Flood Trail Elbe in the Region of Dresden

Abridged Report (on the Project)

Widespread across Saxony, the extreme flood of August 2002 led to massive damages, which could not be fully remedied to date. Besides reconstruction, numerous measures have been taken to provide for protection from future floods.
Nevertheless, absolute security will never be guaranteed. Taking action responsibly in the regions at risk is an important key component of flood prevention. Hence, the people in these regions permanently need to be aware of the problem of flood control.
A flood trail can be conductive in this regard. Nature trails are a medium of environmental education by sensitising and qualifying the viewer for ecology-minded action. Not only previous events should be kept in mind. The visitors of the trail should also be animated to deal consciously with the exposure to hazards and in consequence be encouraged to a continued engagement for prevention. The development of an integrative and coherent concept for a flood trail is of great importance in this process to arouse interest for the topic. Even though the conception can be based on existent and successful nature trails, it has to be reviewed which experiences and concrete elements of content are appropriate for flood trails.
The basic element of a comprehensive flood control strategy is the individual precaution of the citizens. Besides the avoidance of areas at risk, this includes adjusted construction methods as well as further technical measures and possibilities. Thus the potential of damage should be minimised as far as possible.
Further important elements are national and municipal controlled planning, that often aim at extensive territory protection, for example the designation of areas of flood formation and flood plains where building is prohibited.
Beyond, territory protection is realised by technical measures like dams/retention basins, dikes or polders, which are also under the responsibility of administrative organisations.
Last but not least an efficient flood warning system is part of a comprehensive flood protection strategy, so that stakeholders and persons concerned are informed about an expectant hazard in time.
However, prevention can only be successful if all measures complete one another sensibly and stakeholders cooperate cross-disciplinarily and cross-borderly.
In this context, a flood trail has been developed, that presents important elements of flood control taking the city of Dresden as an example.
A lot of criteria, that has to be considered for a flood trail, are irrespective of topic and universal for nature trails. These refer to for example the textual and graphical layout, the modality of knowledge transfer, length and character of the route, the selection of sites and the possibilities for a comprehensive public relation. These universal criteria ought to be a guideline but they have to be adjusted for every nature trail.

One of the Dresden flood trail´s characteristic features is the site-specific content of the panels. Criteria like character of the route, signs, length and distance between the panels subordinate to the site selection. This site-specific character of the trail aims at the visual reference which is an important condition for descriptive explanation of the complex of problems. Due to Urban planning and aspects of monument preservation, the options of site selection were limited.
The location of the sites at the river Elbe in the Old Town of Dresden opens up a good overview of the local flood control measures as well as it benefits the degree of awareness.
The target group is related to the structure of visitors in the town of Dresden, which is predominated by adults in particular adults aged above 50. Children and adolescents only make up a marginal part of the visitors, hence the aspect of adventure was omitted and emphasis was placed on the impartation of knowledge. The topic flood itself and the concern to impart knowledge for self-help as well are mainly targeted at adults than at children. Regarding conveyance the main target group is promenaders.
The animation to interactivity through foldouts, hidden information or other movable elements have been reviewed accordingly to the content and the site of each panel. Since the panels have to subordinate visually within the sensitive heritage-protected Old Town, interactivity and conspicuity was set aside. The possibility of vandalism was also relevant to this decision. Consequently, it mainly was worked with texts and graphics, which exclusively appeal the sense of sight.
The information on the panels are supplemented by a flyer and an internet presence. The flyer ought to advert to the flood trail and comprises further information. It can also serve as a route finder on the trail. The homepage (www.hochwasserlehrpfad-dresden.de) contains beside some basic information more detailed contents to the flood topic and answers the questions asked on the panels.
The thematic layout of the panels is geared to the aforementioned elements of flood control. Apart from pointing out the possibilities of technical flood control and measures of planning and information, the topic spectrum was extended by historical flood events in Dresden, the formation of Elbe Floods, the danger of groundwater and the risk for the city of Dresden posed by the river Weißeritz.

The following chart outlines the sites and the contents of the eight panels, that have been worked out for the route within the city of Dresden:

Panel	**Site**	**Contents**
1	In front of the terrace at the left end of the Augustusbrücke	– Welcome and introduction into the flood topic – Information on the lenght of the trail, the accessibility, the number of sites and the scheduled duration of the visit – Detailed plan of the adjacencies including prominent buildings
2	Terrace at the left end of the Augustusbrücke – view of the gauge Dresden	– Illustration of the alert phases at the gauge Dresden and their meaning – Information about the flood warning and information system in Saxony and the Saxon Flood Centre
3	Blockhausgarden at the Augustusbrücke at the Neustadt riverside	– Historical survey of flood events and their recording in Dresden – Flood turning from natural phenomena to natural disasters in context with the settlement development in Dresden
4	At the Elbe cycle track between Blockhaus and Hotel Bellevue	4a – Visible technical measures of flood protection with regard to the Neustadt riverside 4b – Visible technical measures of flood protection with regard to the Old Town riverside
5	Gardens of the Japanisches Palais in front of the Marienbrücke	– Natural flood plains and their functions – Specific features of the Elbe grasslands in Dresden
6	Between convention centre and Marienbrücke at the Elbe quay	– Information on the development and the function of by-channels (floodways) within the urban area – Effect of buildings as runoff barriers
7	New Terrace / Kleine Packhofstraße	– Formation of floods – Risk of groundwater floods
8	At the Saxon Parliament	– Trait of the river Weißeritz – Repositioning of the Weißeritz in Dresden and its consequences

To raise the recall value, a corporate design needs to be established. For this purpose the harmonisation of the applied picture and text material is important as well as the application of a recurring header. The heading of the panel with a colour photo of the inundated city of Dresden in 2006 takes nearly one-fifth of the vertical and comprises the logo, the slogan: „Lernen aus der Flut - Hochwasserlehrpfad Dresden“ and a sketch of the trail route including the panel sites (current panel number highlighted in red). The design in terms of colour was carried out descreetly. The panels should not be too colourful to avoid conflicts with its surroundings. Finding a compromise between good perception properties and a descreet and appealing design was essential. Supporting the recall value, the applied colours, fonts and the stile of the images are consistent over all modules of the trail. The background was done in a descreet grey.

Due to aspects of monument preservation the panels were installed in the form of desks, in particular because of aesthetic claims and less interferences into the surroundings. The material of choice for the panels was printable synthetics (so-called HPL panels) mounted on a metal base frame. These panels are appropriate for outside use. They are made of extreme hard synthetic resin, which is resistant to environmental influences and fits into the concept of an environment-friendly production as well. The size of the panels was set 70 x 49cm. The metal base frame as well as the panels are removable, due to the risk of floods at several sites.

The flood trail in the state capital Dresden is Saxonie´s first flood trail. It was developed by order of the Saxon State Agency for Environment and Geology / Saxon Flood Centre and funded within the scope of the INTERREG III B project MOSES of the European Union.

Dresden, März 2008

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