

# **EFC Working Party on the Management of Mountain Watersheds**

## **AUSTRIA COUNTRY PAGE**

### **Geographical setting**

As one of the most richly forested areas in central Europe – after all 47% of its land area is wooded – Austria places a special value on this natural resource. Many species and habitats depend, either directly or indirectly, on the sustainable management of the country's forests. Thanks to a programme of near-natural sustainable forest management, which Austria has backed with its forestry act, all functional and ecological needs of forest ecosystems are taken into account, and the conservation of Austria's forests is assured.

Indeed, forests are also indispensable for the protection of living areas in Austria and their protective function is of enormous, ever increasing economic significance. About 67% of the total Austrian territory area is part of a torrent and/or avalanche catchment (about 12.000 torrent catchments and nearly 5.000 snow avalanche paths). Thousands of settlement areas and infrastructure facilities in Austria are protected against natural hazards (like debris flows, sediment disasters, snow avalanches, erosion and landslide events, rockfalls etc.) by forests what causes major strategic planning on a national and regional level in order to manage these forests effectively and to maintain their protective functionality. For many centuries, the Alpine region has been settled and managed in harmony with the elements, and using the protective function of forests is one of these traditional mitigation measures. Integral water and forest management is therefore an essential part of an overall strategy to guarantee the high standard of quality of life in Austria.

The most important problem related to the management of mountainous watersheds from a forest and water management point of view is – beside the notable impacts of Climate Change especially in the Alpine range – ageing protection forests and lacking regeneration. According to the results of the Austrian Forest Inventory (ÖWI 2000/2002), there is a very high need for regeneration in the productive protection forests: Regeneration is necessary in 2/3 of the area, but there is no regeneration present in 70% of the area. In the non-productive protection forest, on the other hand, only one quarter of the area requires regeneration. However, in 80% of the cases there is no regeneration present. Only 59% of the protection forests are classified as “stable”, 33% as “stable to susceptible” and 8.3% as “critically susceptible to unstable” with a steady tendency. The inhibiting factors that obstruct an adequate regeneration include, for example, too dense ground vegetation, erosion, browsing or forest pasturing.

### **Policies**

The Austrian Forest Act provides the legal framework for the management of all Austrian forests. To ensure sustainability, it provides for numerous management restrictions and stipulations, such as the requirement for certain measures to be authorised by the forest authority. Even more stringent regulations apply to the protection forest. Under the Forest Act, forest enterprises are not required to draw up management plans. In practice, however, management plans, so-called operates, are used as a basis for management measures by all larger forest enterprises. These operations are usually updated or revised every 10 years in the course of a forest establishment.

Forest land use planning as set out in the Forest Act provides for three planning instruments for the presentation and forecasting of forest conditions:

- Forest Development Plan
- Hazard Zone Maps, and
- Forestry Plan.

Whilst the former only have an indirect influence at the forest enterprise level, the Forestry Plan offers forest owners a possibility to present and plan certain technical fields within their own sphere of interest. To check sustainability at the regional and federal level, a number of monitoring instruments are available. The most comprehensive instrument is the Austrian Forest Inventory, but other surveys such as the annual timber harvest report or the test operation grid, which provides information about the earnings situation in forestry, also provide an important decision-making basis for forest policy in order to ensure sustainable management of the Austrian forest.

With regard to “protection forests” which play a vital role especially in mountainous regions, the Austrian Forest Act place these forests under special protection, and the owners of protection forests must “manage them in such a manner under the local conditions that their preservation as a stable vegetation with a strong inner structure and timely regeneration is guaranteed”. Since the 2002 amendment, the Act makes a distinction between “site protection forests” and “object protection forests”. The category “site protection forests” includes forests whose site is threatened by the erosive forces of wind, water and gravity, and which require special treatment to protect the soil and growth, as well as to ensure reforestation. On the contrary, the category “object protection forests” newly introduced with the Forest Act Amendment in 2002 includes forests that protect humans, human settlements, facilities or cultivated land in particular against natural hazards or damaging environmental impacts, and which require special treatment in order to achieve and safeguard their protective function or their welfare function

