

# WORKSHOP

## “Elbe Flood Partnership”



**Hitzacker / Elbe during a flood**

on  
25 and 26 August 2011  
in Magdeburg



Landkreis Ludwigslust  
Raum für Zukunft



## **Event organizer:**

Ministry for Regional Development and Transport of the State of Saxony-Anhalt

Ludwigslust District, Mecklenburg-Western Pomerania

State Capital of Magdeburg, Environmental Agency

## **Event location:**

State Office for Flood Protection, Saxony-Anhalt

## Reason and objective for the conference

- The EU-sponsored LABEL project, “ELBE – LBE Adaptation to flood risk in the Elbe catchment area,” began in September 2008 and lasted until February 2012. One of the main areas of work for the project was initiating and establishing an international flood partnership.
- As early as May 2009, municipalities along the Elbe River had come together to form the Elbe Flood Partnership, establishing their tasks and objectives for the partnership.
- They decided to dedicate one of the planned policy workshops to creating an “Elbe Flood Partnership,” since the existing partnership was to be continuously expanded; one of LABEL’s goals was to include Czech municipalities in the international network while also publicizing the issue in the political sphere.

In addition to the Ludwigslust District, responsibility for the project primarily came from the Environmental Agency of the State Capital of Magdeburg – as the head of the Elbe Flood Partnership – and the Ministry for Regional Development and Transport of the State of Saxony-Anhalt.

From the start of the planning process, the workshop focused on building networks and including additional partner municipalities, especially in the Czech Republic.

The goal of the workshop was to discuss flood-related issues, especially floodplain usage and dikes, thereby defining the future tasks and objectives of the Elbe Flood Partnership.

In addition, the planners hoped to determine risks and opportunities in working groups, and to develop concrete recommendations for their further collaboration.

## Workshop participants

- The contents of the workshop were directed toward German and Czech cities and municipalities directly on the Elbe River, but also toward associations, flood protection institutions, scientific organizations and other stakeholders, particularly political representatives.
- The objective was to attract a broad spectrum of municipalities and stakeholders to the partnership so that a wide range of ideas and opinions could be included in the working groups’ findings, thus supporting future issue-oriented collaboration.
- The actual registrations showed that mainly municipal representatives from the Elbe region were interested in the topics being offered. In addition, various regional stakeholders and institutions working in the area of flood protection were represented.
- The complete list of registered participants can be found in the appendix to this documentation.

## Agenda – 25/8/11

Welcome speeches:

By the Mayor of the State Capital of Magdeburg  
Dr. Lutz Trümper

By the Acting Director of the Saxony-Anhalt LHW  
Dr. Hans-Werner Uhlmann



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The presentations:

**“Elbe Flood Partnership – an introduction to the workshop”**

*Holger Platz, Departmental Head of the State Capital of Magdeburg*

**“LABEL – Adaptation to flood risk”**

*INTERREG IV b Project, Peter Heiland, IU Darmstadt, LABEL Project Management*

**“Living with flood risk in the joint Elbe Valley Meadows municipality”**

*Jürgen Meyer, Mayor, joint Elbe Valley Meadows municipality*

**“Flood protection from the perspective of construction planning”**

*Reinhard Nieberg, Lauenburg/Elbe City Planning Office*

**“Forest management in the Elbe flood runoff profile in Mecklenburg-Western Pomerania”**

*Michael Brüdigam, State Office of Agriculture and the Environment, West Mecklenburg*

**“Pros and cons of dike rerouting measures”**

*Bernd Lindow, Prignitz District*

Followed by a **discussion**, an **excursion** to a flood drainage system in Magdeburg-Pechau and a group **dinner**

**Agenda – 26/8/11**

The presentations:

**“Implementing the EC Flood Risk Management Directive in the Elbe River Basin Community”**

*Sven Schulz, Elbe River Basin Community (FGG Elbe)*

**“Aspects of commercial usage in the Elbe floodplain”**

*Rolf Warschun, City of Magdeburg Elbe Flood Partnership*

The working groups:

*Workshop 1 Approaches to floodplain management*

*Workshop 2 Will our dikes still be adequate in 20 years?*

*Workshop 3 Future tasks and objectives of the Elbe Flood Partnership*

*Presentation of results from the working groups – summary*

All of the presentations can be found at: [www.label-eu.eu](http://www.label-eu.eu)

## Elbe Flood Partnership – an introduction to the workshop

*Holger Platz, Departmental Head of the State Capital of Magdeburg*

Mr. Platz told the audience the story of Magdeburg's fate as a reminder of the city's relationship with floods. Since its founding, the city has been a place where the long-distance trade routes intersected with the waterway ("Elbefurt"!).

