

EU – BRAZIL SECTOR DIALOGUES SUPPORT FACILITY
SECTORIAL DIALOGUES ON EMERGENCY PLANNING
WITH CHEMICALS

PREPAREDNESS FOR AND RESPONSE TO
EMERGENCIES WITH CHEMICALS
in selected EU countries

Final report

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Introduction

This report has been prepared under the EU-BRAZIL Sector Dialogues Support Facility which aims at furthering and deepening the bilateral EU-Brazil relation through fostering sector dialogues on themes of mutual interest.

The content and structure of the report follow the Terms of Reference for the 2013 EU – Brazil Sector Dialogues Support Facility – Sectorial Dialogues on Emergency Planning with Chemicals (TOR). This action seeks to foster the exchange of technical information between the Brazilian

federal government and European institutions in the field of planning, implementing and financing activities related to emergencies with chemicals in order to subsidize future actions related to the stages of preparedness and response provided by P2R2 Plan (Brazilian National Plan of preparedness and response to Environmental Emergencies with Hazardous Chemicals).

Furthermore the content and the structure of the report follow author's discussion with the representatives of Brazilian Ministry of Environment on 18 – 19 April 2013 in Brasilia.

The report gives an overall insight into the practice of EU Member States when dealing with emergencies with chemicals.

Emergencies with chemicals is a topic that is being as a specific issue addressed by all EU Member States since the hazards of such emergencies are relevant for all of them. The history of such emergencies has shown that their consequences can be devastating for man and environment – especially in cases when the society has not undertaken measures to be prepared for their mitigation.

In spite of substantial efforts that countries are investing to prevent emergencies with chemicals they still keep occurring and effecting man and the environment. Well organized and maintained response system has been recognized as an essential element of emergencies' management.

In the report the elements of cooperation of EU Member States in the context of activities organized under EU, UN – ECE and OECD are presented. The cooperation under the UN - ECE relates to the trans-boundary aspects of emergencies. The cooperation under OECD has resulted - among others – in the Guideline on safety performance indicators which is considered important source of information on possible indicators for the evaluation of action plans and policies in the area of emergency management.

Furthermore the report presents examples of national practice for addressing management of emergencies with chemicals in Germany, Slovenia, the Netherlands and United Kingdom. In presenting these practices the report is not a comparison of emergency preparedness and response mechanisms, nor is it a benchmark. The aim of presenting mechanisms of specific countries is simply to present current actions that are being undertaken and solutions that are being applied for ensuring efficient and effective emergency preparedness and response in selected EU countries.

In the report the term “emergency” is used together with terms “disasters” and “accidents” since all these terms appear in the EU, UN, OECD and national documents. All of them should be understood as any extraordinary event that can happen as a consequence of activities that deal with chemicals either on the sites of stationary activities or during the transport of chemicals.

Similarly In the report the terms “chemicals” and “dangerous substances” are used to refer to chemicals in accordance with the Globally Harmonised System of Classification and Labelling of Chemicals.

Co-operation of EU Member States in preparedness for and response to emergencies with chemicals

1 Introduction

EU Member Countries are responsible for the establishment and organisation of emergency management on their territory.

Co-operation of 28 EU Member States (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom) is aimed at supporting their national systems and enhancing in the emergency prevention, preparedness and response.

Major part of the co-operation is performed through actions and activities organised by the Directorate General for Environment, Directorate General Joint Research Centre and Directorate General for Humanitarian Aid and Civil Protection (DG ECHO).

For the emergencies with chemicals relevant is also the bilateral co-operation of EU Member States, their co-operation in activities organised under United Nation's Economic Commission for Europe (UN ECE) and under the Organisation for Economic Co-operation and Development (OECD).

2 EU Legislation

2.1 Environmental legislation

Three EU environmental directives relate to emergencies with chemicals:

- a) [Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances](#) – the so-called Seveso II Directive

Directive obliges Member States to ensure that operators handling dangerous substances above certain thresholds have a policy in place to prevent major accidents. Operators must regularly inform the public likely to be affected by an accident, prepare safety reports, introduce and operate in accordance to a safety management system and prepare an internal emergency plan (on-site emergency plan). Member States must ensure that emergency plans are in place for the surrounding areas and that mitigation actions are planned. Account must also be taken of these objectives in land-use planning.

There is a tiered approach to the level of controls: the larger the quantities of dangerous substances present within an establishment, the stricter the rules ('upper-tier' establishments have bigger quantities than 'lower-tier' establishments and are therefore subject to tighter control).

- b) [Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions](#) - the so-called Industrial Emissions Directive (IED Directive).

This Directive covers industrial activities with a major pollution potential that are defined in Annex I to the directive (energy industries, production and processing of metals, mineral industry, chemical industry, waste management, etc.) and is aimed at the control of the environmental pollution as a consequence of their operation.

Any industrial installation which carries out the activities listed in Annex I to the Directive must meet following basic obligations:

- preventive measures are taken against pollution;
- the best available techniques (BAT) are applied for the control of their environmental emissions;
- no significant pollution is caused;
- waste is reduced, recycled or disposed of in the manner which creates least pollution;
- energy efficiency is maximised;
- accidents are prevented and their impact limited;
- sites are remediated when the activities come to an end.

For the operation of these installations the operators need to obtain an environmental permit which must provide for the necessary measures to ensure compliance with the operator's basic obligations and environmental quality standards.

- c) [Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to prevention and remedying of environmental damage](#) - the so-called Environmental Liability Directive (ELD Directive).

The ELD aims at ensuring that the financial consequences of certain types of harm caused to the environment will be borne by the economic operator who caused this harm. Insofar as the ELD provides for the financial responsibility of an operator, it lays down a framework, based on the "polluter-pays" principle, which can be qualified as one of "environmental liability", even though liability under the ELD has few in common with standard civil liability rules. For instance, the ELD does not give private parties a right of compensation as a consequence of environmental damage or of an imminent threat of such damage occurring.

The ELD's own specific approach is shown by the role given to competent authorities to be designated by Member States. These competent authorities will ensure the effective implementation and enforcement of the ELD; they will also safeguard the legitimate interests of the relevant operators and other interested parties. Competent authorities will, for instance, be in charge of specific tasks such as assessing the significance of the damage and determining which remedial measures should be taken (in co-operation with the liable operator)

2.2 Civil Protection legislation

[Treaty on the Functioning of the European Union](#) in Art 196 (Civil Protection) defines that co-operation at EU level shall aim to:

- support and complement Member States' action at national, regional and local level in risk prevention, in preparing their civil-protection personnel and in responding to natural or manmade disasters within the Union;
- promote swift, effective operational cooperation within the Union between national civil protection services;
- promote consistency in international civil-protection work.

This cooperation shall however not be aimed at the harmonisation of the national legislation in this area.

Two pillars of EU civil protection legislation are Council Decision 2007/779/EC, Euratom establishing a Community Civil Protection Mechanism ([Civil Protection Mechanism](#)) and Council Decision 2007/162/EC, Euratom, establishing a Civil Protection Financial Instrument (Civil Protection [Financial Instrument](#)). Three Commission Decisions have been issued after the adoption of these two main pillars of civil protection legislation, each of them having a specific purpose within the meaning of the Council Decisions (implementing rules for transport during an emergency, the modules concept, ...).

The Community Civil Protection Mechanism and the Civil Protection Financial Instrument together cover three of the main aspects of the disaster management cycle – prevention, preparedness and response. The Mechanism itself covers response and some preparedness actions, whereas the Financial Instrument enables actions in all three fields. The EU Civil Protection Mechanism is the key instrument of 32 states (27 EU Member States, Croatia, the former Yugoslav Republic of Macedonia, Iceland, Liechtenstein and Norway) established in 2001 which co-operate in the field of Civil Protection for ensuring better preparedness by pooling resources and maximising the collective European effort on site of disasters occurring both inside and outside of EU. The two pieces of legislation are moreover complementary as the Financial Instrument finances the Mechanism.

2.3 Telecommunications legislation

By the [Council Decision 91/396/EEC of 29 July 1991 on the introduction of a single European emergency call number](#) the single European emergency number 112 was set up so that European citizens in distress situations are able to get through to the emergency services in all Member States. Thus, anyone travelling within the Union has to remember only one number and this guarantees a quicker and more efficient intervention. While 112 does not automatically replace national emergency numbers, all Member States operate it as either their main or additional emergency number.

3 Actions and elements of EU Member States cooperation

3.1 Cooperation under EU environmental legislation

DG Environment organises regular meetings with the representatives of SEVES II competent authorities of Member States. The discussion in these meetings is focused on implementation practice of Member States and on new developments in the area of accidents with hazardous substances. The meetings are usually organised in connection with thematic seminars and an on-site visit of a SEVESO II establishment in specific country.

Within the Institute for the Protection and Security of the Citizens of the DG Joint Research Centre a [Major Accidents Hazard Bureau](#) (MAHB) provides research-based scientific support to the European Commission and to the Member States. This support is on the formulation, implementation and monitoring of EU policies for the control of major accident hazards concerning the processing and storage of hazardous substances.

Following are some of MAHB's activities:

- management of the European accident database (eMARS = electronic Major Accident Reporting System). Based on the data in this database MAHB analysis trends in accident occurrence and disseminates lessons learned in order to avoid recurrence of similar events;
- development of guidance (safety reports, MAPP, land-use planning, inspections, ...);
- steers and manages the co-operation with Member States in technical working groups focusing on specific topics of SEVES II directive (inspection control, land-use planning);
- steers and manages the programme of Mutual Joint Visits (MJVs) which bring together inspectors and provide a platform for them to exchange experience and good practice and to discuss challenges inspectors meet when performing inspections in practice.

3.2 Cooperation under the EU civil protection legislation

3.2.1 Cooperation in the area prevention

Member states have traditionally within their cooperation at EU level focused on emergency response and only in the last years the preventative activities were given more attention. European Parliament, Council and the Commission agreed that »improved knowledge of the risks« is one of three civil protection priorities. The aim of co-operation is to improve coherence among risk assessments at national level and to make risk assessments more comparable between the Member States.

In the coming years priority in the area of prevention will be risk assessment and risk mapping, improving existing sources of information on disasters and launching a disaster prevention good practice programme.

3.2.2 Cooperation in the area preparedness and response

Training

The aim of the Civil Protection Mechanism Training Programme is to reinforce and facilitate European co-operation in civil protection assistance interventions. Experts who have trained together can interact better out in the field; in addition, they will be more knowledgeable about the particular requirements of a European civil protection mission, such as coordination and assessment.

Exchange of experts

In addition to courses and exercises, the Civil Protection Mechanism provides for an exchange system for civil protection experts. The system allows for the secondment of national civil protection experts to administrations of other participating states on all aspects of emergency intervention. The aim of this secondment is to allow experts to gain experience and direct knowledge about similar responsibilities under different national systems; to familiarise themselves with various techniques used; to study the approaches taken by other emergency services; and, if necessary, to attend or give courses requiring specific expert knowledge not available in their home or host country respectively.

Exercises

Civil Protection exercises organised at EU level are designed primarily as field tests aiming to establish a common understanding of co-operation in civil protection assistance interventions and to accelerate the response to major emergencies.

Early Warning Systems and other technologies

Since 2007 the European Commission has launched a number of initiatives in the area of early warning systems. [Meteoalarm](#) is an internet-based alert platform established by the European meteorological services, which issues European weather warnings through a multilingual interface. The [Global Disaster Alerts and Coordination System](#) (GDACS) developed jointly by the EU and UN is a fully automatic 24/7 alert system which gathers data about natural events (earthquakes, tsunamis, tropical storms, floods and volcanoes). For floods, The European Commission financed the establishment of the European [Flood Alert System](#) (EFAS). For forest fires, the European Commission has developed the European [Forest Fire Information System](#) (EFFIS), which provides daily meteorological fire danger maps and forecasts up to 6 days before, daily updated maps of burnt areas and damage assessment derived from satellite imagery over the previous 7 days, and daily updated maps of hot spots and fire perimeters.

Monitoring and Information Centre

The operational heart of the Civil Protection Mechanism is the Monitoring and Information Centre (MIC). Based at the European Commission in Brussels, managed by the Emergency Response Unit of the Directorate General for Humanitarian Aid and Civil Protection (ECHO) the MIC is accessible 24/7 and can spring into action immediately when it receives a call for assistance. The MIC works in close cooperation with national crisis centres throughout the 32 countries participating in the Mechanism.

During emergencies the MIC plays three important roles:

Communications hub: The MIC acts as a focal point for the exchange of requests and offers of assistance. This helps cut down on the participating states' administrative burden in liaising with the affected country. It provides a central platform for participating states to access and share information about the available resources and the assistance offered at any given point in time.

Information provision: The MIC disseminates information on civil protection preparedness and response to participating states as well as a wider audience, both during emergencies and in 'calmer' periods. As part of this role, the MIC disseminates early warning alerts (MIC Daily [link]) on natural disasters to both specialists and the general public and circulates the latest updates on ongoing emergencies and Mechanism interventions to its contact points.

Coordination: The MIC facilitates the provision of European assistance through the Mechanism. This takes place at two levels: at headquarters level, by matching offers to needs, identifying gaps in assistance and searching for solutions, and facilitating the pooling of common resources where possible; and on the site of the disaster through the deployment of EU civil protection experts for assessment and coordination, when required.

