Test-bed
“March / Morava”
(Austria – Upper/Lower Austria)

Source: MONITOR WP 2 Report “Analysis and Base Methodology”,
Annex II: Test-beds and SWOT-Analyses

Location of the test-bed

The Morava (Czech/Slovak: Morava; German: March) is a river in Central Europe. The river originates at the Králický Sněžník mountain (German: Glatzer Schneegebirge) in the northwestern corner of Moravia, near the border between the Czech Republic and Poland and has a vaguely southern trajectory. The lower part of the course of the rivers forms the border between the Czech Republic and Slovakia and then between Austria and Slovakia.

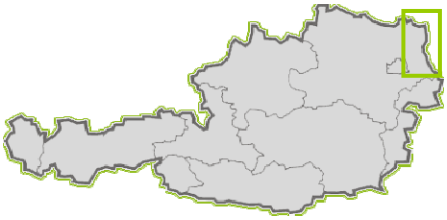

Fig. Setting of the test-bed in Austria

Geographical description of the test-bed

The lowlands formed by the river are the Upper Moravian Vale (Hornomoravský úval) and then the Lower Moravian Vale (Dolnomoravský úval) in Moravia, the Marchfeld or Moravian Field (plain between the northeast of Vienna and the Morava river) in Lower Austria, and the Záhorie Lowland (Záhorská nížina) in Slovakia (plain between Moravia and Bratislava).

After approximately 358 kilometers, the Morava meets the Danube at Bratislava-Devín. The only major cities along the river are Olomouc in Moravia and the Slovak capital Bratislava. Its most important tributary is the Thaya (German) or Dyje (Czech/Slovak), flowing in the border area of Lower Austria and Moravia. Another tributary is the river Myjava (which flows into Morava at Kúty).

(Source: www.wikipedia.com, 30.01.2007)

Fig. March/Morava (Vladimír Tóth)

Fig. March/Morava, ÖBH 2006

Geological description of the test-bed

The Morava builds the eastern border of the so called Marchfeld and the northern part of the Vienna Basin which reaches over to the Czech Republic and the Slovak Republic. In the Tertiary the Vienna Basin was an open bay, several hundreds of meters deep and filled up with sediments from the rivers in the rhythm of the geological ice ages and warm stages. Alternating erosion and accumulation created terracial layers, which are typical for the Marchfeld. The subsoil consists of gravel and sands which are originating from the bedload of the Danube during the last two ice ages.

The thickness of those porous layers reaches from a few meters at the borders to 80 meters in the centre of the Marchfeld. The average discharge of the Morava is 120 m³/sec.

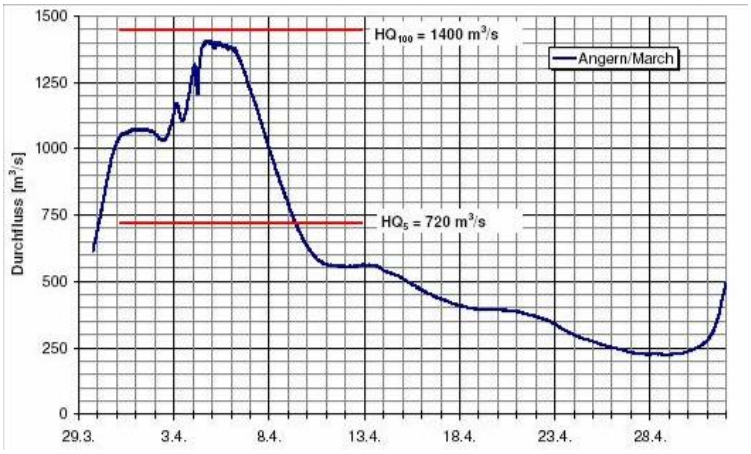

Fig. Hydrograph curve from gauge „Angern“ at river Morava, March to April 2006 *(www.lebens-ministerium.at, 30.01.2007)*

Relevance of test-bed regarding MONITOR

- Major flood in 2002, 2006 with extensive damages by excessive dam failures
- Many people were affected
- Floods were handled by the Lower Austrian Disaster Management, respectively the Department of Fire Service and Civil Protection.
- Additionally the implementation of a new early warning system is planned in co-operation with the Czech Republic and the Slovak Republic.
- This project is an integrated disaster management project. Fire service, rescue service (Red Cross), Crisis intervention teams, civil protection agency, Austrian armed forces, the local government, district government, regional government, federal government are integrated. Additionally a private agency called “Via Donau” which is responsible for the dams along the border river March is participator in the project. Because the river March is a border river the federal government has specific responsibilities.

Main objectives of the analysis in the test-bed

The department Fire Service and Civil Protection of Lower Austria is responsible to review the local disaster management structures and to improve them as a whole within a holistic perspective to prevent and minimize future damages.

Interfaces to the project

For the department of fire service and civil protection it is important to bring new experiences during this planning process to a broad international wide public.

Previous activities in the test-bed

- Laser Scanning
- GIS mapping
- GIS-aided risk analysis

Planned Activities/Output

Development of new best-practice methods for risk assessment, contingency planning and risk communication. Those methods can be brought onto a broader basis within the project MONITOR.

SWOT-analysis of the test-bed

Strengths:	Weaknesses:
▪ Extensive experience because of large-scale events ▪ Functioning disaster management ▪ Extensive experience because of large-scale events ▪ Good knowledge about processes ▪ Good documentation of events (but still need for improvement)	▪ Time, Money ▪ Conflicts in land use management > retention areas ▪ Complex System because of human influence: Electricity industry… (land use management) ▪ Large residual risk areas caused by protection measures
Opportunities:	**Threats:**
▪ Improvement of crisis management; of communication structures ▪ Event not long ago ▪ Risk Assessment is easy because events are reoccurring ▪ Because of re-occurring events monitoring systems are proofed on liability, reasonableness, validity ▪ Knowledge out of events makes improvements easier > money is available, political will, societal will;	▪ Still traumatized people ▪ Organisational structures not willed to change ▪ Events influenced affected people in thinking and behaviour, but with time they forget their experience ▪ Flood simulations are useful for other areas which not necessarily have to make same experiences like already affected areas