There were always flooding situations. However, the floods in the last decade, especially in 2002 and 2003, provided plenty of food for thought. As a result, the city developed a range of measures that included introducing alert systems and information channels, hiring additional personnel and stockpiling materials as well as installing water retention and drainage systems.

Structural measures were thus accounted for, but the 2002 flood caused additional problems due to groundwater. A "flood study" was carried out for the seriously threatened neighbourhood of Pechau. This resulted in 4 new measures, including reinforcing the existing drainage systems and building new ones (trenches and sewers/pumping stations).

In 2010 the city faced a series of new challenges because it was a very wet year. There were numerous flooded cellars in the supposedly flood-safe region on the left bank of the Elbe. This situation still persists in some areas, so another flood study has been commissioned.

In order to discuss these issues more extensively with similarly affected cities and municipalities along the Elbe, to share experiences, optimize the flow of information during flood situations and to establish a functional network, several cities and municipalities came together in 2009 to form the **Elbe Flood Partnership**.

The topics, from the perspective of the City of Magdeburg as the head of the Flood Partnership, are:

- the floodplains and their runoff capabilities
- the Elbe's future as a waterway
- how will we proceed with bed load management?
- what flood levels can we expect to see on a regular basis?

What is the objective of the workshop?

We will work together to develop these topics and use them as a basis for the working-group discussions on the 2<sup>nd</sup> day of the conference.

In addition, we want to attract the participants to the Elbe Flood Partnership.

## Workshop – *Will our dikes still be adequate in 20 years?*

The following aspects were considered:

1. Flood risk management as a cycle of flood precautions and flood management
2. Learning from extreme flooding – a long-time issue along the Elbe
3. How do we deal with uncertainties and risks in terms of the future / ... how do we communicate these?

First, we can assume that we need to get away from safety-oriented thinking (“promises of prevention”) and move toward flood risk management.

The previous **safety-oriented thinking** (the “flood prevention promise”) is increasingly being replaced (internationally) by a **culture of risk**, which begins by looking holistically at **what “can potentially happen” (risk analysis)**.

Building on this, we assess the risk: “**What needs to be avoided?**” and “**What level of safety do we want, at what price?**” (**risk assessment**).

This is used to define the search for possible counter-measures: “**What is the best way to deal with the risk?**” (**risk handling**).

The following shows several centuries’ worth of annual high-water marks for the Elbe at the Dresden marker – so extreme floods are not unusual.

“How does a society respond to the pressure of relentless flooding catastrophes?”

There are several learning phases:

Learning phase I (1784-1799)

Learning phase II (1800-1820)

Learning phase III (1820-1845)

In **Learning phase I (1784-1799)**, the focus was only on counter-measures, which until the turn of the century were more or less purely preventative measures.

- In order to warn the inhabitants in a timely manner, local officials were instructed to exercise greater availability, vigilance and sharing of instructions
- Preventative hygiene regulations were issued for all of Saxony (including disinfecting residences with wine vinegar)
- Acoustic alert system was installed using cannons and messengers on horseback along the Elbe
- Ice barriers in the Elbe were broken up using bombs and artillery fire
- Wood merchants had to remove their floating wood from the banks of the Elbe in a timely manner
- In 1799, food, drinking water, brandy, fuel and money were provided immediately as emergency aid
- 24-hour monitoring and inspections of the dikes were introduced by neighbours of the Elbe

In **Learning phase II (1800-1820)**, communities and agencies moved away from the passivity of previous decades.

- “Catastrophe communications” now took place at the middle as well as local administrative levels.
- Damage assessment and health care were permanently linked.
- The costs of regulation work were transferred to the beneficiaries (setting up funds to support the communities, combining the Elbe communities into dam authorities, setting up dam accounts for maintaining the riverbank structures).
- 1811: Two hydraulic engineering departments founded in Torgau and Dresden
- 1819: Elbe riverbank and dam ordinance



In **Learning phase III (1820-1845)**, after the flood of 1945, a crisis task force was established (consisting of the Minister of the Interior, a member of the Ministry of War, the District Director, the Mayor and Police Chief of Dresden and the Head of the 1<sup>st</sup> Provincial District) in order to guarantee optimized coordination during future floods.

