

Manual of European Environmental Policy

The following pages are a section from the Manual of European Environmental Policy written by the Institute for European Environmental Policy.

The Manual was published by Earthscan/Routledge from 2010 to 2012. It was designed as an on-line interactive reference work and annual printed versions were also produced.

This section is the text of the Manual as published in 2012. It is therefore important to note the following:

- The contents have not been updated since 2012 and no guarantee is given of the accuracy of the contents given potential subsequent developments.
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Adapting to climate change

Formal reference	
COM(2009)147	White Paper: Adapting to climate change: Towards a European framework for action.
COM(2007)354	Green Paper: Adaptation to climate change – options for EU Action.

Adapting to climate change: Towards a European framework for action

The White Paper on adaptation to climate change was published on 1 April 2009. It was accompanied by three sectoral papers on agriculture ([SEC\(2009\)417](#)), health ([SEC\(2009\)416](#)) and water, coasts and marine issues ([SEC\(2009\)386](#)), and suggested that further sectoral papers could be presented in the future.

Building on an earlier Green Paper (COM(2007)354), the White Paper set out a framework to reduce the EU's vulnerability to the impact of climate change. The framework outlined was intended to complement action by Member States and to support wider international efforts to adapt to climate change, particularly in developing countries. It was also designed to evolve in the light of further evidence becomes available.

The rationale for EU level action

The White Paper recognized that due to the regional variability and severity of climate impact, most adaptation measures will be taken at national, regional or local level, but argued that these measures can be supported and strengthened by an integrated and coordinated approach at EU level.

In particular, the White Paper referred to the EU's role when the impact of climate change transcends the boundaries of individual countries (e.g. river and sea basins and bio-geographic regions). Secondly, the White Paper referenced the need for solidarity (Treaty Article 2 TEU) among EU Member States to ensure that disadvantaged regions and regions most affected by climate change will be capable of taking the measures needed to adapt. Thirdly, the White Paper referred to the need for coordinated EU action in certain sectors (e.g. agriculture, water, biodiversity, fisheries and energy networks) that are closely integrated at EU level through the single market and common policies.

Finally, the White Paper observed, with an aside to the requirement under Article 4 of the [UNFCCC](#), while a number of EU Member States had prepared national adaptation strategies, others had yet to do so and that the EU is well placed to facilitate coordination and the exchange of best practices between Member States on climate.

Overall objective and approach

It is important to note that the title of the White Paper is ‘Adapting to climate change: Towards a European framework for action’. EU level action on adaptation is therefore very much work in progress, and the White Paper therefore set out a phased approach.

The overall objective for the EU's Adaptation Framework set out in the White Paper is ‘to improve the EU's resilience to deal with the impact of climate change’. The intention of Phase 1 (2009–2012) is to lay the ground work for preparing a more comprehensive EU adaptation strategy to be implemented during Phase 2, commencing in 2013.

Phase 1 contains four pillars of action:

1. Building a solid knowledge base on the impact and consequences of climate change for the EU.
2. Integrating adaptation into EU key policy areas.
3. Employing a combination of policy instruments (market-based instruments, guidelines, public–private partnerships) to ensure effective delivery of adaptation.
4. Stepping up international cooperation on adaptation.

Developing the knowledge base (Pillar One)

The White Paper called for more knowledge to be developed on climate impacts and vulnerability to enable appropriate policy responses to be developed. The White Paper envisioned four main actions at the Community and Member State level in this area by 2011. Firstly, in order to facilitate the sharing of existing knowledge on impacts and best practices on adaptation across Member States, a Clearing House Mechanism was to be established. Secondly, the White Paper called for further work to develop a set of tools to help forecast impacts, identify vulnerabilities and develop adaptation measures. Thirdly, the White Paper called for the development of a set of vulnerability indicators. Finally, the assessment of the costs and benefits of different adaptation options was considered to be urgent.

Integrating adaptation into EU policies (Pillar Two)

The second pillar concerned the mainstreaming of adaptation into EU policies. The White Paper emphasized that this would need to be carefully prepared and it envisioned a review in each policy area commencing during Phase 1. These reviews should address actual and potential impacts in the sector, the costs of action and inaction, and interaction of proposed measures with other policies in other sectors. The White Paper also stressed the need for early action on adaptation in view of what is already known about projected impacts. It included more detailed consideration of five policy areas which have particularly strong EU involvement and for which adaptation strategies were needed, stressing that priority should be given to no-regrets measures and measures that have mitigation as well as adaptation benefits. The five policy areas were health and social policy; agriculture and forests; biodiversity, ecosystems and water; coastal and marine areas, and finally production systems and physical infrastructure.

