

- 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

ACTION PROGRAMMES AND WATER FRAMEWORK DIRECTIVE

By now the Elbe is a vital river again - that was the conclusion in the final report of the "Elbe Action Programme" 1996 – 2010. Particularly in view of point sources of municipal and industrial wastewater, but also with regard to the recovery of the ecosystem, the "Elbe Action Programme" has been fulfilled.

The European Water Framework Directive introduces new incentives and challenges for achieving a good status of the surface waters, the groundwater and the coastal waters in the international Elbe river basin district.





ELBE ACTION PROGRAMMES

At the end of the 1980ies the Elbe was one of the most polluted rivers in Europe. This was due to the discharge of insufficiently or untreated municipal, industrial and agricultural wastewater. The political changes in Eastern Europe in 1989 provided the opportunities for better cooperation between the countries of the Elbe river basin.

Shortly after its foundation on 8 October 1990, the International Commission for the Protection of the Elbe River adopted an Immediate Action Programme focussing on the solution of the most urgent problems in the

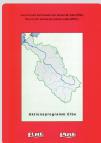
field of point source pollution. The main focus was on the construction of municipal wastewater treatment plants as well as measures for reducing the 15 substances particularly relevant for the Elbe (priority substances defined by the ICPER such as heavy metals and organic compounds) in industrial wastewater discharges.

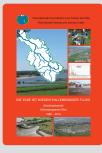
The "Elbe Action Programme" for the period 1996 - 2010 contained a much wider range of measures. They included measures for reducing the municipal and industrial wastewater load (the number of priority substances was increased to 27), for reducing the diffuse loads (nutrients and herbicides) from agriculture, for reducing the diffuse loads from landfills and polluted sites, for improving biotope structures, for providing protection from accidental water pollution and for improving flood protection.

The following examples illustrate the successful implementation of the Elbe Action Programmes (as of 2010):

- All municipal wastewater treatment plants with a capacity of more than 20,000 population equivalents have biological treatment and nutrient elimination (169 in Germany, 78 in the Czech Republic and 1 in Austria).
- All the 69 municipal wastewater treatment plants that were earmarked for reconstruction and that had the highest effect for reducing the load were put into operation by 2007. This way the annual wastewater
- load discharged in the waters (emissions) was reduced by 87,000 t BOD5, 2,600 t phosphorus and approximately 12,400 t nitrogen in comparison with 1995.
- Technological changes in the industrial companies and the treatment of industrial wastewater in new wastewater treatment plants resulted in a significant reduction of water pollution (emissions); e.g. for the parameters COD by 82%, total nitrogen by 71%, total phosphorus by 81%, mercury by 96%, cadmium by more than 99%
- A uniform warning and alarm system with five international main warning centres (four in Germany, one in the Czech Republic) for forwarding information regarding place, time and extent of accident related water pollution in the Elbe river basin ("International Elbe Warning and Alarm Plan") was established.
- The water quality is analysed within the framework of the Elbe Monitoring Programme, which is coordinated on an international level every year.
- The average heavy metal concentrations in the water phase have constantly gone down since 1990, this is particularly true for mercury in the years 1990 – 1995.







WATER FRAMEWORK DIRECTIVE - NEW INCENTIVES AND CHALLENGES

Since the end of 2000, the Water Framework Directive has established a regulatory framework for the action of the European Community in the field of water policy The Water Framework Directive aims at reaching a good status of the surface and groundwater bodies in the European Community. Procedures and instruments have been set up, which need to be implemented by the member states.



The four countries in the Elbe river basin – Germany, the Czech Republic, Austria and Poland - have agreed to coordinate their approach for meeting the requirements of the Water Framework Directive in this river basin under the roof of the ICPER

The Water Framework Directive has introduced new incentives and challenges. For surface waters it sets great store by biologic quality components and the morphology of the waters. The focus on groundwater and economic aspects were also new for the activities of the ICPER. The assessment of the water status

pursuant to the Water Framework Directive is complex and the assessment criteria are challenging. One single parameter with bad values will result in a bad overall assessment. The number of quality components and parameters examined has been considerably expanded in comparison with the past practice, particularly by biological components, i.e. animals and plants living in the waters.

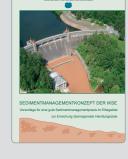
The river basin management plans and the programmes of measures are a fundamental instrument for achieving the environmental objectives addressed in the Water Framework Directive. A joint "International Management Plan for the Elbe River Basin District" was elaborated and published in German and Czech in 2009.

Within the framework of the results of the River Basin Management Plan 2009, the following documents were prepared, among others:

- recommendations for maintaining surface waters used for navigation in order to improve hydromorphological conditions (published in 2013, in German and Czech)
- with general recommendations and specific proposals as well as examples of maintenance measures that are finished or that are currently in progress
- proposals for good sediment management practice in the Elbe region ICPER Sediment Management Concept (published in 2014, in German and Czech) with recommendations for actions regarding
- recommendations in the field of water quantity management

hydromorphology, quality and navigation





Participation and consultation of the public

It is encouraging to note that the work of the ICPER has been supported by the public with critical and constructive comments. In this context, the ICPER is more active in the involvement of the public in the elaboration of the river basin management plans than is required by the Water Framework Directive. Activities for informing and consulting the public such as seminars or expert talks are held under the roof of the International Elbe Forum.

The public also submits written comments on individual implementation steps of the Water Framework Directive.

MEZINÁRODNÍ LABSKÉ FÓRUM INTERNATIONALES ELBEFORUM

The River Basin Management Plan shall be reviewed and updated every 6 years. The following important water management issues at the international level have been identified for updating the plan for the period 2016 - 2021:

- improving surface water structure and river continuity (objectives for restoring passage for fish are shown in the map.)
- reduction of significant substance contamination by nutrients and pollutants



Construction of a rock ramp fishpass at the Lovosice Elbe Weir Photo: Povodí Labe, státní podnik



Foam produced by algal bloom at the North Sea coast Photo: M. Trepel, LLUR Schleswig-Holstein



OBJECTIVE: GOOD STATUS OF SURFACE WATERS AND GROUNDWATER