Influence of important flood retention measures on the Elbe flood in January 2011

In the Saale river catchment (DE) as well as in the catchments of river Vltava and river Ohře (CZ) several dams and retention areas exist, that played an important role for reducing the flood peaks during the past flood events.

The German Federal Institute for Hydrology analysed in cooperation with the Masaryk Water Research Institute and AquaLogic Consulting the effect of Czech (on river Vltava and Ohře) and Thuringian retention measures on extreme flood events at the Elbe. The analyses show that during the flood 2011 the measures at Vltava and Ohře as well as the control of dams at the Saale caused reduced flood water levels all along the German Elbe. The average reductions are between 1.04 m at the gauge Usti nad Labem and 33 cm at the gauge Wittenberg. Hence, it could be significantly contributed to the reduction of flood risks. The results also show: All measures that have a positive impact on the Czech Elbe catchment are also beneficial for the German catchment area: Even at the gauge Neu-Darchau (about 540 km below the Czech-German border) the flood 2011 was reduced from a 50-yearly event to a 25-yearly event.

Table: Modelled water level reductions; the blue column shows the water level reductions by all Czech measures and at the River Saale © BfG

<table>
<thead>
<tr>
<th>Elbe-km</th>
<th>Gauge</th>
<th>Water level reduction by Czech measures</th>
<th>Water level reduction by measures at the Saale</th>
<th>Water level reduction by all measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>-37.4</td>
<td>Usti</td>
<td>-104</td>
<td>0</td>
<td>-104</td>
</tr>
<tr>
<td>2.1</td>
<td>Schöna</td>
<td>-110</td>
<td>0</td>
<td>-110</td>
</tr>
<tr>
<td>55.6</td>
<td>Dresden</td>
<td>-68</td>
<td>0</td>
<td>-68</td>
</tr>
<tr>
<td>154.6</td>
<td>Torgau</td>
<td>-37</td>
<td>0</td>
<td>-37</td>
</tr>
<tr>
<td>214.1</td>
<td>Wittenberg</td>
<td>-33</td>
<td>0</td>
<td>-33</td>
</tr>
<tr>
<td>274.8</td>
<td>Aiken</td>
<td>-39</td>
<td>-1</td>
<td>-40</td>
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<td>295.5</td>
<td>Babry</td>
<td>-28</td>
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<td>-34</td>
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<td>398.2</td>
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<td>-29</td>
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<tr>
<td>536.4</td>
<td>Neu Darchau</td>
<td>-33</td>
<td>-9</td>
<td>-40</td>
</tr>
</tbody>
</table>

Responsible Partners:
German Federal Institute for Hydrology, BfG, DE; Masaryk Water Research Institute, VUV, CZ; AquaLogic Consulting, CZ; Thuringian ministry for agriculture, forestry, environment and nature protection, TMLFUN, DE
Tourist traffic and flood protection in South Bohemia

The Region South Bohemia has analysed potential locations for the development of water tourism and touristic navigation along the rivers Vltava, Otava and Lužnice.

The different locations were evaluated regarding their flood risk, their influence on the discharge in case of a potential flood, their traffic connection and connection to public infrastructure as well as concerning their attractiveness for tourist traffic in the region.

Most important result of the study is a catalogue about existing and potential touristic navigation infrastructure as well as camping sites or recreation centres. This catalogue puts together all relevant information on the different locations: equipment, touristic connections, traffic connections, legal aspects and flood risks.

Responsible Partner: Region South Bohemia, CZ

Map of the study area at the Rivers Vltava, Otava and Lužnice © Region South Bohemia
Climate change and flood risk: Adaptation in the Elbe catchment

The impacts of climate change will also become apparent in the Elbe catchment: Due to climate changes, the future winters in the Elbe catchment will be mild and rainy more frequently, while the summers will be dryer on average. In addition, a general accumulation of extreme weather events, including heavy rain is forecasted. This suggests that the Elbe catchment will have to deal with more floods but also more low water situations in future. Against this background, flexible and sustainable solutions to adapt to the impacts of the current and future climate change are needed. In the affected sectors, such as water management, regional planning or tourism, both sector specific and cross-sector adaptation measures need to be implemented. Possible adaptation measures thereby range from the development of climate-adapted concepts, the change of usage in vulnerable areas to the implementation of structural changes.

