terminals in the whole UNECE Region

