

## **ACTUAL STATUS OF THE TRANSPOSITION OF THE FLOOD DIRECTIVE IN AUSTRIA**

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### **ABSTRACT**

In Austria protection from floods has a long tradition which can be traced back for centuries. Austria's strategies on integrated flood protection comply with the EU objectives and were applied already before the EU Floods Directive was adopted. With the Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks the strategy changed from Flood Protection to Flood Risk Management. For all three steps of the Flood directive, the preliminary flood risk assessment, the preparation of flood hazard maps and flood risk maps and the development of flood risk management plans the Ministry of Life, as competent authority, elaborated guidelines for each phase of the Directive. For the preparatory work, working groups were established on national level. In Austria the first two steps of the Flood Directive were finished successful. The flood risk management plans are still in the design phase.

### **1. Introduction**

The implementation of the Directive 2007/60/EC in national law was conducted in March 2011 by the amendment to the Water Law Act, Federal Law Gazette I no 14/2011 (BGBl. I Nr. 14/2011). Competent authorities in Austria are the Federal Ministry of Agriculture, Forestry, Environment and Water Management and the Governors of the 9 federal states (Bundeslaender).

For the transposition of the Directive and the preparatory work, interdisciplinary working groups (technical and legal task force) composed of members of the respective ministries and representatives of the Laender, was set up on national level. In Austria, the Directive concerns many federal and provincial competencies (e.g. water legislation, torrent and avalanche control as federal competences as well as spatial planning, disaster control and nature conservation as responsibilities of the Federal Provinces).

As regards the types of flood, only fluvial floods, pluvial floods and groundwater floods are of interest in Austria, the latter being of little relevance. As for international harmonisation of the Flood Directive with neighbouring countries, this issue is dealt with by and within the already existing bilateral River Commissions.

## **2. Preliminary Flood Risk Assessment**

In Austria the first step of the Directive, the preliminary flood risk assessment (Article 4) and the identification of areas for which the Member States conclude that potential significant flood risks exist (APSFR) or might be considered likely to occur (Article 5) has been finished in time end of December 2011. The assessment was performed on the basis of HORA ([www.hora.gv.at](http://www.hora.gv.at)), a cooperation project in Austria between the Ministry of Life and the association of Austrian insurance companies. The system allows a first assessment of the impacts of different natural hazards e.g. floods and supplements the existing hazard maps and the hazard zone plans of the torrent and avalanche control. It depicts the inundation areas for flood events with return periods of 100 and 200 years for more than 25,000 km of river stretches. This allows all citizens to make a first assessment of the potential hazard and risk of flooding to which their dwellings may be exposed. To this end, the inundation areas adjacent to the water courses are superimposed on a 125 m grid with data related to Austrian population statistics, land-use and cultural assets as well as with the available data on the storage of hazardous substances and projected onto the respective river axis (line approach). The flood risk is determined using defined significance criteria. A special emphasis was placed on human life. The assessment regarding the number of inhabitants affected has shown that more than 150 to 300 inhabitants are exposed to a significant flood risk per river kilometre. The final assessment of the river basin districts which are believed to be exposed to a potential significant flood risk pursuant to Article 5 of the Flood Directive was done by the Laender in a second stage. For this process, more detailed data, if available, from flood discharge studies carried out by the Laender and data of floods which occurred in the past are incorporated.

In Austria 329 APSFR with a total length of 2,654 km were defined. The results elaborated by the Laender were summarised by the Ministry and reported to the Commission in Brussels up to 22 March 2012.

### **3. Flood hazard maps and flood risk maps**

Following the next step of the Directive the federal ministry made guidelines for the production of hazard maps and risk maps. Flood risk maps are an important basis and a practical tool for presenting and sharing information on existing flood risks. The extent of the floods with high, medium and low probability is mapped on a scale of 1 : 25.000. Based on the guidelines the federal states elaborated hazard maps for the 329 APSFR. In the majority of cases the Laender reverted to existing maps. As regards the flood hazard maps according to Article 6 of the Directive, Austria has already laid some groundwork. For several years flood discharge areas have been designated systematically for river basins. The elements specified in the Directive “flood extent”, “water depth” and “flow velocity” are shown for the entire river basin district which is being investigated. Regarding probability, the following scenarios are considered in Austria:

- HQ30 for floods with a high probability
- HQ100 for floods with a medium probability and
- HQ300 for floods with a low probability

For those parts of the APSFR where no hazard maps or data of flood plain modeling existed (only a small percentage), the HORA system was used for the design of hazard maps.

Based on the results of the hazard maps, risk maps were produced by the Umweltbundesamt (UBA) - Environment Agency Austria. The graphic account of affected people on the maps is clustered in three groups. Further risk parameters e.g. hospitals, schools, home for elderly, import infrastructure, cultural heritages are also mapped on the risk maps. But the risks are not differentiated into high, medium or low risk.

The production of the flood hazard maps and the flood risk maps is already done in Austria. The reporting to the European Commission is intended in time not later than 22 March 2014.

### **4. Flood risk management plans (FRMP)**

Also for the third step of the Flood Directive guidelines with a description of the method for the preparation of Flood Risk Management Plans (FRMP) were produced by the Ministry of Life. These guidelines include a catalogue of measures and standards for the prioritization of measures and also methods for the public involvement and public participation (Art. 10).

The ministry is working out a draft version (federal blue print) for the FRMP. Beginning with January 2014 the federal states (Laender) will finish the plans in consideration of their local knowledge and experiences within 9 month. In September 2014 the Laender send back the FRMP to the ministry. In a finishing the Ministry merges the results of the treatment of the FRMP by federal countries. The Ministry also prepares the maps and papers for the public participation, which starts in December 2014. The FRMP will be finished in December 2015 and reported to the commission at the latest up to March 2016.

## **5. Conclusion**

The Directive brings in its wake some new challenges for Austria. In particular, the deadlines by which planning has to be completed and the requirement to review the results every 6 years and taking into account the impacts of climate change, was not usual in Austria during the last decades and will require an augmentation of planning resources. Integral planning implies that more funds as well as increased work capacity will be needed. The Directive provides a European framework for flood risk management and, beyond that, aims at improving the prevention of damage and the mitigation of risks by fostering cross-border cooperation.