The Common Emergency Communication and Information System (CECIS)

The Common Emergency Communication and Information System (CECIS) facilitates communication between the MIC with National Authorities, making response to disasters faster and more effective. Its main task is to host a database on potentially available assets for assistance, to handle requests for assistance on the basis of these data, to exchange information and to document all action and message traffic. The end-users of CECIS are the Monitoring and Information Centre (MIC) and national contact points.

Civil protection modules

[Civil protection modules](#) are made of national resources from one or more Member States on a voluntary basis and contribute to the civil protection rapid response capability. Currently thirteen civil protection

modules = specialised emergency response units have been identified by the Commission together with Member States. They can be used for interventions both within and outside the EU. They have to be available at short notice (max. 12 hours) and be able to work independently. Using modules ensures that the European response is quick and that European teams are experienced in working together. Examples of European modules include high capacity pumping, advanced medical posts or urban search and rescue.

Financial Mechanism

The Civil Protection Financial Instrument aims at supporting and complementing the efforts of Member States for the protection, primarily of people, but also of the environment and property, including cultural heritage, in the event of natural and man-made disasters, acts of terrorism and technological, radiological or environmental accidents.

It foresees the financing of the following activities:

- response and preparedness actions covered by the EU's Civil Protection Mechanism, e.g. training, exercises and missions;
- studies and projects on prevention and preparedness;
- co-financing the transport of assistance from Member States operating under the Mechanism.

Annual Work programmes defines the areas and activities that are eligible for a financial support more in detail.

3.3 Bilateral cooperation of EU Member States

Majority of EU Member States co-operate with their neighbouring countries in managing the emergencies with chemicals. Such co-operation is aimed at enhancing the preparedness and response to emergencies with trans-boundary consequences, but also to mutual assistance in the event of emergencies.

Bilateral cooperation is in practice realised by local communities which co-operate to exchange information on activities close to the borders with a potential for an emergency with trans-boundary consequences and on the systems for mutual early warning of emergencies. Bordering local communities would also undertake common planning of a response to recognised emergencies with trans-boundary potential.

Bilateral cooperation is in most cases supported by agreements on such cooperation between the governments of the involved countries.

3.4 Cooperation under the UN-ECE Convention of the trans-boundary effects of industrial accidents

Major part of EU Member States are Parties to the [UN-ECE Convention on the trans-boundary effects of industrial accidents](#). This convention is linked to SEVESO II directive and is often referred to as “trans-boundary SEVESO II directive”.

Parties to the Convention work together to ensure better preparedness and response to accidents with hazardous substances that could have trans-boundary consequences. The Convention encourages them to ensure that mechanisms are in place for the prevention of such accidents and for the response, should such accidents occur. The Convention also encourages its Parties to help each other in the event of an accident, to cooperate on research and development, and to share information and technology

For the countries with economies in transition assistance programme has been developed to enhance their preparedness and response capacities. EU Member States financially and in-kind (provision of expertise, organisation of workshops, preparation of guidelines, ...) support this assistance programme

3.5 Cooperation under the OECD Programme of Chemical Accidents

Majority of EU Member States are also Member States of Organisation for Economic Co-operation and Development (OECD).

[OECD Programme of Chemical Accidents](#) brings together experts to work on projects that help public authorities, industry, labour and other interested parties prevent chemical accidents and respond appropriately. The cooperation focuses on three areas:

- developing common principles and policy guidance on prevention of, preparedness for, and response to chemical accidents;
- analysing issues of concern and making recommendations concerning best practices;
- facilitating the sharing of information and experience between both OECD and non-member countries.

The Programme's most important products are the "Guiding Principles for Chemical Accident Prevention, Preparedness and Response" and the "Guidance on Developing Safety Performance Indicators". The Guiding Principles address all aspects of preventing and managing chemical accidents and the Guidance on Safety Performance Indicators serves as a guide for key stakeholders to determine if their implementation of the Guiding Principles has led to improved chemical safety.

The Guidance on Safety Performance Indicators is used by many EU Member States as a set of indicators = observable measures that provide insight into a concept – safety, emergency management - that is difficult to measure directly. In this guidance the indicators relating to emergency preparedness and planning and to emergency response and mitigation are addressed in specific chapters. The guidance divides Safety Performance Indicators into “outcome indicators” and “activities indicators”.

“Outcome indicators” are designed to help assess whether safety related actions (policies, programmes, procedures and practices) are achieving their desired results and whether such actions are leading to less likelihood of an accident occurring and less adverse impact on human health, the environment and property from accidents. They are reactive, intended to measure the impact of actions that were taken to manage safety.

“Activities indicators” are designed to help identify whether organisations are taking actions believed necessary to lower risk. Activities indicators are pro-active measures which often measure safety performance against the tolerance level. When used in this way, activities indicators highlight the need for action when a tolerance level is exceeded. Thus, activities indicators provide organisations with a means of checking, on a regular and systematic basis, whether they are implementing their priority actions in the way they were intended.

Another area of work essentially consists of organising workshops on specific issues to gather information and make recommendations concerning best practices. Examples of subjects include: accidents investigation; health and environmental aspects of chemical accidents; audits and inspections of hazardous installations; training of engineers in risk management; use of safety reports in the control of major accidents hazards; lessons learned from accidents; and integrated management of safety, health, environment and quality.

The Programme also helps countries share information and learn from each other's experience in: [OECD-EC accident reporting system](#); safety management, risk assessment, risk management

and risk communication in the context of chemical accident prevention; economic aspects of chemical accidents and prevention; acute exposure guidelines levels; land use planning; and special concerns of small and medium-sized enterprises.

Results of the work under the Programme on Chemical Accidents are published in the Series on Chemical Accidents that are publicly available.

Organisation of preparedness for and response to emergencies with chemicals in selected EU Member States

Germany

Germany has a size of approx 357.000 sq km and a population of approx 81 million.

Germany is a federal republic and consists of 16 constituent federal states. Each federal state has its own parliament and government and high degree of autonomy. Most states are divided into administrative districts (Regierungsbezirke) and each district is divided into administrative counties (Landkreise) and county boroughs (Kreisfreie Städte). The smallest administrative entities are municipalities (Gemeinde, Märkte, Städte).

GDP per capita amounts to approx 40.000 USD.

1 Introduction

In Germany preparedness for and response to emergencies involving hazardous substances is not a system of its own but an integral part of the emergency management system in the federal state.

According to the German Constitution it is a federal responsibility to ensure protection of the population in case of war (with the measures of civil protection system ("Zivilschutz System")) and it is the states' responsibility to ensure protection of population, property and environment from all emergencies that could happen in the peace time.

Consequently each state is obliged to organise preparedness for emergencies that are likely to affect its territory and in practice this is done based on its legislation and administrative arrangements of state's authorities that have a duty to realise emergency preparedness. States perform this duty in a similar manner with no substantial differences as regards the legislation and organisation of emergency planning and response.

It is characteristic for Germany that the emergency preparedness and response largely depends on the work of volunteers as members of numerous rescue and relief organisations that are trained and equipped to protect and help the population in case of an emergency. Participation of volunteers (in organisations such as German Red Cross and Malteser Hilfsdienst) in the emergency preparedness and response is very much supported by the German Government. In line with such approach the response organisation that is organised at federal level Technical Assistance Services (THW = Technisches Hilfswerk) relies on the work of its volunteer members.

Regardless the strict division of responsibilities for the protection of population between the federal and state level the necessity for co-operation has been recognised to ensure cost-

efficiency and better protection of the population. Specific tools have been for this purpose introduced by the Framework Strategy for the Protection of the Population in Germany.

2 Framework Strategy for the Protection of Population in Germany

In Germany the political and strategic plan for the protection of the population is a joint federal – states Framework Strategy for the Protection of Population in Germany. This strategy aims at:

- better coordination between existing resources at federal (in particular THW) and state (fire services and rescue organizations) level;
- new tools allowing the federation and states to work together more efficiently, especially in the area of information management and in tracking scarce resources;
- the development and practice of a shared understanding of emergency management.

First such strategy has been adopted in 2002. The second version from 2010 takes into account lessons learnt from large scale emergencies that affected Germany (especially floods) and emerging risks. It supports transparent, sustainable and cost effective use of resources for the protection of the population regardless the cause of an emergency.

For the implementation of the strategy the [Federal Office for Civil Protection and Disaster Relief](#) has been put in operation in 2004. This office together with THW presents two pillars of support to the federal Ministry of Interior.

With this framework strategy specific elements and concepts have been either introduced or enhanced to ensure integration of federal and states efforts for emergency preparedness and response:

- the [Joint information and Situation Centre \(JISC\)](#) within Federal Office for Civil Protection and Disaster Relief has been created to ensure efficient co-ordination in the event of large emergencies. It is intended to serve as a centre for resource management, able to allocate volunteers, keep track of needs and organize resources and technical equipment at national and international level;
- the JISC relies on the [German emergency preparedness information system](#) called deNIS (deutsches Notfallvorsorge Informations System), a database intended to offer access to disaster management information. In addition, deNIS is also a public information portal offering individuals a broad range of important information on emergencies and civil protection issues;
- the [Satellite-based communications system](#);
- [Academy for Crisis Management, Emergency Planning and Civil Protection](#) – aimed to ensure intensified exchange of knowledge and information among the various federal, state and local offices, fire services, relief organizations and the research community;
- promotion of [public self-protection](#) to help individuals to prepare and protect themselves. Here special emphasis is put on the promotion of first-aid training at schools, where the greatest success with early and lasting awareness can be expected;
- [supplemental disaster protection equipment](#) (mainly intended for mass casualties emergencies and for CBRN (chemical, biological, radiological and nuclear threats)) is supplied by the Ministry of the Interior to the states for emergency management purposes;

- since 2004 the LÜKEX interministerial and interstate crisis management exercises have been held to test the federal–state crisis and emergency management system. The Federation and the states have agreed to continue this series of exercises every second year.

3 Legislation

3.1 Civil Protection and Disaster Assistance Act

This federal act lays down the organisation of civil protection which as federal responsibility is implemented also at all levels of state administrations (district, county, municipal). With regard to emergency preparedness it very importantly provides for the efficient use of resource stating that federal civil protection assets can be used also by states for the emergency management and that the emergency management arrangements at the state level are considered integral part of the civil protection system.

3.2 Federal state’s legislation on emergency preparedness and response

Each federal state has its own legislation defining emergency preparedness and response actions and the division of responsibilities. There are no major differences among such legislation in different states.

In this report the legislation of The State of Bavaria (Freistaat Bayern) is presented.

Bavaria is a federal state of a size of approx 70.500 sq km and of 12,4 million population. It has a state government with state ministries, authorities and agencies. Administratively it is divided into 7 administrative districts (Regierungsbezirke), 71 counties (Landkreise) and 25 city boroughs (kreisfreie Städte) and 2031 municipalities (Gemeinden).

a) The Bavarian Disaster Protection Act

The Bavarian Disaster Protection Act identifies counties, city boroughs, districts and Bavarian Ministry of the Interior as “disaster protection authorities”.

Consequently following disaster preparedness measures are to be realised by counties and city boroughs and if necessary by the district authorities and the ministry of the interior:

- the preparation of general External emergency management plans;
- the preparation of Alarm and response plans that address specific hazards – such as those originating from the operation of an installations with hazardous substances or from the transport of hazardous substances;
- the organisation of emergency response and ensuring that for such response educated and trained responders are available;
- the ensuring quick alarming of responders in case of an emergency;
- the organisation of emergency exercises as appropriate.

Furthermore the “disaster protection authorities” are responsible for declaring an emergency and its end, for leading the response, for ensuring co-ordinated response of more responders and for nominating persons in charge of leading the response on spot of the emergency.

“Disaster protection authorities” are responsible for the management of an emergency on their territory. In practice this is done by counties’ authorities, while district and state authorities get involved only in cases when this is necessary. To ensure this in practice they can rely upon following emergency responders defined by the same act: Bavarian state authorities, districts, counties and municipalities, by other public institutions, by fire fighting services, by voluntary relief organisations and other organisations and associations mainly from social and health care area.

As regards the planning for emergencies with hazardous substances this Act regulates the responsibility of operators of all activities which present a hazard of an accident to co-operate with the “disaster protection authorities” in the preparation of Alarm and response plans and in the emergency response exercises.

This Act serves also for the implementation of SEVESO II directive as regards the off-site emergency plans: it regulates the preparation, content, maintenance and exercising of emergency response to possible accidents in the SEVESO II establishments. It also regulates the exchange of information and co-operation among different countries in case of accidents in the SEVESO II establishments with trans-boundary consequences.

b) The Bavarian Fire fighters’ Act and the decree for the implementation of this Act

The fire fighting and technical rescue duties are to be ensured by municipal fire fighters and by plant fire brigades (organised by operators of industrial installations for the fire prevention and fire fighting on sites of their activities).

The municipalities are responsible for ensuring fire fighting and technical rescue by organising, equipping and maintaining municipal fire fighting units. Fire fighting and technical rescue can be performed in the form of volunteer, conscript or professional units. Professional units are organised in the large Bavarian cities or in cases when fire fighting and technical rescue service can not be managed by volunteer units.

