

Key messages

A. It is time to adapt now! Scientific evidence urges action

The climate is changing! The scientific evidence conveys the clear message that this change will impact the water cycle in Europe, with potentially disastrous effects. The predicted impacts will aggravate an already serious situation where European water resources suffer due to existing and increasing pressures and insufficient integration of water management practices.

These impacts on water resources will significantly affect on key economic activities such as **agriculture**, **hydropower** and **energy production**, **tourism** and **navigation** in large parts of Europe. Equally important, attention needs to be given to the serious adverse impacts on **biodiversity** and **ecosystems**.

Therefore, while climate change mitigation should remain a priority, there is also an urgent need to develop strategies for adaptation to the already inevitable climate change-driven changes in water resources. However, interactions between mitigation and adaptation measures need to be considered in order to develop the most effective policies and incentives.

B. EU water and marine policy provides a solid basis for integrated water resource management – it should be used to factor in adaptation to climate change

Existing European water policy on freshwater, coastal and marine management is already fit to factor in climate change. Community actions on floods, water scarcity, droughts and the marine directive will complement the ongoing work. In particular, the Water Framework Directive (WFD) is a powerful tool to introduce climate change impacts into water resources management and river basin planning, at the latest in the second planning cycle in 2015 and preferably before. This process should integrate the needs, including the ecological needs, and impacts from all water-related sectors.

C. A successful adaptation strategy needs a common and integrated approach

Adaptation starts with using water more efficiently in all sectors

Measures to reduce demand should clearly be favoured over increasing supply. This applies to all sectors and users. Moreover, supply side management needs to become more efficient, e.g. by reducing leakages. Change in lifestyles as well as in consumption and production patterns are essential for both adaptation and mitigation.

Water-dependent sectors need to be involved

All relevant water-related sectors, such as agriculture, electricity production, inland navigation and tourism must be integrated under one common adaptation management process related to water. This relates to participation on all levels, whether administrative, institutional, private or from the civil society. Only a common and integrated approach will provide successful win-win solutions and avoid negative cross-sectoral feedbacks of measures or non-action in one sector. Water demand management should be introduced in all sectors.

All EU policy areas need to undergo an adaptation check

At present, not all EU policies contribute sufficiently to adaptation to climate change. In fact, some policies or their implementation may even be counterproductive. A systematic check of all policy areas on whether measures for adaptation to climate-related impacts on the water resources exist should be carried out by 2009, whether they are funding instruments, sector policies or environment policy. New policy proposals should incorporate adaptation aspects in the impact assessment. This also applies to mitigation policies, e.g. the Biomass Action Plan. This will contribute to a better, more effective regulation.

Actions in all sectors need to be taken and integrated into broader water management

All sectors will have to take specific actions to factor in climate change. There are, however, some crosscutting conclusions which are applicable across all sectors.

First, integrated water management through implementation of the Water Framework Directive and other relevant water legislation is a precondition to effective adaptation strategies. Sector-specific actions and

water-related needs of different users should be integrated into water management by close cooperation with these implementation processes.

Second, the future investments in infrastructure must be climate-proof. What appears to be a cost-effective investment under current conditions may become economically and ecologically not viable when considering the climatic predictions and their impacts on water resources. Flexibility of approaches is therefore key.

Third, compensation measures, subventions and incentives should increasingly consider climate change impacts and adaptation measures in order to be sustainable. On Community level, this will mainly affect the implementation of regional and cohesion policy.

In addition, the following specific conclusions were drawn:

- **Agriculture can make a stronger contribution to adaptation:** agricultural production needs to factor in climate change and effects on water availability and quality. There is certainly scope for improving the adaptive capacity of European agricultural systems including changes in land use and crop yield through incentives in the framework of changes to the funding schemes provided by the Common Agricultural Policy (CAP) of the EU, both the first pillar (direct payments) and the second pillar (rural development). The upcoming “health check” of the Common Agricultural Policy provides an opportunity to address these issues.
- **Energy and electricity production have an important role in mitigation and adaptation:** improving energy efficiency (including reductions in transmission losses) should play a key role in national and European mitigation and adaptation policies. Decentralised approaches and a diverse energy mix are likely to be beneficial both in terms of adaptation and mitigation on the supply side. The management of cooling water demands, in particular under low flow conditions, should be made a part of the river basin management plans.
- **Navigation management and planning needs to become climate-proof:** the focus should be on making the right choices regarding the infrastructure, compatibility with environmental legislation including climate change, and the development of an innovative navigation fleet that can cope with future climatic conditions. The NAIADES action plan can be used to support and guide the improvement of inland water transport development.
- **Truly sustainable tourism needs to be promoted:** Adaptation to climate change can only be achieved in the tourism industry if it becomes more sustainable. Thus, promoting the implementation of the efficient use of (water) resources within the tourism sector is a priority. A diversification of tourism activities could further help to make the sector more resilient to changes in climatic conditions and in water resources availability. Increasing awareness and fostering necessary behavioural changes among individuals and tourism enterprises is another important objective.

More intensive cooperation and common action at EU level

An intensive exchange among Member States and a common process for developing guidance should be organised in the context of existing mechanisms.

D. The “user pays principle” needs to be fully implemented

Economic instruments, as set out in the WFD, should be widely applied to recover the costs, including ecological costs, of coping with and adapting to climate change impacts, and to ensure that these costs are shared fairly between users, providers and polluters. These can become key instruments for the integrated approach. This should lead to a gradual move to full cost recovery in all sectors, taking into account social aspects. One way forward is the ‘user pays principle’, regardless of whether the water is taken from a tap, a river or an aquifer.

E. Further research activities are necessary to tackle adaptation issues more effectively – the science-policy dialogue needs to be continued and strengthened

F. Do not forget the world outside the EU! Adaptation and integrated water resource management should be a key element of development co-operation including co-operation with States in the European Neighbourhood