Health and social policy

The Commission staff working document ‘Human, Animal and Plant Health Impacts of Climate Change’, accompanying the White Paper, considered the main issues relating to human, animal and plant health in relation to climate change, what is currently being done to address these challenges, and indicated what some of the key future steps to be taken at Community and Member State level might be.

In relation to human health, the White Paper itself, noted that the EU Health Strategy (Health Strategy White Paper [COM\(2007\)630](#)) foresees action on adaptation and that while the main policy actions should be taken by the Member States, the EU should use measures to assist Member States under the EU Health Programme (Decision [1350/2007/EC](#)) and through other means in accordance with the Treaty (Article 152 of the TEC (now Article 168 TFEU) stated ‘a high level of human health protection shall be ensured in the definition and implementation of all community policies and activities’). In particular, it called for guidelines and surveillance mechanisms on the health impacts of climate change to be developed by 2011.

In relation to animal health, it considered that the impact of climate change would need to be addressed principally at farm level but also in relation to animal population density in certain regions and current movement patterns of live animals. It noted that the Community Animal Health Strategy ([COM\(2007\)539](#)) will consider how climate change affects the occurrence of diseases. It called for the stepping up of existing animal disease and control systems, but did not set any specific deadlines. One would assume therefore, that this should be by the end of Phase 1, and so by the end of 2012.

The White Paper did not give extensive consideration of the social dimension of adaptation policy, and there was no staff working document specifically dedicated to this topic. The White Paper stated that this should be pursued within existing EU processes in the social and employment fields and called for the assessment of impacts of climate change and adaptation policies on employment and on the well-being of vulnerable social groups. Again no specific deadlines were given.

Agriculture and forests

The Commission staff working document ‘Adapting to climate change: the challenge for European agriculture and rural areas’, accompanying the White Paper, considered the main impacts of climate change on EU agriculture, examined adaptation needs, described the implications for the Common Agricultural Policy (CAP) and explored possible orientations for future action. It also aimed to engage the Member States and the farming community in a debate and action on adaptation needs.

The White Paper noted that as the majority of land in the EU is managed by farmers, the CAP is well placed to play a central role in contributing to adaptation by helping farmers adapt production to a changing climate and by providing wider ecosystem services dependent on specific land management. The White Paper outlined three actions to be taken in relation to agriculture and one in relation to forests to be taken at the Community and Member State level. Firstly, measures for adaptation and water management should be embedded in the [rural development](#) (see section on agriculture) national strategies and programmes 2007–2013. Secondly, it called for the consideration of how Member States can integrate adaptation

into the three strands of rural development (competitiveness, the environment, rural quality of life). Thirdly, the capacity of the Farm Advisory System to reinforce training, knowledge and adoption of new technologies to facilitate adaptation should be strengthened. Finally, in relation to forestry, the White Paper suggested that the climate-related aspects of the existing EU [forestry strategy](#) (see section on forestry) could be updated, and that in the context of the EU Forest Action Plan, a debate should be launched for a Community level approach to forest protection and information systems. There were no specific deadlines for any of the actions.

Biodiversity, ecosystems and water

The Commission staff working document ‘Climate Change and Water, Coasts and Marine Issues’, accompanying the White Paper, summarized the main impacts of climate change on water and related policies and identified the measures in place to facilitate adaptation. It was shorter than the other two staff working papers. There was no specific staff working document dealing with biodiversity and ecosystems.

The White Paper itself noted that a comprehensive and integrated approach towards the maintenance and enhancement of ecosystems and the goods and services they provide was needed. It recognized that a number of Member States have developed initiatives designed to protect their land-based and water infrastructure, but stated that greater coordination at EU level could deliver additional benefits.

It recalled that a number of existing EU policies ([Water Framework Directive](#); [Floods Directive](#)) contribute to adaptation efforts. It outlined six actions, four of which addressed water issues and two of which addressed biodiversity. Firstly, a set of guidelines and tools (guidance and exchange of best practice) should be developed by the end of 2009 to ensure that the River Basin Management Plans required under the Water Framework Directive are climate proofed. Secondly, Member States must take climate change into account in the implementation of the Floods Directive. Thirdly, the Commission will assess the need for further measures to enhance water efficiency in agriculture, households and buildings. Fourth, the potential for policies and measures to boost ecosystem capacity for water storage should be explored (in particular in the context of the upcoming reviews of the Water Framework Directive and the [Water Scarcity and Droughts strategy](#)). On biodiversity, the White Paper called for an exploration of the possibilities for improving policies and developing measures which address biodiversity and biodiversity *together* in an integrated manner. The purpose should be to on the one hand take full advantage of any co-benefits and on the other to avoid ecosystem feedbacks accelerating global warming. Again there was no specific deadline. Finally, draft guidelines should be developed by 2010, on how to deal with the impacts of climate change on [Natura 2000 sites](#) (see section on habitats and species conservation).