The counties have to ensure additional training and equipment for the municipal fire fighting service to enable it for a response to emergencies that go beyond the borders of municipalities.

The state supports the counties and municipalities financially and operates the state fire-fighting schools.

c) Legislation covering other emergency responders (police and rescue services) in Bavaria

The role and operation of police (to ensure public peace and security) is defined by the Act on the role and authorities of the Bavarian state police. And this role is to be performed regardless the extent of an event or emergency.

The Act on the regulation of rescue services regulates the execution of following rescue services: general rescue services (urgent medical assistance), ambulance service and mountain, cave and water rescue services.

Based on this Act the Bavarian counties and county boroughs are obliged to organise these rescue services as public services and to ensure their operation in each “emergency rescue area”. Bavaria is divided into 26 “emergency rescue areas” (Rettungsdienstbereiche) and in each such area all rescue services work together in the form of functional associations. Since the emergency rescue areas are also a base for the establishment and organisation of an emergency alarm centres serving also the fire fighting units – the associations are called Rescue services and firefighting functional associations.

Their role is to:

- ensure and optimise emergency response;
- operate the integrated emergency control and alarm centres.

The establishment and operation of an emergency alarm centre in each emergency rescue area is according to the Act on the establishment and operation of integrated emergency alarm centres responsibility of counties. Alarm centres respond to 112 emergency calls (single emergency telephone number) and dispatch fire fighting units and rescue units and monitor their operation during emergency.

3.3 Emergencies with hazardous substances in environmental legislation

German environmental legislation relating to the control of air immission and to the management of water resources contains provisions connected to the emergencies with hazardous substances.

The Federal Immission Control Act sets the framework for the control of immissions to air from relevant industrial and other activities. Part of those activities are controlled through the environmental permit in which authorities inter alia set limit values for their emissions into environment.

For the implementation of the Immission Control Act numerous ordinances have been adopted, among them:

- the 12th Immission Control Act Implementation Ordinance (Major Accidents Ordinance) regulates the operation of the SEVESO II establishments – with the exception of external emergency plans which are regulated by the states’ legislation on disaster prevention - in compliance with SEVESO II directive. In this ordinance the obligation is defined for the operators of SEVESO II establishments in Germany to prepare and maintain on-site emergency management plans to ensure operators’ preparedness for and response to emergencies involving hazardous substances and their co-operation with state authorities for the co-ordination of on-site emergency plans and off-site (external) emergency plans;
- the 4th Immission Control Act Implementation Ordinance (Ordinance on the permit issuing process). In this ordinance – and in line with Industrial emissions directive – the requirements for operators of installations that are subject to environmental permitting system to demonstrate the measures for the control of hazards of accidents are defined as a pre-condition for obtaining environmental permit.

In Bavaria no additional – state level – legislation exist for the control of hazards of major accidents at sites of SEVESO II establishments. However the Bavarian State Ministry of the Environment and Public Health has prepared the Working instructions for the implementation of Major Accidents Ordinance (Arbeitshilfen des StMLU zum Vollzug der Störfall-Verordnung in Bayern).

Based on Federal Immission Control Act the Commission on Process Safety ([Kommission für Anlagensicherheit, KAS](#)) has been established. This commission brings together representatives of federal and state authorities and agencies, industry associations, NGO's, Labour unions and science to discuss and advise on the best available techniques for the prevention of major accidents and reduction of their consequences. The commission prepares guidance documents addressing different topics (some of them also translated to English).

The Federal Water Act requires operators of installations where substances hazardous to waters are handled to prevent any pollution of waters with such substances. For the implementation of this requirement the *Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes* and the *Administrative Regulation on the operation of installations that deal with substances hazardous to waters* have been adopted.

The classification of substances hazardous to waters is not directly linked with the Globally Harmonised System (GHS) that is used for the classification of hazardous substances in EU countries. Nevertheless in Germany the possible impact of these substances to water pollution is regulated separately to stress the importance of preventing water pollution with hazardous substances.

3.4 Emergencies with hazardous substances in the transport legislation

The transport of hazardous goods is in Germany regulated in compliance with European Agreement Concerning the International Carriage of Dangerous Goods by Road and the Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods.

The framework provisions are outlined in the Act on the carriage of goods by roads (Güterkraftverkehrsgesetz) and in the Ordinance on the Transport of Dangerous Goods by road, rail and Inland Waterways (Gefahrgutverordnung Strasse, Eisenbahn und Binnenschifffahrt).

With regard to preventing and containing the spills of hazardous substances during their transport they define the actions that are to be realised by the organiser of the transport for the prevention of such spills and for the response in case of incidents during the transport.

4 Emergency planning and response to accidents involving hazardous substances

No special emergency planning is performed for a response to spills of a limited scope from stationary sources or during the transport of hazardous goods. Response to such spills is considered a general capability response of emergency responders – mainly fire fighting units.

Should such a spill occur on site of a stationary activity the operator of such activity is obliged to contain the spill and to prevent the contamination of water and soil. Should an uncontrolled spill

occur during the transport of hazardous materials the driver and the organiser of the transport are obliged to contain the spill.

Should the operator or the driver not be able to contain the spill or to prevent the pollution of water or soil they are obliged to notify the Integrated Emergency Alarm Centre which will dispatch the fire fighting services to prevent the pollution and other rescue and relief services should this be necessary to protect the population.

In cases when county administration declares an emergency this administration would also lead and coordinate the response of different responders. They would lead the response in accordance to emergency response plans that they are obliged to prepare based on information from operators of activities that present a possible source of an emergency. Emergencies of such extent could happen on sites of installations that are subject to environmental permitting (IED installations) and to the control of major accident hazards (SEVESO II establishments).

The states agreed on a set of basic recommendations to harmonise the command and control structures at the various levels of emergency management. Fire Services Regulation 100 (Service rules on the leadership and command in emergency operations) is to be applied at the operational-tactical level by all organizations, and the Guidelines for setting up administrative-organizational task forces are to be applied at the administrative-organizational level. In addition, the states agreed on a procedure for interstate emergency assistance.

The Federal Office for Civil Protection and Disaster Relief supports the response capabilities of states in the form of information, advice and resources.

For emergencies of extraordinary damage the preparedness and response activities are carried out also at the level of federal ministries and are led by the Federal Ministry of the Interior in the form of an Interministerial Panel on National Crisis Management. These arrangements are intended to enable the responsible federal ministries to set up crisis task forces.

5 Improving emergency preparedness based on lessons learned from accident reports

The central accident notification and assessment office (ZEMA, Zentrale Melde und Auswertestelle für Störfälle und Störungen) is established and operates within the Federal Environmental Agency. It collects, evaluates and publishes in annual reports all events which have to be reported pursuant to 12th Immission Control Act Implementation Ordinance. The systematic recording and evaluation of events provide information which is an important basis for a further development of the state of the art technologies. Statistical evaluations are available from 1991.

Similarly the transport accidents are to be reported to Federal Office for the transport of goods (Bundesamt für Güterverkehr).

6 Summary of authorities and organisations with major responsibilities in the planning for and response to emergencies with chemicals

see Table 1

	Level of activity	Authorities and organisations with their tasks
Auth oritie s	Federal level	<u>Federal Ministry of the Interior – Federal Office for Civil Protection and Disaster Relief:</u> <ul style="list-style-type: none"> - design of a policy for emergency management, - preparation of the federal legislation, - support to states for emergency response, - co-ordination of emergency preparedness and response at federal level. <u>Federal Ministry for the Environment, Nature Conservation and Nuclear Safety:</u> policy design and preparation of the legislation with the scientific and administrative support of <u>The Federal Environment Agency</u> .
	State level	<u>State Ministry of the Interior</u> is considered disaster protection authority with duties to prepare emergency plans and organise emergency response if appropriate. In emergency planning and response it supports the districts and counties.
	Local level (districts, boroughs, counties, municipalities)	<u>Districts:</u> are considered disaster protection authorities with duties to prepare emergency plans and organise emergency response if appropriate. <u>Counties and boroughs:</u> are considered “base” disaster protection authorities. They prepare general and specific emergency response plans and organise emergency response. Counties’ authorities operate emergency call centres and organise “emergency area” based work of all emergency relief services. Counties support municipalities in the management of fire fighting units. <u>Municipalities:</u> organise municipal fire fighting units.
Resp onse organ isations	Federal level	THW (Technisches Hilfswerk) is part of the federal Ministry of Interior with branch offices covering the whole country. Its main units are rescue and technical assistance units. The members of units are volunteers.
	County level	Police and rescue services (health and ambulance, mountain, cave and water rescue services).
	Municipalities level	Fire fighting units
Oper ators of	IED installations	Operators of IED installations are obliged to ensure accidents are prevented and their consequences mitigated with the use of BAT techniques (prerequisite for an integrated environmental operation permit).
	SEVESO II establishments	Operators of SEVESO II establishments are obliged to ensure the control of the hazards of major accidents with hazardous substances and this is a prerequisite for their operation.
	Other activities that deal with hazardous substances	Operators of these activities address emergencies with chemicals with the “health and safety at work” measures.
	Roads	Roads operators assist in the response to spills of chemicals during their transport.

Table 1: authorities and organisations with major responsibilities in the planning for and response to emergencies with chemicals in Germany

Slovenia

Slovenia has a size of approx 20.000 sq km and a population of approx 2 million.

Slovenia is a parliamentary republic. There are two administrative levels: national and local. At local level Slovenia is divided into 211 municipalities and 11 urban municipalities.

GDP per capita amounts to approx 28.000 USD.

1 Introduction

In Slovenia preparedness for and response to emergencies of natural and man-made origin is organised under unified, integral and interdisciplinary system known as the “System for the Protection Against Natural and Other Disasters”. Based on common goals and principles it merges all elements that ensure protection from disasters: prevention, preparedness, response and recovery into organisationally and functionally unified system.

This system builds on more than a century of experience in organised fire fighting. Fire fighting has long tradition in Slovenia, professional and volunteer fire-fighting units are considered the first and main responders to emergencies.

The system is aimed at the protection of people, property and environment from all emergencies that can happen in the country, its scope and features shall be based on risk assessments.

Preparedness for and response to emergencies with chemicals is organised and functions as integral part of this system in line with uniform emergency preparedness principles that apply equally for emergencies of all kinds.

The organisation of emergency preparedness and response is adjusted and follows the structure of country's administrative structure which is realised at national and local level.

In preparing for emergencies with chemicals authorities at national and local level work together with operators of relevant industrial and other types of installations that use, store or produce chemicals and with operators of major roads to ensure response to accidents with hazardous substances that might happen during their transport.

2 Strategic approach to emergency management

The National Security Strategy is a document adopted by the Slovenian Parliament that outlines mechanisms and measures for managing all possible threats – these being of different character and of national and international origin – to the country's security.

Among the threats this strategy identifies hazards of natural and man-made accidents and recognises existing System for the Protection against Natural and Other Disasters as adequate mechanism for addressing these threats.

Directions for the development and functioning of the system for a five-year period are outlined in a national programme adopted by Slovenian Parliament (currently valid is National programme of protection against natural and man-made disasters for the period 2009-2014). It defines actions that are to be undertaken to increase the level of prevention of, preparedness for, response to and recovery from all kind of emergencies and accidents which might affect Slovenia.

Based on experience and lessons learnt from past disasters and taking into account the new knowledge in the area of emergency management this programme gives directions also for increased capability in a country to respond to emergencies with hazardous substances.

3 Principles of emergency preparedness and response

Emergency preparedness and response is organised based on principles defined in [the Act on the Protection Against Natural and Other Disasters](#). Principles apply equally to all kinds of emergencies.

The fundamental principle that influences the preparedness and response to emergencies is the principle of subsidiarity, of step-by-step response to emergencies. It defines that the response shall be based on the capabilities of local communities, only in cases when the scale of an emergency overwhelms the capabilities of local communities the state shall ensure the assistance of responders from wider area.

Furthermore the emergency preparedness and response shall be based on the principle that the scope and type of emergency preparedness measures shall be adjusted to the level of risk and on the principle that all commercial and non-commercial, public and private organisations that perform rescue and relief activities as part of their every-day work should perform this also in case of an emergency.

4 Legislation and other documents that contain important provisions related to the emergency planning and response

4.1 Civil Protection legislation

Principles and basic provisions with regard to emergency preparedness and response to emergencies are defined in the Act on the Protection Against Natural and Other Disasters.

Based on this act following legislation has been adopted:

- a) Decree on the Content and Compilation of Emergency Response Plans. This decree defines parameters for linking the degree of hazard with an obligation for the preparation of emergency plans, their review, revision and testing;
- b) Decree on the Organisation, Equipping and Training of Rescue and Relief units. This decree defines parameters for linking the degree of hazard at the level of hazardous activities, at local level and at national level with an obligation to establish, equip and train rescue and relief units;
- c) Decree on the Organisation and Operation of the Monitoring, Information and Alarming System. This decree defines responsibilities and sets the rules for monitoring, information and alarming system. With this decree also a network of emergency notification centres in Slovenia has been established (14 national notification centres);
- d) Rules for Informing and Reporting within the System of Protection against Natural and Other Disasters. These rules define methodology, procedures and mode of notifying, collecting, transmitting and using information on hazards and on emergencies. Based on these rules an obligation is assigned to an operator of a hazardous activity to monitor its operation and to inform the competent authority (through emergency notification centre) of any extraordinary event or emergency. Annexed to these rules are forms for reporting accidents and other extraordinary events – among them a reporting format that is to be used by operators for the notification of accidents with hazardous substances.

