



## Water

# Ecosystems for water; water for populations

## Background

**Blue Planet.** The “Blue Planet” is an apt description: water covers about two thirds of the earth’s surface. However, only 2.5% of this is freshwater, and of these resources only 0.5% is available, the rest being stored in the form of ice and glaciers.

**Water castle.** Switzerland can be considered as a water castle, encompassing some of Europe’s most abundant freshwater resources. Although the country accounts for barely 4 per mille of the total area of the continent, some 262 billion cubic metres of water lie within its borders – 6 per cent of Europe’s total freshwater reserves.

## Threats facing the environment and humans

**Destruction of ecosystems.** From an environmental viewpoint, the current crisis is essentially due to mismanagement of the hydrological cycle. Ecosystems that produce water, such as forests, soil and wetlands, are inadequately protected. They are destroyed or severely damaged by human activities, such as agriculture and the development of settlements in particular. As a result, 50% of the world’s wetlands disappeared in the course of the twentieth century. A third of the watersheds of rivers and lakes have lost 75% of their primary forest cover. Mountain forests are disappearing more rapidly than any other type of forest.

**Pollution and wastage.** Freshwater resources are overexploited, wasted, and subject to chemical and organic pollution. In developed countries, some progress has been made in reducing pollution, cleaning up rivers, establishing a legislative framework and implementing integrated watershed management. But enormous challenges remain: improving ecosystem protection, improving management while also considering cost-effectiveness, reducing subsidies detrimental to the environment, improving groundwater protection, ensuring greater public participation in decision making, and enhancing protection against flooding and droughts.

## Measures taken to date

### *In Switzerland*

**National public information campaign.** For 2003, as part of the International Year of Freshwater, a major information campaign has been organized in order to raise public awareness of the importance of using water sustainably.

### *Internationally*

**Protection of ecosystems.** At the 3rd World Water Forum, held in Kyoto (Japan) in March 2003, the Swiss delegation secured the inclusion in the Ministerial Declaration (establishing global water policy) of a clause identifying ecosystem protection as a prerequisite for any water-related project. The original text reads as follows:

“To ensure a sustainable water supply of good quality, we should protect and use in a sustainable manner the ecosystems that naturally capture, filter, store, and release water, such as rivers, wetlands, forests, and soils.”

**Liability for industrial accidents.** In response to a Swiss proposal, a regime concerning civil liability and compensation for damage caused by the transboundary effects of industrial accidents on transboundary waters has just been adopted within the UN Economic Commission for Europe (UN/ECE). Henceforth, companies engaged in hazardous activities that could cause serious damage to transboundary waters in the event of an industrial accident will be required to be covered by insurance against this potential risk. These new legal arrangements will encourage operators to give serious consideration to the environmental risks arising from hazardous industrial activities.

## Agenda for the future

**Water and development.** Water is the key to sustainable development and food security. Water supplies of good quality are also fundamental to the eradication of poverty. But water supplies are dependent on the protection and sustainable use of ecosystems that naturally capture, filter, store, and release water, such as wetlands, forests, and soils. The so-called ecosystem approach is thus one of the essential conditions for poverty alleviation.

**Establishing the ecosystem approach.** Recognizing the vital role played by ecosystems in the water cycle will be an important aspect of the Integrated Water Resources Management plans that are to be prepared worldwide by 2005 in accordance with the WSSD Plan of Implementation. The ecosystem approach may be put into effect via the Ramsar Convention on the protection of wetlands, which was signed in 1971. This agreement should be recognized as a major global water convention.

**Solidarity.** On the basis of the ecosystem approach, solidarity between the generally poorer mountain populations and the richer valley dwellers should be reinforced in the area of water. Innovative approaches need to be adopted to ensure that downstream populations have sufficient water at their disposal while upstream populations are compensated for their contributions to the protection, management and sustainable use of ecosystems.

**Private-sector investment.** Investments made by the private sector should take account of the need to protect ecosystems in any projects relating to food or water supplies. Partnerships between governments and the private sector are desirable so as to increase the resources made available for ecosystem protection. Such partnerships should also involve a commitment to provide water supplies to the poorest populations at an affordable price.

### **Further information:**

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