The Elbe river and its basin
 International Commission for the Protection of the Elbe River
 FLOOD PROTECTION

- Action programmes and Water Framework Directive
   Warning and alarm system
- Monitoring network, monitoring programme and water quality

# **FLOOD PROTECTION**



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Flood protection issues have been an important part of the work activities of the International Commission for the Protection of the Elbe River (ICPER) since the mid-1990ies.

The first step was to analyse how floods occur, to elaborate a flood protection strategy and to survey the existing flood protection measures in the Elbe river basin. On this basis, the "Elbe Flood Protection Action Plan" was elaborated in July 2002, where the findings and experience acquired during the extreme flood in August 2002 were subsequently taken into account. This version was finally approved by ICPER in October 2003.

The "Elbe Flood Protection Action Plan" has proved to be an excellent flood risk management instrument, its thematic content and elements have been integrated and continued within the framework of the implementation of the European Flood Risk Management Directive (2007/60/EC).

The countries of the international Elbe river basin district agreed to elaborate a joint International Flood Risk Management Plan for the Elbe River Basin District.





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1998 Flood Protection Strategy for the Elbe River Basin

Summary of Analysis of the Hydrological Aspects of Floods and their Forecasting for the Elbe River and its Tributaries

Survey of the Existing Flood Protection Measures in the Elbe River Basin

 $\approx$  Summer flood in August

2000

2001 2002

2003

2004

2006

2006

2007

2007

2009 2010

2011

2011

2012

2012

2013 2013

2014

2015

## ELBE FLOOD PROTECTION ACTION PLAN

- Improving the water retention capacity of catchment areas, waters and flood plains
- Protection of endangered areas by way of technical measures
- Reducing the damage potential in the endangered areas (on the basis of mapped flood risks)
- Perfecting flood forecast and warning systems
- Improving the information of the general public, increasing flood awareness
- Documentation of the August 2002 Flood in the Elbe River Basin
- $\approx$  Spring flood in March and April

First Report on the Implementation of the "Elbe Flood Protection Action Plan" 2003 - 2005

- Hydrological Assessment of the Spring Flood 2006
- 26 November Flood Risk Management Directive 2007/60/EC comes into effect
- Second Report on the Implementation of the "Elbe Flood Protection Action Plan" 2006 2008
- $\approx$  Summer flood in August und September
- $\approx$  Winter flood in January
- Preliminary assessment of the flood risk pursuant to the Flood Risk Management Directive

Hydrological Assessment of the flood events in August and September 2010 in the Elbe River Basin

Final Report on the Implementation of the "Elbe Flood Protection Action Plan" 2003 – 2011

### Selected results from the final report

- Dykes were relocated at four sites and more than 650 ha of flooding area was restored.
- 513 km of dykes were rebuilt or newly built. 18 new storage reservoirs with a retention volume of more than 30,000 m<sup>3</sup> and a total of 10.2 million m<sup>3</sup> flood retention space were built. The reservoir volume of new or upgraded storage dams and installations for improving water retention capacity is 71 million m<sup>3</sup>.
- From the adoption of the action plan in 2003 till the end of 2011, the total investment in the Elbe river basin for technical flood protection in the Czech Republic was CZK 4.2 billion and € 450 million for the rehabilitation of the Elbe dykes in Germany.
- Thanks to the extension of the prognosis period in the Czech part of the river basin from 24 to 48 hours, the forecast period in Dresden has increased from 36 to 60 hours.
- The flood protection measures finished in the years 2002 2011 provide protection for approx. 400,000 inhabitants.
- The final report contains an overview of the results of the preliminary assessment of the flood risk in the Elbe river basin according to the Flood Risk Management Directive.

#### $\approx$ Summer flood in June

- FLOOD HAZARD AND FLOOD RISK MAPS ACCORDING TO FLOOD RISK MANAGEMENT DIRECTIVE
- The central access to flood hazard and flood risk maps for the international Elbe river basin district has been made possible by way of an interactive map application:
   http://geoportal.bafg.de/mapapps/resources/apps/IKSE\_DE/index.html?lang=de
- The application can be used for selecting a specific area and for being forwarded to the detailed national flood hazard and flood risk maps.

#### 2014 Hydrological Assessment of the Flood in June 2013 in the Elbe River Basin

Draft of the "International Flood Risk Management Plan for the Elbe River Basin District"

The public consultation on the "International Flood Risk Management Plan for the Elbe River Basin District" (Part A) was held together with the public consultation on the "International Management Plan for the Elbe River Basin Pietrict" from 22 December 2014 to 22 June 2015.

- THE INTERNATIONAL FLOOD RISK MANAGEMENT PLAN FOR THE ELBE RIVER BASIN DISTRICT FOR THE PERIOD OF 2016 2021
- constitutes the basis for future international cooperation in the field of flood protection in the Elbe river basin,

continues the "Elbe Flood Protection Action Plan" 2003 – 2011 by incorporating its objectives and activities and integrating them in the overall strategy of the flood risk
management plan.

The International Flood Risk Management Plan for the Elbe River Basin District is regularly reviewed and updated.