4.1.1 Act on the Protection against Natural and Other Disasters

This act defines all elements that constitute the emergency management system and are aimed at the protection of people, property and environment from the harmful consequences of natural and man-made disasters:

- monitoring of hazards,

- notification and warning in the event of imminent danger,
- preparation of emergency response plans,
- establishment and maintenance of emergency preparedness,
- emergency response,
- elimination of the consequences of disasters and provision of basic living conditions in the affected areas.

The realisation of these elements in relation to the emergencies with hazardous substances is the responsibility of authorities and organisations at national and local level and of operators of installations and of major roads.

Administration for Civil Protection and Disaster Relief (under the Ministry of Defence) is a body at national level responsible for policy issues and for the control over functioning of the emergency management system. It operates with one central office and 13 branch offices. Additionally it is coordinating the assessment of risks and preparation of emergency plans and for organising rescue and relief units at national level.

Local communities are responsible for the assessment of risks, for the preparation of emergency response plans and for organising rescue and relief units at local level.

4.1.2 Decree on the Content and Elaboration of Emergency Plans

This decree defines basic rules and responsibilities for the preparation of emergency plans. It relates to all kinds of emergencies, but has special provisions that relate to the preparation of emergency plans for accidents involving hazardous substances.

In Slovenia emergency plans are being prepared at national and local level and at the level of industrial and other types of installations which operation is either considered a possible source of an emergency or which operation is vital for the functioning of the society and the country.

In national/local emergency plans the actions and arrangement for the response of authorities and organisations at national/local level are defined. Regional emergency plans are being prepared to address emergencies that can affect more local communities. When for specific type of hazard a response is planned by authorities and organisations at different level (e.g. for a response to an earthquake) the emergency response plans at different levels need to be harmonised. In such cases a “base plan” is determined and this plan serves as a basis and guide for plans at other levels.

Regardless the type and level of the plan each plan is assigned an administrator, whose role is to ensure that the plan is harmonised and co-ordinated with related plans should this be relevant.

Furthermore this decree defines the topics that are to be covered in an emergency plan as a minimum, the review and revision of the plan, the public participation in the process when plans are being prepared and the availability of plans to the public.

Emergency response plans are activated by the decision of relevant Civil Protection Commander, the plans at installation levels are being activated by its management.

This decree serves also for the transposition of parts of SEVESO II directive that relate to on-site and off-site emergency plans.

4.1.3 Decree on the Organisation, Equipping and Training of Emergency Response Organisations

Availability of trained and equipped emergency responders is crucial for an effective and efficient response and this decree is of vital importance for ensuring emergency preparedness. It defines:

- types of rescue and relief responders that are to be organised in Slovenia to address all kinds of emergencies;
- authorities and organisations that are responsible for their organisation;
- the tasks they are expected to perform in an emergency (in practice these tasks will be realised in accordance to emergency plans);
- minimum number and qualifications of members of rescue and response teams, their equipment and training requirements.

In Slovenia emergency response is organised in such a way that it relies on the work of organisations which in their every-day job perform activities which are connected to emergency response. Only small part of emergency responders are organised and trained specifically for emergency response.

With regard to emergency response it is also characteristic for Slovenia that especially in major emergencies substantial part of the response is on rescue and relief organisations which origin is in volunteer organisations.

In general response organisations are of three categories:

- professional (fire-fighting service, police, health services,),
- units of volunteer organisations (volunteer fire-fighters, mountain rescue, spelaeologist association, red cross, ...),
- Civil Protection units (first aid units, technical rescue units, RCB (radiological, chemical, biological) units,).

Civil Protection units are being organised only to perform tasks which are not covered by professional and volunteer units.

Specific for Slovenian emergency response system is nomination and specific role of Civil Protection Commanders. They are being nominated at the level of installations, at local and national level. Civil Protection Commanders are called to for the lead of emergency response only in complex emergencies to give direction and to ensure the co-ordinated response.

Civil Protection Commanders are responsible to activate emergency response plan at relevant level and to organise and lead the emergency response. In performing these duties he/she is supported by a Civil Protection Coordination and Support Group. This group is composed of representatives of all institutions that are expected to provide information and guide the commander.

Provision of training to the members of emergency response units is performed in accordance with the national emergency response training scheme. This scheme defines in detail the scope, content and

frequency of training that members of specific units need to undergo. Major part of this training is organised and performed in a National Training Centre for Civil Protection and Disaster Relief.

4.1.4 Others

Doctrine on Protection, Rescue and Relief is a document comprised of common principles and views on organisation and conduct of protection, rescue and relief efforts during emergency response. The use of common principles provides for a functionally unified and harmonised approach for disaster preparations as well as harmonised operations of all those who carry out protection, rescue and relief efforts. It outlines also telecommunication and information system and other infrastructure that is part of overall emergency response system.

Organisation of fire-fighting services is realised in accordance to the Act on the organisation of fire-fighting service.

4.2 Environmental legislation

Environmental legislation based on the Act on the protection of environment in Slovenia covers preparedness and response to emergencies for installations that are subject to the integrated environmental permitting scheme. For all other installations which operation is considered a hazard of an emergency (such as SEVESO II establishments) the environmental legislation directs to the legislation that regulates the system for protection against natural and man-made disasters.

Environmental legislation based on the Act on the management of watercourses provides for separate units for the response to emergencies with hazardous substances when there is a major threat of pollution to waters. Currently there are two professional organisations contracted for such response.

4.3 Act on the transport of dangerous goods

Transport of dangerous goods is in Slovenia regulated in an EU harmonised manner. The Act on the transport of dangerous goods relates to the International Agreement on the transport of dangerous goods. It defines specific measures to ensure safe transport (technical specifications for vehicles transporting dangerous goods, qualifications of drivers, responsibilities of different persons involved in the transport of dangerous goods, permitting of the transport for dangerous goods – only for explosives, radioactive material and nuclear material). Among the measures is also an obligation to have ready the plan of measures to be undertaken by the transport organisation to contain an uncontrolled release of hazardous goods.

5 Emergency planning and response to accidents involving hazardous substances

5.1 Emergency planning and response to accidents involving hazardous substances in stationary sources

a) spills of hazardous substances of a limited scope from stationary sources

No special emergency planning is performed for a response to spills of a limited scope from stationary sources.

Should such a spill occur on site of an industrial establishment its operator would be responsible to contain the spill and to prevent the spill entering the environment. Should the operators themselves not be capable of containing the spill they are obliged to notify emergency notification centre (112 is emergency call number). The staff of the centre will activate either the professional or volunteer fire fighting unit (depending on the location of a spill, its scope and possibility of environmental consequences) to respond to a spill.

Only bigger local communities in Slovenia are obliged by law (Act on the organisation of fire fighting service) to organise a professional fire brigade which scope is harmonised with the size of local community and with its emergency risks characteristics.

Should the spill threaten to cause harmful consequences of wider scope the local emergency plan would be activated by the Local Civil Protection Commander and the response would follow the arrangements defined in this plan.

b) accidents involving hazardous substances in installations that are subject to integrated environmental permitting

In line with EU legislation (IED Directive) installations that are subject to integrated environmental permitting are required to control hazards of accident with hazardous substances and to plan measures for the prevention of such accidents and for the reduction of their consequences.

Emergency planning arrangements of such installations are controlled in the process of issuing the integrated environmental permit, which is granted only if the operator of an installation has demonstrated to the competent authority (Environment Agency) that the installation has appropriate and sufficient emergency response arrangements (compliant with best available techniques) in place to be able to contain the emergency on the site of an installation.

Should the consequences of accidents threaten or affect the area outside the site of an installation the management of this installation is obliged to notify the emergency notification centre which would then inform Civil Protection Commander to activate the local emergency response plan.

c) accidents involving hazardous substances in establishments that are subject to the control of hazards of major accidents with hazardous substances

In line with the EU legislation (SEVESO II Directive) separate emergency preparedness regime has been introduced for establishments which operation is considered a major accident hazard. This regime is composed of internal emergency preparedness regime (responsibility of operators) and external emergency preparedness regime (responsibility of local community).

Operators of these establishments (currently 25 in Slovenia) are obliged to ensure emergency preparedness and to prepare an emergency response plan (on-site emergency plan). The basis for planning emergency response actions and arrangements are scenarios of possible major accidents. Scenarios of major accidents give detailed information on the characteristics of hazardous substances which uncontrolled release could be a trigger for a major accident, the possible affects of such releases and possible consequences for man and environment.

Decree on the content and elaboration of emergency response plans defines topics that are as a minimum to be addressed by on-site emergency plans for SEVESO II establishments.

Local communities with such establishments in their territories are obliged to ensure capabilities for local response to an emergency originating in such establishment.

5.2 Emergency planning and response to accidents during the transport of hazardous goods

The principles of response to spills of hazardous goods during their transport are the same as of the response to spills and emergencies at stationary sources.

a) spills of hazardous substances on local roads

Transport of dangerous goods on the local roads is realised to bring the goods from the major roads to the final customer. Local roads are operated by local communities.

There is no obligation in the legislation for a local community to prepare an emergency response plan for spills of hazardous substances on local roads. Local communities are however obliged to prepare for emergencies that they consider relevant. In practice majority of local communities have emergency response plans prepared that specifically address the emergency response to a spill during the transport of hazardous goods. The main reason for this is the importance of protecting areas under specific environmental protection regime and protecting environment in general from harmful consequences of spills.

Response to a spill does not differ from a response to a spill in a stationary source. Should the transport organisation not succeed in containing the spill or preventing it from entering into the soil or water it is obliged by law to inform the emergency notification centre. This centre would then activate the responders in the same manner as in case of a spill in stationary source. The same rules apply also as regards the activation of local emergency response plan.

b) spills of hazardous substances on national roads

The transport of dangerous goods is allowed on the roads that are categorised as national roads. Two organisations operate these roads and are heavily involved in emergency preparedness for emergencies with hazardous substances on these roads.

Operators of these roads are obliged by legislation (Decree on the content and elaboration of emergency plans) to prepare emergency plans for accidents that could happen on roads involving hazardous substances or not. These plans need to be aligned with national emergency response plan for emergencies on national roads (due to national category of roads) which preparation is to be coordinated by the Administration for Civil Protection and Disaster Relief.

Specific responders to accidents on national roads are the national roads operators' Traffic Information Centre and National Auto Moto Association (AMZS).

Due to specifics of a spill from a vehicle transporting dangerous goods professional fire-brigades and part of volunteer fire fighting units (equipped and trained for response to such emergencies) are authorised to respond.

Should a spill of hazardous substance threaten to cause or cause major pollution of a watercourse authorised environmental response organisations are called for response.

The response to a spill on national road in general does not differ from a response to a spill on local roads. Should the transport organisation not succeed in containing the spill or preventing it from entering into soil or water it is obliged by law to inform the emergency notification centre. This centre would then activate the responders in the same manner as in case of a spill in stationary source. The difference is only that the arrangements from national emergency response plans would be put in practice.

6 Assessing the level of preparedness for emergencies

In Slovenia no specific indicators for assessing the level of emergency preparedness are being used.

There are however two mechanisms that provide input to the assessment of the level of emergency preparedness:

a) inspection control

Inspectorate for the Protection Against Natural and Other Disasters (within Ministry of Defence) performs inspection control related to the implementation of specific tasks defined in the Act on the protection against natural and other disasters.

Inspectors perform inspection controls of authorities at national and local level and of operators of installations with specific responsibilities regarding emergency preparedness. The inspection control relates to the duties of these bodies to:

- prepare an emergency plan,
- assure that emergency response units are organised, equipped and trained.

Inspectorate prepares yearly reports on their activities and findings from inspection control. These reports are used as an input when planning new measures to enhance the emergency preparedness.

b) emergency response tests and exercises

The testing of emergency response plans is carried out by means of exercises in accordance with the Rules on exercises in the field of protection against natural and other disasters. These suggest different types of exercises that could be realised to test specific parts of the plan or the whole plan.

For each exercise a plan for its conduct is prepared defining exercise scenarios, list of trainees and other participants, mode of communication, means necessary for the execution of an exercise, safety issues, financial coverage and public information. Such plan can also define guidelines and reminders for trainees.

The conduct and results of each exercise are being analysed and the findings from these analyses are used for the revision of emergency plans, developing training programmes and for targeted organization of emergency responders.

Separate testing of emergency response plans is defined for SEVESO II sites for which the frequency of testing is at three years period as a minimum.