- In 1820, Hydraulics Director Wagner presented a comprehensive report that was used as the basis for improved catastrophe management.
- Starting in 1826, a State-wide notification system was in place: the number of signal cannons was increased to 17 towns, with 19 police posts along the Elbe; the residents' behavior was optimized before, during and after an ice drift.
- 1835: a rescue organization was established in Dresden
- In 1836, there was a "risk map" for Dresden, allowing the expected water volumes to be estimated along with the corresponding preventative use of police and military forces.
- 1845: significantly improved management in Dresden, which was praised by the residents even during the flood
- After 1845, there was constant communication between the suburbs and the capital (police and local officials reported to the main district office in Dresden).
- In 1845, immediately after the flood, critical voices were heard about increased flood risks due to previous river regulation work.

**Some causes of uncertainty in the climate projections include:**

- **Future emissions;**
- **Natural climate fluctuations** that override anthropogenic trends;
- **Calculation processes** that **cannot be separated** from the **rough computational grid;**
- **Missing processes**, such as bio-geochemical cycles.

**Freeboard, uncertainties, confidence level**

- **The dike height** itself is determined based on the **measured water level** plus **freeboard**.
  - **Allowances** are made for example for water levels raised by wind, surging breakers, ice blockages, settling, construction tolerances, uncertainties in determining the HQ.
  - ... allowances ... **wherever** ... the **calculation is uncertain** ... and where their dimensions are based on the **confidence level** of the data" (DIN 19712)
- for **statistical extreme value analyses**, show the **upper and lower confidence limits!**

### **Workshop – Future tasks and objectives of the Elbe Flood Partnership**

In the working group, it was important to the Elbe Flood Partnership to establish the tasks for the coming year of cooperation and to define long-term objectives for the network. These were the content-related tasks and new tasks, which the working group sub-divided into "internal policy" and "external policy."

### **Workshop – Approaches to floodplain management**

The focus here, based on the characterization of the current situation and the upcoming problems, was to determine solutions and future tasks during a joint discussion.

The following topics were mentioned:

- a lack of specialized environmental protection management principles
- no sheep grazing in Meckl.-Western P.
- heavy use of inner dikes
- conflict: environmental protection – flooding
- commercial fishing, fishing rights
- tourism and other recreational use
- protected status: Natura 2000, Habitats Directive and protected areas
- floodplain forest development

### The following solutions were discussed:

- national hydraulic studies in terms of flood protection
- establish an integrated cross-river floodplain management system
- create maintenance plans (flood protection always takes precedence)
- greater responsibility by land owners in terms of flood protection
- allow parcel exchanges for all land areas
- form a national association for maintenance plans, energy usage concepts and regional value creation

## Summary

In summarizing the important issues, tasks and objectives for the Elbe Flood Partnership that were brought up by the conference participants, it can be said that the members of the Elbe Flood Partnership should increasingly focus more on important issues that affect everyone, discuss them at annual conferences and formulate possible solutions. These must be communicated to the municipalities and cities affected by flooding, to the administrative districts responsible for flood protection, and to the state governments and politicians. The annual conference will define a topic for collaboration in the following year, and it will be discussed with all of the stakeholders, institutions and political bodies. The tasks and objectives are classified as content-related tasks and internal/external policy tasks.

### Issues for the Flood Partnership are:

- assessing flood events
- groundwater
- heavy rain / flash floods
- planning and construction
- burden sharing (upstream/downstream riparian)
- business with "risk"
- insurers
- adjusting to climate change

Additional issues include how the floodplains and their runoff potential are developing, the Elbe's future as a waterway, how to proceed with bed load management and what general flood levels we can expect in the future.

Internal-policy tasks include **solidifying the network, attracting additional members, better communication and information** and, in the long term, **institutionalizing** and/or **professionalizing** the partnership.

**NEW** items on the agenda also include a **consulting service for members** and the **acquisition of funding**.

In the future, external policy items for the members of the Elbe Flood Partnership will mainly involve a **better public image, constructive collaboration with and/or participation in rivershed-related working committees, raising awareness about the problems among the population and official agencies** alike ("After the flood is before the flood").

- More **targeted publicity work**, increased **external communication** and the **integration of municipal umbrella organizations**, for instance, will lend the partner network more weight and will also help attract **more members**.

- **Looking for partners in the field of business** is considered essential to the goal of **institutionalizing the partnership** and/or in order to **take part in EU funding programs**, for instance.

- For all of these issues and tasks, the current EU directives (Habitats Directive, Natura 2000, HWRMRL, WRRL, etc.) should always be included in the discussion.