The Austrian Water Act regulates when the use of water (including spring water and groundwater) requires an authorisation. Authorisations can only be granted subject to the preservation of sustainable water use and third-party rights. The Water Act does not specify who may utilise the water, although the utilisation of groundwater and spring water by third parties always requires the permission of the land/forest owner. The provision of a public water supply as an essential service is seen primarily as a communal responsibility in Austria. The utilisation of (drinking) water as a commodity is a very sensitive socio-political issue in Austria; further steps towards marketing the water will therefore require a careful approach and must comply with the parameters of ecological sustainability. It is of high relevance to illustrate the connection between forest management and the supply with high-quality water and to increase people’s awareness of the value of water as an economic asset. At present, only a small part of Austria’s water resources is exploited, and there is a vast potential for development. However, until now the forest owners have hardly succeeded in earning significant revenues from the exploitation of water.

The implementation of protection and mitigation concepts especially in mountainous areas is a core task of the Austrian Forest Engineering Service for Torrent and Avalanche Control (WLV). As a matter of principle, WLV pursues the concept of a meaningful combination of protective forest biology, engineering and land-use planning measures within the scope of comprehensive natural hazard management. The tasks include the planning, implementation and maintenance of active protection measures, hazard zone planning, consulting and expert activities, as well as support for the catchment areas. In the course of time, the protection measures in the catchment areas of torrents and avalanches have developed into integral management concepts that permanently include technical and forest biology measures, and most recently also temporary measures. The protection concepts not only comprise active measures, they are also aimed at controlling other spatial utilisations within the catchment area (catchment area management). With implementation of the EU Water Framework Directive as well as the EU Floods Directive, the perspective has to be raised to the level of larger hydrological units (river basin management).

The following present policy / key drivers are shaping the landscape for policy development and implementation with regard to water and forest management in Austria:

- Development of a national Climate Change Adaptation Strategy

- Implementation of the EU Floods Directive (2007/60/EC)
- Implementation of the EU Water Framework Directive (2000/60/EC)
- Implementation of the Alpine Convention Mountain Forest Protocol
- EU - Green paper on Forest Protection and Information in the EU: Preparing forests for climate change
- Duties in the frame of FOREST EUROPE (previously known as MCPFE)
- Implementation of the UNFF8 outcomes
- Activities related to UNESCO - International Year of Biodiversity
- Shortage / limitations of financial resources

## Outlook

The political, socio-economical, scientific, legal and technical issues underpinning natural hazard and forest management strategies have undergone considerable change during the past few years. With the increase in environmental consciousness, and the potential impacts of Climate Change ahead, the demands on integral aspects of natural hazard and forest management have also become more stringent. Public awareness of natural hazards is increasing and the expectations of the public are changing towards increased levels of protection as Austria becomes wealthier and therefore more vulnerable. At the same time, public investments in natural hazard protection and prevention measures are more and more limited, and the shortage of financial resources cause a challenge in meeting the demands of maintaining or restructuring structural measures in use. Conventional protection concepts are not more adequate in covering all the aspects a modern natural hazard management strategy require, especially in which terms like social responsibility, capacity building, and resilience are leading policy development and implementation.

In order to tackle these challenges and to develop effective policies and risk management practices, Austria is on the way to develop a new strategy that is considering concepts that support people at risk in more ownership of risk. This strategy is a step towards balancing public and individual demands and interests in natural hazard and forest management, but it is important to never neglect the several risks which such a concept implies. Further capacity building, awareness raising, interdisciplinary communication and (international) co-operation have been identified as key factors to make this strategy a success.

Forest land use planning <http://www.forstnet.at/article/archive/5803/>

Forest development plan <http://www.forstnet.at/article/archive/58036/>

Hazard zone maps <http://www.forstnet.at/article/archive/5804/>

Forestry plan <http://www.forstnet.at/article/archive/5807/>

Protection forests <http://www.forstnet.at/article/articleview/20429/1/5782>

Austrian Water Act <http://www.wassernet.at/article/archive/1460/>

WLV <http://www.forstnet.at/article/archive/5813/>

Development of a national Climate Change Adaptation Strategy

<http://www.circle-era.net/recent-country-news/austria/>

Implementation of the EU Floods Directive (2007/60/EC)

[http://www.umweltbundesamt.at/en/umweltschutz/wasser/hochwasser\\_wasser/eu\\_hochwasser/errl/](http://www.umweltbundesamt.at/en/umweltschutz/wasser/hochwasser_wasser/eu_hochwasser/errl/)