Suitable adaptation measures for the Elbe region are currently collected and evaluated systematically in a study.

Responsible Partner: Saxon State Office for Environment, Agriculture and Geology, LfULG, DE

Elbe-Atlas II: Damage potential in the Elbe catchment

For the Elbe Atlas II the German States and the Czech Regions jointly create maps for damage assessment along the Elbe. For this, assets are determined Elbe catchment wide. Where there are water depth available of extreme floods at Labe and Elbe, damage potentials are calculated. These complement the existing maps of the first Elbe-Atlas. Furthermore, potentially hazardous sites are added on the maps and affected people in the flood area are displayed.

With the addition of risk maps to the existing Elbe Atlas I, important requirements of the EU-Flood risk management directive are met. Next to the experts benefit from the usage of the data from the Elbe-Atlas II, the important issue of raising awareness for flood protection in the Elbe catchment is accommodated.

Responsible Partner: Saxon State Office for Environment, Agriculture and Geology, LfULG, DE

Films and articles about LABEL on behalf of the EU Commission

The EU Commission, Directorate General Regional Policy has chosen LABEL as exemplary INTERREG project for a new publication as well as an image film about European Territorial Cooperation.

The films can be watched here: www.label-eu.eu and www.label-eu.eu/download/other.html

The publication “European Territorial Cooperation: building bridges between people” is available for download here: http://ec.europa.eu/regional_policy/cooperate/cooperation/index_en.cfm

Pictures (f.l.t.r.): Elbe in Dresden, DE; Tynec marina, CZ; landing place at the Tynec marina, CZ; Uwe Restetzki, fire brigade Görlitz, DE; Andreas Kühl, SMI, DE © Tipik Communication Agency
LABEL - Headlines

LABEL will be extended!
The CENTRAL EUROPE programme secretariat preliminary agreed to an extension of the project duration of six months, until 31.08.2012.

LABEL editor’s group founded
During the last partner meeting in Dresden an editor’s group was founded, that should further develop the contents of the LABEL strategy and finalise it. The first meeting will take place in Dresden in the beginning of 2012.

Transnational cooperation in practise. Workshop in Berlin, 17.11.2011
A Workshop at the German Federal Ministry of Transport, Building and Urban Development presents the results from the project LABEL and ideas for further cooperation and joint work on the topic flood risk management. The following questions should be addressed on a round table together with decision makers and stakeholders: How can results be integrated into existing structures and be noticed by the respective persons? Which added value gives the transnational approach? And how can the INTERREG-Programme be further developed in a goal-oriented way?

LABEL Partnership

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**Lead Partner:** Saxon State Ministry of the Interior
PP 2: Ministry of State Development and Transport, Saxony-Anhalt
PP 3: Thuringian Ministry of Agriculture, Forestry, Environment and Nature Preservation
PP 4: Saxon State Ministry of the Environment and Agriculture
PP 5: Saxon State Office for Environment, Agriculture and Geology
PP 6: Ludwigslust County
PP 7: German Federal Institute for Hydrology
PP 8: Association for Housing, Urban and Spatial Development e.V.

**Czech Republic**

PP 9: Ministry of the Environment
PP 10: Ústí Region
PP 11: Region of South Bohemia
PP 12: Pilsen Region
PP 13: Hradec Králové Region
PP 14: Central Bohemia Region
PP 15: Liberec Region
PP 16: Pardubice Region
PP 17: Elbe River Basin Authority
PP 18: Vltava River Basin Authority

**Austria**

PP 19: Federal Ministry of Agriculture, Forestry, Environment and Water Management

**Hungary**

PP 20: Middle-Tisza district Environment and Water Directorate

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