7 Summary of authorities and organisations with major duties in the planning for and response to emergencies with chemicals

see table 2

	Level of activity	Authorities and organisations with their tasks
Auth oritie s	National level	<u>Ministry of Defence – Administration for Civil Protection and Disaster Relief:</u> <ul style="list-style-type: none"> - designing a policy for emergency management, - preparing legislation, - supporting local communities, - coordination for preparing emergency response plans at national level, - organisation, training and equipping of national emergency response units, - organisation of information, notification and alarming centres. <u>Ministry of Agriculture and the Environment:</u> policy design and preparation of the legislation with the administrative support of <u>Environmental Protection Agency</u> . <u>Ministry of Health:</u> to ensure that medical, first aid and ambulance services are prepared to respond to emergencies. <u>Ministry of the Interior:</u> to ensure that police units are prepared for emergency response.
	Local level	<u>Municipalities:</u> <ul style="list-style-type: none"> - preparing of local emergency response plans, - organisation, training and equipping of local emergency response units.
Resp onse organ isations	National	<u>Voluntary</u> units: mountain rescue, Red Cross, search dog handlers, divers, scouting units and cave rescue units. <u>Professional</u> units: ecological laboratory with mobile unit, identification of dead unit, engineering rescue units, maritime rescue units, engineering rescue units, ABC laboratories. <u>Civil Protection</u> units: quick response unit, protection from unexploded deadly devices, ABC protection, support services units. <u>Authorised companies</u> for response to emergencies with water pollution potential.
	Local	<u>Voluntary</u> units: fire fighting units, first aid units of Red Cross. <u>Professional</u> units: fire fighting units, medical units, veterinarian units, logistics and supply units <u>Civil Protection</u> units: technical rescue units, first aid units, ABC protection units, units for maintaining shelters, support services

Operators of	IED installations	To ensure accidents are prevented and their consequences mitigated with the use of BAT techniques (a prerequisite for an integrated environmental operation permit) Organisation of company's fire fighting units, technical rescue units and first aid units as appropriate.
	SEVESO II establishments	To ensure the control of the hazards of major accidents with hazardous substances (major accidents are to be prevented, the consequences should be reduced) – a prerequisite for their operation. Organisation of company's fire fighting units, technical rescue units and first aid units as appropriate.
	Other activities that deal with hazardous substances	To address emergencies with "health and safety at work" measures. Organisation of company's fire fighting units, technical rescue units and first aid units as appropriate.
	Roads	To assist in the response to spills of chemicals during the transport of chemicals.

Table 2: authorities and organisations with major responsibilities in the planning for and response to emergencies with chemicals in Slovenia

The Netherlands

Netherlands has a size of approx 41.500 sq km and a population of approx 16,8 million.

Form of government is constitutional monarchy. There are three administrative levels: national, provincial and local. The country is divided into 12 provinces and more than 400 municipalities.

GDP per capita amounts to approx 43.000 USD.

1 Introduction

In the Netherlands revised approach to emergency preparedness and response has been adopted in 2010.

This approach is based on thorough analysis of developments in the society characterised by increased complexity of emergencies and on the assessments of the management of several disasters, but also on the identified need for increased effectiveness and professionalism of the emergency services.

As one of the answers to these challenges the uniform emergency service level (security regions) was established as an extension of local governments.

2 Emergency management as part of national security management

The Dutch government has adopted the National Security Strategy which is its mechanism for examining the threats and the ways how to prevent them and how to respond to them.

National security is endangered when one or more of the country's vital interests (among them the protection of the environment) are threatened to be endangered or are actually endangered.

The National Security Strategy provides for yearly investigation of the Netherland's potential threats based on common Guidelines for the National Security Implementation Method: Scenarios, Risk Assessment and Capacities.

Serious chemical incidents are being considered a threat to national security and are as such analysed among the threats to national security too. The government regularly examines whether public bodies, business enterprises and individual citizens are prepared for the case of a disaster or a crisis.

Crisis control is subject to different management system than emergencies. A crisis is coordinated at the national level by means of a top-down control system. A disaster management system is set up in an opposite manner as a down-top response.

3 Legislation covering emergency preparedness and response

3.1 Security Regions Act and related decisions and regulations

The system of emergency preparedness and response to all kinds of emergencies is outlined in the »security regions legislation« that consists of Security Regions Act and related decisions and regulations (Security Regions Decision, Regulation on security regions personnel and the Official Instruction for the King's Commissioner).

The Security Regions Act seeks to achieve an efficient and high-quality organisation of all emergency responders under one regional management board – which is actually the extension of the local governments of municipalities.

The territory of Netherlands is divided into 25 security regions (defined in the Act) that are as public bodies established by a joint regulation of municipal executives. Each security region must ensure a trained and equipped professional organisation for emergency management that is able to respond to large-scale incidents. The idea behind is that by combining forces in the form of a security region, the emergency services can better prepare for emergencies like major fires and other large scale events in an efficient and cost-effective way.

The municipality remains responsible for the organisation of fire service, medical assistance and disasters management. This responsibility it can execute by itself or it can decide that it shall implement this duty by using the sources of security region. This is important for small municipalities for which the organisation of own emergency response system would not be cost-effective

The security regions are tasked with following duties:

- compiling data on all emergencies that are relevant for the region and analysing them,
- advising the competent authorities on risks of emergencies,
- advising the municipal executives,
- preparing for emergency response management,
- setting up and maintaining a fire service;
- setting up and maintaining a Regional Medical Assistance Organisation (GHOR);
- ensuring the operation of an incident room,

- procuring the necessary equipment,
- ensuring exchange of information within the services of the security region and between them and with all other services and organisations that have a role in emergency preparedness and response (such as water boards).

The security regions are managed by management boards composed of mayors of participating municipalities. It is considered good practice that the managers of water boards and police boards and the King's Commissioner take part in the meetings of the management board.

3.2 Hazards of major accidents Decree (BRZO 1999)

Based on this decree the majority of obligations for SEVESO II establishments are defined (scope, obligations for industry, inspections). In this decree the safety and health at work regulations are merged with regulations on external safety and disaster response.

The operators of “BRZO establishments” have a duty to prepare internal emergency response plans, to activate it in case of an emergency but also to use it for exercises with relevant emergency services.

3.3 External safety Decree (BEVI)

This decree is not directly related to emergencies' management, but is very important for the control of major accident hazards as it establishes rules for the identification of risk contours round high risk sites. These risk contours are calculated based on the common methodology for all high risk installations in the country (non Seveso II companies are covered too) and are used as a basis when decisions are taken in the land-use procedures.

This decree is important also for raising awareness of the population on risks since it provides for the preparation of risk maps that need to be available to the public. The maps are produced for the whole country and beside basic information on the risks contain also risk contours.

3.4 Legislation at municipal level

Based on Security Regions Act municipalities can define detailed rules with regard to the preparedness for and response to emergencies. Following topics can be further defined by municipal legislation:

- rules related to fire service (organisation and personnel, response time, training, ...);
- how the public will be informed in case of an emergency;
- categories of establishments for which the management board of the security region shall establish disaster management plan;
- the content of the emergency response plan.

4 Planning a response to emergencies

Planning a response to emergencies with hazardous substances is managed as a separate topic for SEVESO II establishments and for other establishments determined by decisions of municipalities' counties. But even for these establishments emergency preparedness is performed based on the Security Regions Act as for all other types of emergencies.

4.1 Planning a response to spills of hazardous substances of smaller scope

There is no specific planning in terms of planning for organisation and management of such spills with the emergency response plans. A response to such spills is carried out as an everyday duty of fire services without specific pre-planning and coordination.

4.2 Planning a response to emergencies with chemical substances of a larger scale that need coordination of emergency services

Planning a response to emergencies is done by security regions. Emergencies response plan is however only one of the security region's documents with which it organises the preparedness and response to emergencies for all municipalities that belong to the security region and for all types of emergencies that are relevant for the security region.

Municipalities have big influence on the scope and type of emergencies that are being addressed in the emergency planning process since this process is organised in accordance with suggestions from municipalities.

A security region functions in line with the four-year policy plan. The policy plan is an overall plan of actions and relates to all tasks of security regions:

- management and policy of the fire services and the regional medical assistance organisation;
- advising the competent authorities on risk policy;
- managing the joint incident room;
- preparing for the emergency response.

The priorities and activities identified in the policy plan are then fleshed out in annual work plans of the relevant organisations. The policy plan will also translate the national policy objectives, if adopted by the Dutch Minister of the Interior, to suit the regional situation. As here too the involvement of the municipal councils is of great importance when drawing up the policy plan, the duty to consult them has been established.

The management board of the security region establishes the policy plan on the basis of the risk profile determined by the management board of the security region. The risk profile comprises a risk inventory and a risk analysis of the risks present in a security region, including relevant risks from adjacent areas. The risk inventory encompasses an overview of risky situations and the types of incident which can consequently arise.

The security management board can conclude agreements with the various partners on the basis of the established risk profile, regarding their role and contribution in case of an emergency. These agreements are particularly relevant for emergencies with hazardous substances as these emergencies do require specific expertise of response organisations such as water boards and the *Rijkswaterstaat* (the Directorate-General of Public Works and Water Management). The risk profile will be reviewed at least once every four years.

The security region has been set up as extended local government to perform tasks on behalf of and for the municipalities. Since the risk profile forms the basis for the policy plan, the legislator explicitly positioned the risk profile as an instrument for giving the municipal councils direct influence on the policy of the security region. The management board of the security region is under an obligation to discuss the concept of the risk profile with all participating municipal councils. The councils must be able to recognise the risks that are relevant for their municipality from the concept of the risk profile, and if necessary they must be able to supplement the concept with risks they have identified themselves. They can also put forward local priorities and emergency themes for the policy plan.

The management board of the security region will also invite the regional police board, the management boards of the water boards and other partners to express their views on the concept of the risk profile. The risks are also on the agenda of the annual meeting with all emergency response partners, convened by the management board of the security region.

A national guideline has been developed for periodically drawing up regional risk profiles, offering the security regions a uniform method. This allows the profiles to be compared with each other and enables smoother supra-regional coordination.

Based on the policy plan and risk profile emergency response plans are prepared by a security region which address all applicable types of emergencies – among them also emergencies with hazardous substances. The plan describes the general organisation of disaster management in the security region. It consists of the tasks, powers, responsibilities and agreements relating to the maintenance of preparedness, providing information and alerting, on-site response, leading authority and information provision.

As an obligation from the EU legislation the emergency response plan of a security region must be drawn up for BRZO establishments. The decision as to whether or not to draw up disaster management plans for other risk objects or activities is left to the management board of the security region.

There are no specific provisions in the legislation concerning the emergencies with hazardous substances that are a consequence of a spill during the transport of hazardous goods.

5 Response to emergencies

5.1 Operational response organisations

Operational response on site of an emergency is mostly performed by three major response services: fire services, health and ambulance services and police.

The fire service

The fire services play a central role in emergency response. Each municipality is obliged to ensure a fire service to perform following tasks:

- preventing, containing and fighting fire;
- limiting and mitigating dangers to people and animals in the event of incidents other than fire.

The municipal fire service that is established by the management board of the security region shall additionally to above perform following tasks:

- warn the population;
- examine hazardous substances (special equipment necessary) and carry out decontaminations;
- advise other public authorities and organisations as regards fire prevention, fire fighting and preventing and combating incidents with hazardous substances.

The fire services's role does not relate only to emergency response but also to prevention of fires.

The municipalities may decide to organise all fire service tasks under municipal fire service.

Based on the Security regions Act the management board of the security region may designate an establishment which could cause danger to public safety in the event of a fire or incident and is therefore obliged to have a company fire service. In this designation the management board lays down the requirements related to the size, education and equipment of such company fire service.

Equal requirements apply as regards the education, training and equipment for volunteer and professional fire fighters.

Medical and ambulance services

Integrated in the emergency preparedness and response of each region is a regional medical assistance service headed by the regional medical officer who coordinates all medical relief activities during a major accident or disaster.

Police services

Integrated in the emergency preparedness and response of each safety region is also a police. The police will ensure that the fire and ambulance services can do their job. They will cordon off the disaster area, manage the traffic, and sometimes set up a safety zone around the disaster area. If victims are difficult to identify, the police will deploy the disaster identification team.

Other services provided by specialised institutions

Specialised institutions that can support the emergency response are organised under:

- the [Ministry of Infrastructure and the Environment](#) (National Meteorological Institute, water boards, Directorate General for Public Works and Water Management ([Rijkswaterstaat](#)), The Netherlands Traffic Control Centre)
- and Ministry of Health, Welfare and Sport (National Institute for Public Health and the Environment).

The National Institute for Public Health and the Environment (RIVM)

This institute can play an important role during a response to an emergency through Environmental Incident Service (MOD). This service can in case of a fire, an overturned tanker, or health complaints of unknown cause, rapidly supply information about the nature,

concentration and dispersion of chemicals, as well as the potential hazards to human health and the environment to emergency responders or to mayor who based on this information can inform the public accordingly.

Emergency response services intended mainly for a response to emergencies with hazardous substances abroad

As joint initiative of the RIVM and the Ministry of Foreign Affairs the Environmental Assessment Module (EAM) was created to support the international response to environmental emergencies. The EAM can be rapidly deployed for disasters involving hazardous substances, together with the relevant technical expertise and two fully-equipped off-road vehicles: one containing a mobile measurement and analysis unit, the other containing materials for logistical support, such as satellite equipment and a GPS. When deployed, the EAM will be supported by a knowledge network of research institutions and Ministries in the Netherlands (BOT-mi) to ensure affected countries receive the best available support. The EAM can be deployed at the request of the UN or other international organizations. Countries themselves may also directly request assistance from the Netherlands. A primary client of the EAM is the Joint UNEP/OCHA Environment Unit.