Implementation of the EU Water Framework Directive (2000/60/EC)

<http://wasser.lebensministerium.at/article/archive/6345/15>

Implementation of the Alpine Convention Mountain Forest Protocol

[http://www.alpconv.org/NR/rdonlyres/8A57D05E-072D-4590-AAED-64BE8C97152B/0/protokoll\\_bergwaldGB.pdf](http://www.alpconv.org/NR/rdonlyres/8A57D05E-072D-4590-AAED-64BE8C97152B/0/protokoll_bergwaldGB.pdf)

EU - Green paper on Forest Protection and Information in the EU: Preparing forests for climate change

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0066:FIN:EN:PDF>

Duties in the frame of FOREST EUROPE (previously known as MCPFE)

<http://www.foresteuropa.org/>

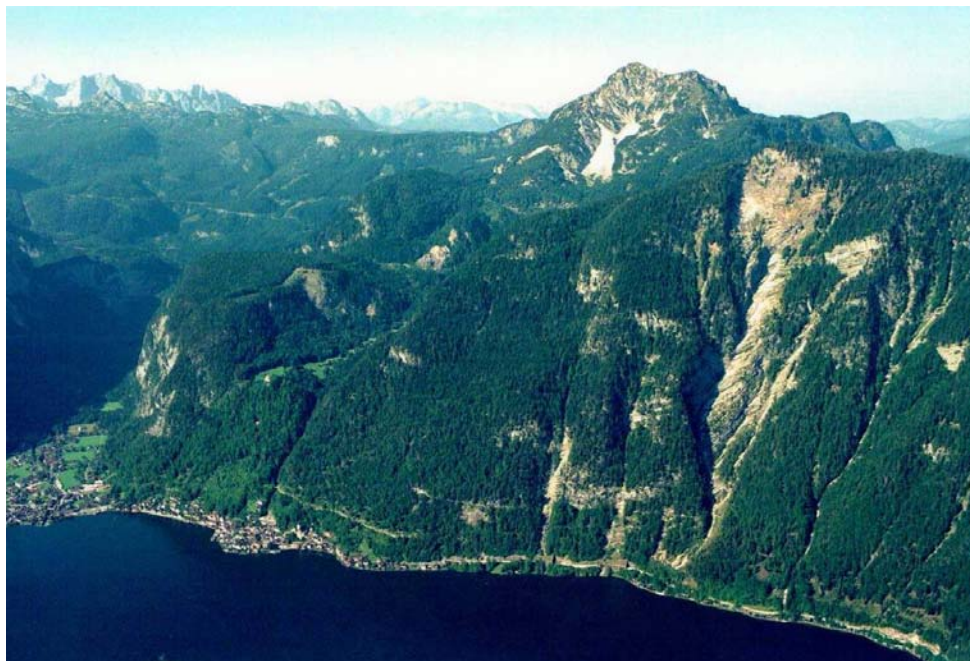
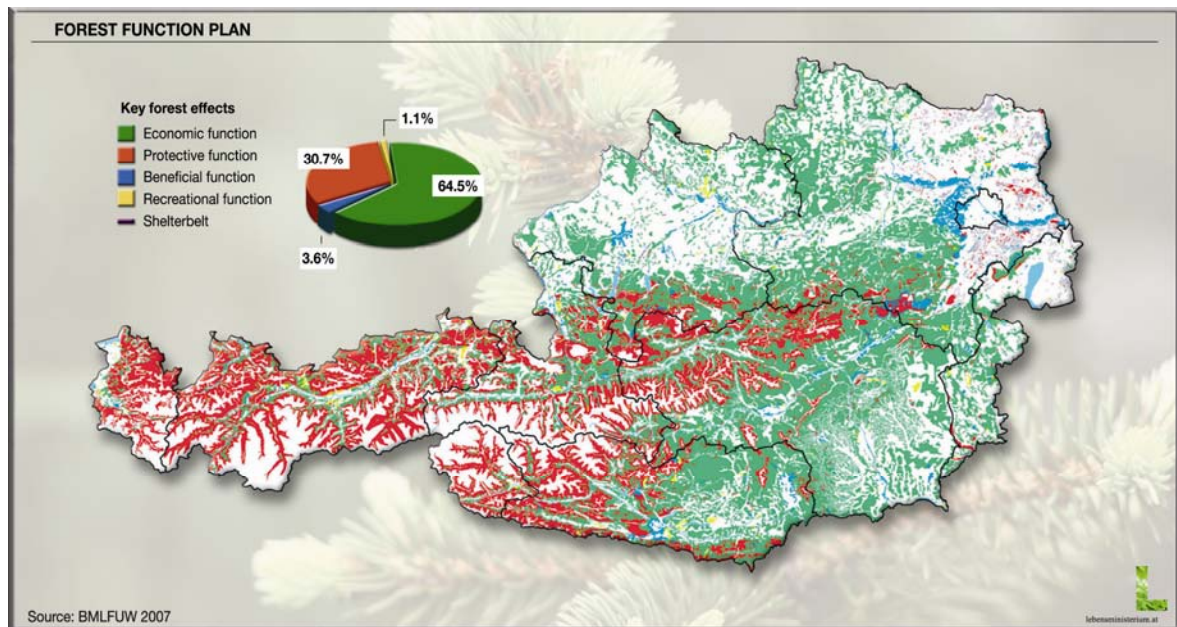
Implementation of the UNFF8 outcomes