5.2 Coordination and management of a response

Emergency at company level

Should the emergency not exceed the borders of a company than a response is organised by the company fire service (if such fire service has been established) or by the municipal fire service and in accordance with the on-site emergency response plan should such plan be prepared.

Emergency at municipality level

Management of a response to an emergency at municipal level is the responsibility of a mayor, who in practice delegates the operational responsibility to a commander of a fire service. Commander of a fire service also coordinates on site of an emergency the work of all response services.

The mayor may convene a group of representatives of various public services who make up the disaster management team to provide an advice for the smooth running of the response effort.

The mayor shall ensure that the population is given information on the disaster which has struck or is threatening to struck the municipality together with instructions and procedures to be followed.

Response to emergencies that exceed the capacity of a municipality

In the event of an emergency of more than local significance, or a serious threat that such an emergency may occur, the chairman of the security region has the exclusive authority for emergency response. The chairman shall convene a regional policy team comprised of mayors of the municipalities involved – invited shall be also chairmen of water boards.

The chairman appoints a regional operations leader who shall be in charge of the management of a regional operations team.

The management board of the security region acts with the support of a joint incident room for the fire services tasks, medical assistance, ambulance services and the police tasks.

In the event of a disaster of more than regional significance The King's Commissioner may give the chairman of the security region instructions with regard to the disaster management.

Authority to manage a disaster can also be taken by a minister – depending on the type of the disaster.

Awareness raising of the population

The provincial executive shall ensure the production and maintenance of a geographic map indicating the risks present in the security region on the basis of a risk profile. In accordance with the Environmental Management Act (data in public register) the risk map shall set out the location specific and geographically distinguished risks. The map shall be made available to the public. The municipal executives in the province and National Institute for Public Health and the Environment shall provide provincial executive with data necessary to produce risk maps.

6 Summary of authorities and organisations with responsibilities in the planning for and response to emergencies with chemicals

see table 3

	Level of activity	Authorities and organisations with their tasks
Auth oritie s	National	<p><u>Ministry of Infrastructure and the Environment:</u></p> <ul style="list-style-type: none"> - management of major accidents with hazardous substances from the environmental protection point of view, - external safety, <p><u>Ministry of Infrastructure and the Environment - Directorate General for Public Works and Water Management:</u> design, construction, management and maintenance of main road network, main water ways network and main water systems.</p> <p><u>Ministry of Social Affairs and Employment:</u> management of major accidents with hazardous substances from the view of health and safety at work.</p> <p><u>Ministry of Security and Justice:</u> overall coordination of security issues, policy and organisation of fire services and police.</p> <p><u>Public Health and the Environment Institute (RIVM):</u> scientific support to Ministry of Infrastructure and the Environment and to Ministry of Health, Welfare and Sport.</p>
	Regional	<p><u>Provincial authorities:</u> link between the national and local level authorities, support and guidance to local authorities.</p> <p><u>Water boards:</u> main responsibility is management and maintenance of water barriers and of waterways and the control of water quantity and quality. They are strongly involved in the work of security regions.</p>

	Local	<u>Municipal council, mayors</u> : organisation of municipal fire fighting units , medical assistance, disaster management, working together in security regions.
Response organisations	National	National police corps
	Local	Fire fighting units, medical assistance units
Operators of	BRZO installations	Operators of SEVESO II establishments are obliged to ensure the control of the hazards of major accidents with hazardous substances and this is a prerequisite for their operation.
	Other activities that deal with hazardous substances	Operators of these activities address emergencies with chemicals with the “health and safety at work” measures.
	Roads	Roads operators assist in the response to spills of chemicals during their transport.

Table 3: authorities and organisations with major responsibilities in the planning for and response to emergencies with chemicals in the Netherlands

United Kingdom

United Kingdom has a size of approx 244.000 sq km and a population of approx 63 million.

Form of government is constitutional monarchy.

Administrative organisation is similar in all parts: England, Northern Ireland, Scotland and Wales. This report focuses on emergency preparedness and response arrangements in England.

England is administratively subdivided into 9 regions. The London region (known as greater London) is further divided into City of London and 32 London boroughs. The other regions are made up of metropolitan and non-metropolitan counties and unitary authorities. The counties are further divided into districts.

GDP per capita amounts to approx 37.500 USD.

1 Introduction

In UK preparing for and response to emergencies involving hazardous substances is part of an overall and uniform system aiming at the protection of people, economy, infrastructure, territory and way of life from all major relevant risks. This system is adjusted to administrative management patterns of the country.

This report outlines emergency preparedness and response in England, arrangements in other parts of UK (Wales, Scotland, Northern Ireland) are similar, the division of responsibilities is adjusted to their administrative structure.

Actions, roles and responsibilities for ensuring emergency preparedness and response are defined in documents of obligatory and non-obligatory character at strategic, policy and operational level. In UK number of guidance documents and manuals prepared by different organisations specify the implementation of their responsibilities related to the preparedness for and response to emergencies.

The responsibility for actions is on authorities (at different levels of administration: national, local) and organisations of different character (administrations, services, utilities).

Management of emergencies is composed of two schemes: emergency planning scheme (composed of civil protection duties for local emergency responders) and emergency response scheme.

2. UK's strategy for ensuring preparedness for emergencies

National strategy for ensuring a secure and resilient UK is defined in [National Security Strategy](#) which aims at protecting people, economy, infrastructure, territory and way of life from all major risks that can affect UK.

In this strategy major accidents and natural hazards are identified as high priority risks.

For meeting the objectives of the strategy the National Security Council is responsible. It is chaired by the Prime Minister, advised by the National Security Adviser and supported by the Civil Contingencies Secretariat (CCS). CCS leads the wider government effort on civil emergency planning and response.

3 Starting point for a response to emergencies

Starting point for a response to emergencies of any kind - also to emergencies with hazardous substances – is that the prime responsibility for handling emergencies should remain at the local level. The role of central government and the regional bodies is to support and supplement the efforts of local responders through the provision of resources and coordination. The central and regional tiers will only become involved in emergency planning and response where it is necessary or helpful to do so.

4 Legislation and other documents that contain important provisions related to the emergency planning and response

4.1 Civil Contingencies Act and related regulations and statutory guidance on emergency planning

The [Civil Contingencies Act](#) 2004 defines a single framework for emergency preparedness and civil protection in the UK. It is divided into two parts: local arrangements for civil protection (Part 1) and emergency powers (Part 2).

Part 1 of this Act and supporting Civil Contingencies Act 2004 (Contingency Planning) Regulation 2005 and the statutory guidance [Emergency Preparedness](#)) establish a clear set of roles and responsibilities for those involved in emergency preparation and response at the local level. This helps to deliver greater consistency of civil protection activity at the local level, facilitate more systematic co-operation between responders and lay the foundation for robust performance management.

The Act identifies responders that have specific duties to implement with regard to emergency planning and response. It divides local responders into two categories, imposing a different set of duties on each.

Category 1 responders are organisations at the core of emergency response (e.g. emergency services (police, fire and rescue authority), local authorities (county councils, district councils and specific local authorities for London), health service bodies and the Environment Agency.

Category 2 responders (e.g. Health and Safety Executive, transport and utility companies) are “co-operating bodies”, which are less likely to be involved in the heart of planning work but will be heavily involved in incidents that affect their sector.

Category 1 responders are subject to the full set of civil protection duties. They are required to:

- assess the risk of emergencies and use this assessment to inform emergency planning and business continuity planning,
- put in place emergency plans,
- put in place business continuity plans,
- put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform and advise the public in the event of an emergency,
- share information with other local responders to enhance co-ordination,

- co-operate with other local responders to enhance co-ordination and efficiency, and
- provide advice and assistance to businesses and voluntary organisations about business continuity management (local authorities only).

Category 2 responders have a lesser set of duties. They are required to co-operate and share information with other responders.

Part 2 of the Act allows for the making of temporary special legislation (emergency regulations) to help deal with the most serious of emergencies. The use of emergency powers is a last resort option and planning arrangements at the local level should not assume that emergency powers will be made available. Their use is subject to a robust set of safeguards – they can only be deployed in exceptional circumstances.

The Act also differently defines emergency to which Part 1 and Part 2 provisions apply. While for Part 1 provisions emergency relates to a place in UK, for Part 2 provisions emergency relates to UK. Irrespective of its scope the emergency always means an event or a situation that threatens serious damage to human welfare (causes or may cause loss of human life, human illness or injury) or to environment (contamination of land, water or air with biological, chemical or radioactive matter) or to the security.

For the responders with duties under Civil Contingencies Act it is important to consider how these duties interface with their duties under other legislation that has introduced emergency planning and response regimes for specific hazards before this Act has been prepared. A regime for the control of hazards of major accidents involving hazardous substances (introduced by the Control of Major Accident Hazards Regulations 1999 (COMAH), for the control of major accidents at industrial hazardous pipelines and for the control of radiation hazards are considered such regimes. These sector-specific regulations have established multi-agency emergency planning regimes in co-operation with the operators. To avoid duplication the Civil Contingencies Act defines that responders need not perform a duty in relation to an emergency which has been regulated by another pre-existing legislation. It is however considered good practice that responders use the »act regime« to support or supplement these separate regimes where they consider this appropriate.

4.2 The Control of Major Accidents (COMAH) Regulations 1999

[COMAH](#) Regulations define control regime for the prevention of major accidents and reduction of their consequences for establishments (COMAH establishments) which use, produce or store certain type and certain amount of hazardous substance on site. It serves for the transposition of SEVESO II directive.

The objective of this regulation is to ensure that operators of COMAH establishments identify and implement all measures necessary for the prevention of major accidents and for the reduction of their consequences on human and environment and to demonstrate this to competent authorities. To achieve this goal the regulations place responsibilities on operators and authorities.

Operators of COMAH establishments are obliged to assess the risks of major accidents, to identify and implement measures for their control and to prepare for an efficient and effective response to an accident should it occur on the site of an establishment.

Authorities need to ensure that the operation of COMAH sites is inspected at regular intervals, that off-site emergency plans are prepared and that public is informed of hazards of major accidents.

In England competent authority for COMAH are Health and Safety Executive and Environment Agency. These have prepared numerous guidance documents that help industry and authorities in performing the duties under COMAH.

4.3 The Pollution and Control Act 1999

[The Pollution and Control Act 1999](#) and accompanying Environmental Permitting (England and Wales) Regulations 2010 meet the requirements of the European Directive on Integrated Pollution Prevention and Control.

The Act establishes the Integrated Pollution Control (IPC) regime and Local Air Pollution Control (LAPC) regime to regulate pollution from industrial processes. Under IPC, the Environment Agency regulates emissions to air, water and land from around 2,000 installations. Under LAPC, local authorities regulate emissions to air from around 13,000 installations whose potential to pollute land and water is less significant.

Installations that are subject to this act are obliged to control a wider range of environmental impacts – among them also the hazards of accidents – with the use of best available techniques.

In England Environment Agency is the competent authority for the implementation of IPC regime at national level. It has issued number of guidance documents that relate to the control of emissions to the environment, among them also guidance related to the obligations of installations to demonstrate that they have arrangements in place to prevent accidents and to reduce their consequences.

This agency has also issued guidance for addressing environmental consequences of pollutions that apply to spills at stationary installations and also to spills on roads: Pollution guidance note (PPG) 21: Pollution incident response planning and Pollution prevention guidance note (PPG) 22: Dealing with spills.

4.4 Guidance on emergency response

[Guidance on emergency response and recovery](#) is a non-statutory guidance accompanying Civil Contingencies Act.

This guidance aims to establish good practice based on lessons identified from responding to and recovering from emergencies, both in the UK and internationally. Furthermore the objectives of this guidance is to further develop an understanding:

- of the multi-agency framework for emergency response and recovery at the local level, and the roles and responsibilities of individual organisations,
- of the role of local, sub-national and national levels in emergency response and how they will work together in an emergency.

4.5 Others

There are other regulations that touch upon emergency planning and response – such as the Environmental Damage (Prevention and Remediation) Regulations 2009, Fire and Rescue Services Act 2004 and legislation defining the work of the police force in the UK.

The Fire and Rescue Services Act 2004 defines following core functions of fire and rescue authorities: fire safety, fire – fighting (provisions for extinguishing fires and protecting life and property in case of a fire at their areas) and road traffic accidents (rescuing people and protecting people from the harm in the event of a road traffic accident in their areas).

5 Implementing civil protection duties

The implementation of civil protection duties – defined in the Civil Contingencies Act – is performed in the following way:

5.1 Co-operation, co-ordination and information sharing among responders before an emergency

Co-operation between organisations is fundamental for emergency preparedness. A large number of organisations will need to co-operate when responding to emergencies, so it is right that organisations co-operate closely in preparedness and planning as well. The government takes such co-operation and co-ordination and information sharing seriously and has established mechanisms and processes for the co-operation among all organisations that will be involved in the response to an emergency (such as emergency services, local authorities, commercial and voluntary organisations).

Co-operation at the local level

Local responders identified in Civil Contingencies Act may cooperate in the form of two or more responders cooperating with each other, but must cooperate in a local resilience forum (LRF). LRF is a principle mechanism for multi-agency co-operation in the emergency management matters at the local level.