<http://forst.lebensministerium.at/article/articleview/74543/1/5823/>

Activities related to UNESCO - International Year of Biodiversity

<http://www.cbd.int/countries/?country=at>

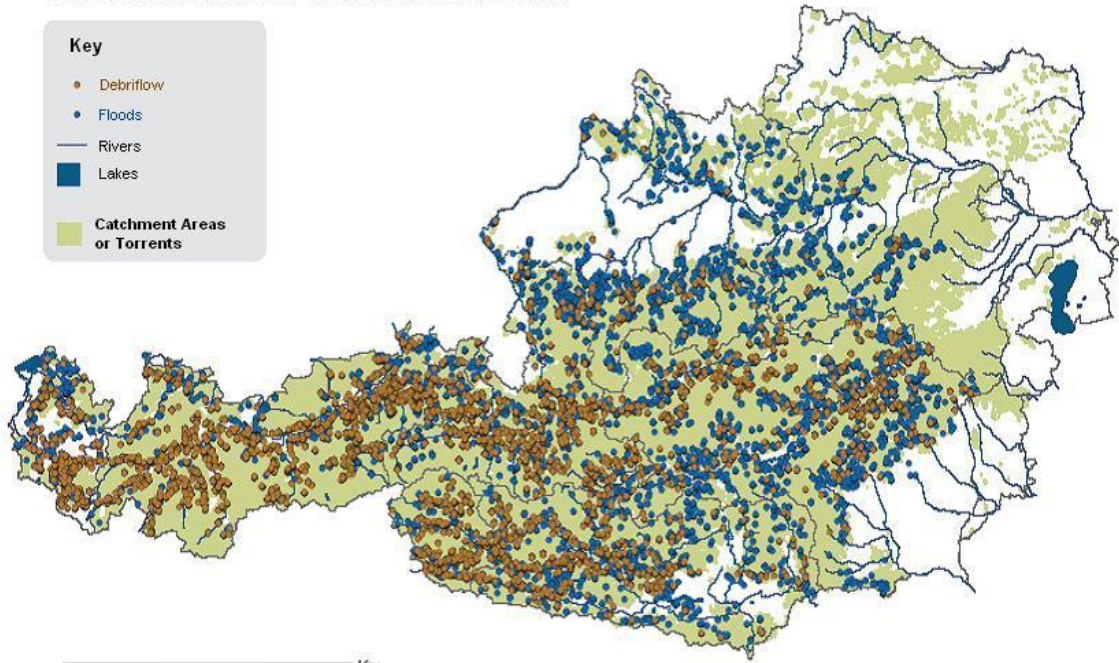
<http://www.cbd.int/countries/profile.shtml?country=at#thematic>



Protection Forest in Hallstatt (Upper Austria)

### CATCHMENT AREAS OF TORRENTS IN AUSTRIA

- Key**
- Debrisflow
  - Floods
  - Rivers
  - Lakes
  - Catchment Areas or Torrents



0 50 100 150 Km

### CATCHMENT AREAS OF AVALANCHES IN AUSTRIA

- Key**
- Destructive Avalanches
  - Rivers
  - Lakes