LRFs are generally based on local police areas (= local resilience area) and bring together all organisations who have a duty to co-operate under the Civil Contingencies Act along with others who would be involved in the response. LRF is not a legal entity, it is a process implemented in specific local resilience area and is led by the local authorities (emergency planning units within counties or districts or boroughs of London).

Co-operation at sub-national level

To address larger-scale civil protection issues co-operation and co-ordination takes place at multi-LRF level. Such co-operation brings together representatives of local responders, and is supported by resilience advisers from the Resilience and Emergencies Division in the Department for Communities and Local Government. The sub-national tier is not a judgement on the local level, it is a mechanism for improving co-ordination and communication into and out from the centre of government.

Co-operation at national level

Government departments who are responsible for contingency planning and response within their own areas (for example, infectious diseases falls to Department of Health) work closely together. The Civil

Contingencies Secretariat (CCS) in the Cabinet Office co-ordinates their work to enhance the country's resilience to the full range of emergencies.

5.2 Risk assessment

Assessing the risk is a base for preparing for emergencies. The scope and type of actions and activities that are part of the process of planning for a response to emergencies is based on risk assessments.

The overall scheme of how risk of emergencies is assessed can be depicted from the UK Cabinet Office document (<https://www.gov.uk/risk-assessment-how-the-risk-of-emergencies-in-the-uk-is-assessed>)

In practice assessing the risks of emergencies is performed at the level of specific organisations (either as responders to emergencies or as possible sources of emergencies), at local level, at sub-central level, and at central level.

No special risk assessments are prepared for response to spills of every-day character (scope) either in stationary installations or during a transport. These are managed based on every-day duties of main responders: police, fire and rescue authority, health services and Environment Agency.

Installations and establishments that could in course of their operation cause a spill or an accident and are subject to COMAH and/or integrated environmental permitting regime are required by the regulations defining these regimes to perform a risk assessment identifying the possible scenarios of accidents or spills, their magnitude and frequency and possible effects on man and environment.

Local responders to emergencies are according to Civil Contingency Act required to assess the risk of an emergency occurring in the area of their responsibility. This ensures that local responders make plans that are sound and proportionate to the risk. They are also required to co-operate in the maintenance of Community Risk Register.

At the local level the local emergency response planners within the local administrations (county, district, borough of London) are according to Civil Contingencies Act required to produce a specific risk assessment (available to public as Community Risk Register at the web pages of local authorities) that reflects the unique characteristics of each local resilience area and addresses all risk of emergencies that are specific to certain local resilience area within a local community. Inputs to the Community Risk Register come from local emergency responders and from the government guidance on the likelihood and expected consequences of emergencies based on national assessments, along with guidance on how to locally interpret these.

It is considered good practice that risks of major accidents with hazardous substances are part of the Community Risk Register.

At national level the CCS (Civil Contingencies Secretariat) is responsible for monitoring the most significant emergencies that the UK and its citizens could face in a number of ways and for the preparation of the National Risk Assessment which considers risks that may impact the UK

over the next five years. This is a confidential assessment conducted annually, drawing on expertise from a wide range of departments and agencies of government and external experts. The [National Risk Register](#) is the public version of the National Risk Assessment. The risks cover 3 broad categories: natural events, major accidents and malicious attacks.

5.3 Planning a response to emergencies

5.3.1 General requirements with regard to emergency planning

Organisations that have a role to play in the response to emergencies should aim to maintain plans which cover 3 different areas: plans for preventing an emergency, plans for reducing, controlling or mitigating the effects of an emergency and plans for taking other action in connection with an emergency – such as handling the increased interest of media and/public.

Emergency plans should draw on risk assessments and should contain arrangements to warn, inform and advise the public at the time of an emergency.

Emergency plans should include procedures for determining whether an emergency has occurred and when to activate the plan in response to an emergency. Emergency plans should also contain provision for training key staff and provision for exercising the plan to ensure it is effective. Procedures should also be put in place to ensure that the plan is reviewed periodically and kept up to date.

The maintenance of plans involves more than just their preparation. Once a plan has been prepared, it must be maintained systematically to ensure it remains up-to-date and fit for purpose at any time if an emergency occurs.

It may be important for an organisation that will have to respond to an emergency to have more than one emergency plan. It is often the case that organisations have generic plans and more specific plans.

Organisations should test the effectiveness of their emergency plans by carrying out exercises, and should ensure that staff involved in the planning for or response to an emergency receive appropriate training. Training plans should also consider other people who have a role in the emergency plans such as contractors and civil protection partners.

5.3.2 Preparing emergency plans

In parallel to the arrangements related to risk assessments the preparation of emergency plans is performed at the level of specific organisations as possible sources of emergencies, at the level of responders defined in Civil Contingencies Act, at sub-central level and at central level for emergencies for specific emergencies (example: emergency plan for off-shore spills).

The duty to prepare and maintain an emergency plan is defined in the Civil Contingencies Act and in the regulations for specific emergency planning regimes – such as for COMAS sites and sites that are subject to integrated environmental permitting regime.

Emergency plans for COMAH establishments

Planning for and response to major accidents involving hazardous substances is part of the regime for the control of hazards of major accidents involving hazardous substances defined in COMAH.

This regime introduces two-tier preparedness: on-site and off-site. Obligatory emergency planning arrangements apply only for upper-tier establishments (part of COMAH establishments with higher quantities of hazardous substances on site).

On-site emergency plan is prepared by the operator of an establishment to specify the response of those who work on site. Additionally the on-site plan should identify the arrangements the operator has in place to assist in the emergency response off-site.

Off-site emergency plan is to be prepared by the local community to specify the co-ordinated response of agencies to an emergency on the site, which has off-site effects. Additionally the off-site plan should include details for providing assistance to on-site emergency response.

COMAH defines topics that need as a minimum to be addressed in the on-site and off-site emergency plans. All those organisations with a foreseeable role in the emergency response must be involved in the emergency planning. Under COMAH the obligatory consultees for on-site emergency plans (in addition to those employed on the site of establishment) are the fire service, the police service, the ambulance service, the Coastguard Agency (if appropriate), the health authority, the environment agency, the local authority (if there is the requirement for off-site plan). For off-site plans additionally to the above consultees come Health and Safety Executive (HSE) and members of the public.

Further guidance on emergency planning, specifics for on-site plans and off-site plans, training and testing of these plans, initiation of emergency plans, their review and revision, information to and warning of the public is available in the [Health and Safety Executive's guidance Emergency Planning for major accidents \(HSG 191\)](#).

Emergency planning for sites that are subject to Integrated Environment Permitting Regime

Under the environmental permitting regulations there is an obligation for the installations that are subject to integrated permitting regime to have an incident response plan in place as part of their written management system and to implement it if an accident occurs.

This plan must be available to all staff, emergency services and Environment agency's officers at all times and used if there is an accident on site. Operators of these installations are required to:

- identify potential accidents and put in place measures to minimise them happening;
- identify events or equipment failures that could damage the environment, for example fires, vandalism, flooding or other extreme weather events such as drought, heat waves or strong winds;
- identify how likely these events or failures are to happen;
- identify the consequences if they do happen;
- identify the steps needed to minimise them happening;
- identify the steps needed to minimise any impact if they do happen.

Emergency plans of responders defined by Civil Contingencies Act

The Act requires Category 1 responders to maintain plans for preventing emergencies, reducing, controlling or mitigating the effects of emergencies and taking other action in the event of emergencies.

Category 1 responders must take note of risk assessments when deciding which plans are required and when developing them.

Emergency plans may take the form of generic plans - which set out the core of a Category 1 responder's response to, and recovery from, any emergency - or specific plans dealing with particular hazards or sites. Category 1 responders mostly adopt a combination of the two.

Multi-agency plans can consolidate partnership working. Multi-agency plans are permitted, and Category 1 responders are required to consider whether it would be appropriate to develop a multi-agency plan.

Category 1 responders should involve Category 2 responders and other organisations with which they will co-operate in emergency response as appropriate throughout the planning process. Category 1 responders are specifically required to have regard to the activities of relevant voluntary organisations when developing plans.

Emergency planning for a multi-LRF response

Emergency planning at a multi-LRF level also takes place to address specific emergencies for which the co-operation of more LRF is necessary.

The role of the voluntary sector in emergency planning and response

Where appropriate, organisations should consider at an early stage in planning whether voluntary organisations may have capabilities which could assist in responding to an emergency.

It is considered good practice to involve the voluntary sector that can provide a wide range of skills and services in planning for and responding to an emergency. In response to emergencies voluntary organisations may provide: practical support (such as first aid, transportation, or provisions for responders), psycho-social support (such as counselling and help-lines), equipment (radios, medical equipment) and information services (such as public training and communications).

5.4 Emergency response

Most incidents and accidents in UK are managed by local responders with no direct involvement from central government. Where there is a need for central government involvement this is undertaken in accordance with established concept of Lead Government Departments. Details of government response are outlined under [Central Government Arrangements in the Emergency Response and recovery guidelines](#).

5.4.1 Responders

Responders at local level

The non-statutory guidance accompanying the Civil Contingencies Act 2004 [Emergency Response and Recovery](#) outlines the roles of specific local responders (police services, fire and rescue services, ambulance service, ...) and also the role of wider resilience community.

The police will normally co-ordinate the activities of those responding to land-based emergencies. Exemptions are major fires when the on-site response would be coordinated by fire and rescue service. The police will in consultation with other services establish and maintain cordons at specific distances. The police will co-ordinate the response from Emergency Operations Centres which are equipped and staffed to be able to respond to emergencies of all kind.

The primary role of fire and rescue services at the emergency is the rescue of people trapped by fire, wreckage and debris. They will prevent further escalation of incidents by controlling or extinguishing fires, by rescuing people and undertaking other protective measures. They will deal with released chemicals and other contaminants and will also recommend exclusion zones.

Local authorities play a crucial role in emergency response. They will support the emergency responders, they will provide assistance to people who have been affected or could be affected by an emergency, they would also co-ordinate the activities of various voluntary organisations being involved in response.

Environment agency is leading public body for protecting the environment in England. It responds to many different types of incidents affecting natural environment, human health and property. In pollution incidents and emergencies it will seek to prevent/control and monitor the input of pollutants into environment. In emergencies involving air pollution the agency will co-ordinate a multi-agency Air Quality Cell to provide interpreted air quality information.

A response to an emergency can also be performed by local responders from more local resilience areas with or without the support of government departments.

Response to spills of hazardous substances on roads

Response to a spill of hazardous substances during the transport is a responsibility of a driver, of an authority operating the road and of a response service should there be a need to rescue people and/or to prevent hazardous substances to enter into soil or water.

The carriage of dangerous goods on roads is regulated through the Carriage of Dangerous Goods and Use of Transport Pressure Equipment Regulations 2009 and by the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). These lay down the conditions for the goods to be transported in particular as regards their packaging and labelling and as regards the construction, equipment and operation of the vehicle carrying dangerous goods and as regards the qualifications and other requirements related to the driver. Among topics to be covered by training courses for drivers are also procedures and arrangement on how to react in the case of an accident. Should the spill of hazardous substance during the transport be small the drivers will have equipment in place to manage the spill.

Highway Agency with its force of Highway Agencies Traffic Officers patrol the agency's roads 24/7. Their duty is to assist police and other organisations in the safe removal of spills and in preventing a spill to spread into environment.

Should the accident occur where there is a threat to the health of people the fire and rescue services will be activated together with the Hazardous Materials Adviser (Haz Mat Adviser).

In an accident where the hazardous substance has entered or is threatening to enter and spread into environment (soil, water) the Environment Agency officers would ensure that actions will be performed for the prevention of the spill to entering into environment or for the limitation of the consequences to the environment.

Police force would in such accidents have a role to ensure that cordons round the site of an accident are established.

Collective central government response

Serious emergencies of a wide and/or prolonged impact may require a central government coordination and support. The central government response to such an emergency would be coordinated by the Cabinet Office Briefing Rooms (COBR), under the leadership of the lead government department. COBR is the physical location from which the central response is activated, monitored and coordinated.

5.4.2 The national framework for responding to emergencies

A generic national framework for managing emergency response and recovery has been established that is applicable irrespective of the size, nature or cause of emergencies. This framework identifies three tiers of emergency response that are applicable for a single-agency and multi-agency response. It provides a common framework within which individual agencies can develop their own response procedures.

According to this framework the emergency response is undertaken at one or more (depending on the type and scope/level of emergency) emergency response levels: operations, tactic and/or strategic level (often referred to as "bronze, silver and gold" single agency emergency response levels):

a) operational is the level at which the management of immediate work is undertaken at the site of an emergency or other affected areas. Operational commanders will concentrate their resources on specific tasks within their areas of responsibility.

b) the purpose of the tactical level is to ensure that the actions taken by the operational level are coherent, co-ordinated and integrated to achieve maximum effectiveness and efficiency. For the co-ordination of more responders' activities a Tactical co-ordination group may be convened. Such group could work from a control point at the site of an emergency or away from it.

c) the purpose of the strategic level is to consider emergency in its wider context. Where an event has an especially significant impact, substantial resource implications, involves a large number of organisations or lasts for an extended duration it might be necessary to convene a multi-agency coordination group at strategic level. A coordination group at strategic level will usually work from a location away from scene of an emergency.

This framework is based on the concepts of command, control and coordination functions. The command functions are executed only at the single organisation level and at the so-called »bronze, silver and gold level of command«. For the control and coordination functions execution the multi-agency groups are convened at operational, tactical and strategic levels.

The effective management of emergencies with chemicals will require access to specialist scientific and technical advice – for example regarding the public health or environmental

implications of the release of toxic substances. Local responders are advised to establish a Science and Technical Advice Cell. Local Resilience Forums should identify in advance of an emergency the relevant members of such group depending on the characteristics of an emergency.

6 Procedures and tools for assessing the level of emergency preparedness

6.1 National resilience capabilities programme

The purpose of this programme is to identify, challenge and monitor the current levels of capability in each of the areas covered by the so-called workstreams. The information gathered on how much capability each workstream has delivered is then used to provide assurance to Ministers on how ready the UK is to respond to civil emergencies.

Capability to respond to emergencies encompasses a number of interdependent and interrelated factors including appropriate numbers and types of personnel, the right types of equipment and supplies, relevant and sufficient training and exercising, clear plans etc.

The Programme is made up of a total of 22 capability »workstreams« that fall into four groups:

- Functional workstreams which build capability against specific types of outcomes of emergencies. There are 8 of these workstreams: Chemical, Biological, Radiological and Nuclear (CBRN) capability; Infectious Diseases (human); Animal Diseases; Mass Casualties; Evacuation & Shelter; Mass Fatalities; Flooding; and Site Clearance;
- Essential Services workstreams which are concerned with the maintenance of essential services. There are six of these workstreams: Food & Water; Transport; Health Services; Financial Services; Energy; and Telecommunications & Postal Services;
- Structural workstreams which ensure that the frameworks for coordinating and directing an emergency response are in place. There are two of these workstreams: Central (national) Response; and Local Resilience (which make sure that there is a good relationship in place between the local and national levels);
- Supporting workstreams which build supporting capabilities that would be common to almost every type of emergency. There are six of these workstreams: Warning & Informing; Resilient Telecommunications; Interoperability between the emergency services; Humanitarian Assistance; Community & Corporate Resilience; and Recovery.

Each of the workstreams is the responsibility of a lead government department and the management of the Programme as a whole the responsibility of the Civil Contingencies Secretariat (CCS). CCS works with each lead government department to measure on a regular basis the level of workstream capability, taking into account information available at the national and local levels.

CCS also works particularly closely with the Resilience and Emergencies Division in the Department for Communities and Local Government, which is able to feed in information about how the local level is building capability and how well the local and national levels are working together.

6.2 The expectations and indicators of good practice for Category 1 and Category 2 responders

Cabinet Office document Expectations and indicators of good practice set for Category 1 and Category 2 responders aims at clarifying what is expected from responders and what is considered good practice and provides check-list of relevant considerations.

7 Summary of main authorities and organisations with responsibilities in the planning for and response to emergencies with chemicals

see table 4

	Level of activity	Authorities and organisations with their tasks
Auth oritie s	National	<p><u>Cabinet Office – Civil Contingencies Secretariat</u>: overall coordination of emergency management capabilities, support to Security Council.</p> <p><u>Health and Safety Executive and Environment Agency</u>: competent authorities for the control of hazards of major accidents involving dangerous substances.</p>
	Local	<p><u>County and district authorities</u>: Category 1 responders, implement civil protection duties (co-operation, co-ordination and information sharing, risk assessment, preparing emergency response plans, ensure emergency preparedness), cooperate in the Local resilience forum.__</p>
Resp onse organ isatio ns	National	<p>Lead government department: lead the central government response.</p> <p>Environment Agency: prevent contamination of water and soil from spilled chemicals.</p> <p>Health and Safety Executive: provide advice on emergency response.</p>
	Local	<p>County and district administrations: coordinate the response in accordance to emergency response plans.</p> <p>On-site response organizations: fire brigades, police, health and ambulance services.</p>
Oper ators of	IPC installations	<p>To ensure accidents are prevented and/or their consequences mitigated with the use of best available techniques – a prerequisite for an integrated environmental operation permit.</p>

	COMAH establishments	To ensure the control over the hazards of major accidents with hazardous substances – a prerequisite for their operation.
	Other activities that deal with hazardous substances	To address emergencies with chemicals with “health and safety at work” measures.
	Roads	To assist in the response to spills of chemicals during the transport of chemicals.

Table 4: authorities and organisations with major responsibilities in the planning for and response to emergencies with chemicals in UK – England

Emergency management and public awareness

More and more attention is being devoted to the role of public in matters related to emergency planning and response. The role of public is usually addressed under the topic “public information and participation in decision making on environmental matters”.

EU countries are parties to the United Nations Economic Commission for Europe (UNECE) [Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters](#) (Aarhus Convention).

The Aarhus Convention establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective. The Convention provides for:

- the right of everyone to receive environmental information that is held by public authorities ("**access to environmental information**"). This can include information on the state of the environment, but also on policies or measures taken, or on the state of human health and safety where this can be affected by the state of the environment. Applicants are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession;
- the right to participate in environmental decision-making. Arrangements are to be made by public authorities to enable the public affected and environmental non-governmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment, these comments to be taken into due account in decision-making, and information to be provided on the final decisions and the reasons for it ("**public participation in environmental decision-making**");

- the right to review procedures to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general ("**access to justice**").

SEVESO II directive contains more detailed provisions on the information that competent authorities are obliged to ensure available to public. Such information focuses on establishments that operate in their vicinity and present a hazard for a major accident with hazardous substances. As a minimum such information should contain data on the location and operational characteristics of an establishment, on how the public will be alarmed in case of an accident and on how the public should behave in case of an accident. It is provided to public by competent authorities and operators of establishments.

Registers of SEVESO II establishments, risk maps, conclusions of risk assessments and other information is in practice available on internet addresses of competent authorities. Here also advice on how to behave in case of an accident is available to the public.

The operators also make information on their operations and on their emergency preparedness and response arrangements available to the public. This information is mostly conveyed to the public through leaflets and/or by organising "open-door days", when interested public can enter the premises of an establishment and get all the information from the management of an establishment.

As regards the right of the public to participate in environmental decision-making this right is in relation to emergencies with chemicals realised in procedures when off-site emergency response plans are being prepared and in the permitting procedures of SEVESO II and other activities.

Conclusions

Based on the review of emergency preparedness and response practice of 4 selected EU countries following conclusions can be drawn:

1. preparedness for and response to emergencies with chemicals is not a separate mechanism of its own but an integral part of an overall system that is in specific country being established for the management of emergencies of all kinds. Based on EU legislation (SEVESO II Directive) a specific control regime is being introduced for the control of hazards of major accidents with dangerous substances, but also this regime is interweaved with the overall emergency management regime;
2. principle of subsidiarity is the basic principle of emergency preparedness and response. In line with this principle emergency preparedness and response is to be handled by the smallest authority capable of addressing the matter effectively;
3. to ensure that emergencies are managed in efficient and cost-effective manner the scope and characteristics of emergency management system are adjusted to the results of hazard or risk assessments. This means that the scope of the system is harmonised with the level of hazard or risk of emergencies with chemicals and with the characteristics of these hazards or risks;
4. countries have adopted documents of strategic nature (usually adopted by the Parliament or by the Government) outlining their general approach and policies towards the management of emergencies with chemicals;

5. the legislation that regulates emergency preparedness and response usually is a mixture of the “environmental protection legislation” and/or “civil protection legislation” and/or “health and safety at work legislation”;
6. first responders to emergencies with chemicals are fire fighting units, which together with police and medical assistance services constitute backbone of the operational response mechanism;
7. vital importance and much support is devoted to volunteer and professional responders cooperation in preparedness and response to emergencies;
8. different arrangements are used to monitor the efficiency of the systems for the management of emergencies with chemicals. Monitoring is mostly performed by focused review of the work of relevant authorities, by inspection controls and by tests and exercises. The results of such monitoring are then used as a basis for revisions of the emergency management systems.

References

1. information from <http://ec.europa.eu/environment>
2. information from <http://ec.europa.eu/echo/>
3. information from <http://mahb.jrc.it/>
4. information from <https://www.cia.gov/library/publications/the-world-factbook/>
5. information from <http://www.unece.org/env/teia>
6. information from <http://www.oecd.org/chemicalsafety/risk-management/>
7. information from <http://www.umweltbundesamt.de/index-e.htm>
8. information from http://www.bmi.bund.de/EN/Topics/Civil-Protection/civil-protection_node.html
9. information from <http://www.bmvbs.de/SharedDocs/EN/Artikel/UI/Gefahrgut/carriage-of-dangerous-goods.html?linkToOverview=js>
10. information from www.urszr.si
11. information from www.mko.gov.si
12. information from www.government.nl
13. information from http://www.inspectieszw.nl/english/major_hazard_control/
14. information from http://www.veiligheidsregio-amsterdam-amstelland.nl/algemene_onderdelen/english/
15. information from <https://www.gov.uk/government/policies/improving-the-uks-ability-to-absorb-respond-to-and-recover-from-emergencies>
16. information from <http://www.hse.gov.uk/>
17. Vademecum Civil Protection (http://ec.europa.eu/echo/civil_protection/civil/vademecum/)
18. Leo Iberl. (2013). “Emergency preparedness and response in Bavaria”, personal communication

19. Gesetz über den Zivilschutz und die Katastrophenhilfe des Bundes (Zivilschutz- und Katastrophenhilfegesetz - ZSKG)
20. Bundesimmissionsschutzgesetz (Federal Immission Control Act)
21. 12th and 4th Immission Control Act Implementation Ordinance
22. Wasserhaushaltgesetz (Federal Water Act)
23. Arbeitshilfen zum Vollzug der Störfall-Verordnung. Arbeitshilfen des StMLU zum Vollzug der Störfall-Verordnung in Bayern (Bavarian Working Instructions for the Implementation of Major Accidents Ordinance)
24. Bayerisches Katastrophenschutzgesetz (BayKSG)
25. Bayerisches Feuerwehrgesetz (BayFwG) und Verordnung zur Ausführung des Bayerischen Feuerwehrgesetzes (AVBayFwG)
26. Gesetz zur Regelung des Rettungsdienstes und zur Änderung des Gesetzes über die Errichtung und den Betrieb Integrierter Leitstellen Vom 22. Juli 2008. Bayerisches Gesetz- und Verordnungsblatt Nr. 15/2008
27. Schriften des Deutschen Landkreistages. Die Landkreise im Katastrophenschutz.
 28. Leadership and Command in Emergency Operations – translation of the German regulation: Dienstvorschrift 100: Führung und Leitung im Einsatz
 29. Andreja Ferlin Lubi. (2013). “Cooperation of EU Member States in the area of emergency preparedness and response”, personal communication
 30. Resolucija o strategiji nacionalne varnosti Republike Slovenije (Resolution of the National Security Strategy of the Republic of Slovenia)
 31. Resolucija o nacionalnem programu varstva pred naravnimi in drugimi nesrečami v letih 2009 do 2015 (ReNPVNDN) ([Uradni list RS, št. 57/09](#)) (Resolution on the National Programme for the Protection Against Natural and Other Disasters 2009 – 2014)
 32. Doktrina zaščite, reševanja in pomoči (Ur. List RS, št. 812-07/2002-1) (Doctrine on Protection, Rescue and Relief)
 33. Act on the Protection Against Natural and Other Disasters (SLO)
 34. Decree on the Content and Elaboration of Emergency Plans (SLO)
 35. Decree on the Organisation, Equipping and Training of Emergency Response Organisations
 36. Bojan Ušeničnik. 1999. Protection Against Natural and Other Disasters in the Republic of Slovenia
 37. Programme National Security, Ministry of the Interior and Kingdom Relations (NL).2007. National Security, Strategy and Work Programme 2007 - 2008
 38. Ministry of Interior and Kingdom Relations (NL). Emergency Response by fire brigade and medical services in the Netherlands
 39. Netherlands Institute for Safety, Fire Academy. The Fire Service in the Netherlands
 40. Julij Jeraj. 1999. Fire Service in the Netherlands
 41. Walter Oudshoorn. External Safety and SEVESO II in the Netherlands

42. Association of Netherlands Municipalities. Local Government in The Netherlands
43. Committee for the Prevention of Disasters involving Hazardous Substances. 1999. Report on information requirements: Major Accident Risks Decree '99
44. Ministry of Infrastructure and the Environment. 2011. Water Management in the Netherlands
45. Phil Cannings. (2013). "Emergency response in UK", personal communication
46. Civil Contingencies Act (UK) and Civil Contingencies Act 2004 (Contingency Planning) Regulation 2005
47. Cabinet office. 2013. Preparation and planning for emergencies: responsibilities of responder agencies and others (UK)
48. Cabinet Office.2013. Emergency response and recovery (UK)
49. Environment Agency. 2012. How to comply with your environmental permit
50. Environment Agency, Scottish Environment Protection Agency, Northern Ireland Environment Agency.2011.Pollution Prevention Guidelines 22: Dealing with spills