Coastal and marine areas

The above mentioned Commission staff working document also considered coasts and marine issues. The White Paper itself called for just two, albeit substantial, actions at the Community and Member State level in this area, neither of which had a specific timetable other than the generic Phase 1 timetable. Firstly, adaptation in coastal and marine areas must be taken into account in the context of the [Integrated Maritime Policy](#), the implementation of

the [Marine Strategy Framework Directive](#) and the reform of the [Common Fisheries Policy](#). And secondly, the development of European guidelines on adaptation in coastal and marine areas.

Production systems and physical infrastructure

There was no specific Commission staff working document on production systems and physical infrastructure. The White Paper noted that while protecting existing and future infrastructure from the impact of climate change will predominantly be a Member State responsibility, the Community will have an important role in promoting best practice, through support for infrastructure development, and also in developing standards for construction. It also noted that improving the resilience of existing transport infrastructure and energy networks requires a common and coordinated approach for assessing the vulnerability of critical infrastructure to extreme weather events. Five actions at the Community and Member State level were outlined under this heading, mostly with no specific deadline. Firstly, at the Community level, account should be taken of climate change impacts in the Strategic Energy Review process. Secondly, methodologies should be developed for climate-proofing infrastructure projects. It should be considered how these could be incorporated into the [TEN-T](#) (see section on transport) and TEN-E guidelines and guidance on investments under [Cohesion policy](#) (see section on Structural and Cohesion Funds) in the current period. Thirdly, the possibility of making climate impact assessment a condition for public and private investment should be explored. Fourth, the feasibility of incorporating climate impacts into construction standards, such as Eurocodes should be assessed. Finally, by 2011, guidelines to ensure that climate impacts are taken into account in [Environmental Impact Assessment](#) and [Strategic Environmental Assessment](#) Directives should be developed.

Having outlined the need for a systematic review in each Community level policy area, and having considered in some detail five policy areas with particularly strong Community level involvement. The final sections of the White Paper considered financing, how the Adaptation Framework should be taken forward with Member States and the external dimension of the Adaptation Framework.

Financing

The White Paper noted that climate change was one of the priorities for the current multi-annual financial framework (2007–2013) and stressed the importance of ensuring available funds are used to reflect this priority. It also pointed to the scope for improving the uptake of adaptation action by Member States and for better targeting the use of available financial resources and instruments. It stressed that attention should be paid to ensuring that public funding and state aid do not foster ‘mal-adaptation’. It further pointed to the existence of a number of proposals in the European Economic Recovery Plan relating to climate change investments of relevance to adaptation. It called for Member States considering investment in infrastructure as a response to the economic crisis to take adaptation fully into consideration. The White Paper contained four actions in this area. Firstly, the development of adaptation costs for relevant sectoral policy areas so that adaptation costs can be taken into account in future financial decisions. This is one of the areas where the existing knowledge base is weak. Secondly, the White Paper called for the potential use of innovative funding measures should be further examined. These could include specialized market-based instruments (such as payments for ecosystem services) or public-private partnerships. Thirdly, the potential for

insurance and other financial products to complement adaptation measures and function as risk sharing instruments should be explored. Finally, Member States should be encouraged to use the EU [emissions trading scheme](#) revenues for adaptation purposes.

Impact and Adaptation Steering Group

The White Paper foresaw the establishment of an Impact and Adaptation Steering Group (IASG) to provide secretariat services in support of cooperation on adaptation, and to help take forward the Adaptation Framework outlined in the White Paper. IASG was to include representatives from the EU Member States involved in the formulation of national and regional adaptation programmes and to consult with representatives from civil society and the scientific community. It was to be supported by a number of technical groups, dealing specifically with developments in key sectors (agriculture and forestry, biodiversity, water, oceans and seas, energy, health etc.). It was to play a role in developing the four pillars identified in the White Paper, to help develop the EU strategy and the preparation of national adaptation strategies by Member States. The White Paper called for the further development of National and Regional Adaptation Strategies with a view to considering mandatory adaptation strategies from 2012. The IASG had not yet been established by the time of writing, but was foreseen for early 2010¹.

External dimension

The White Paper called for the stepping up of efforts to mainstreaming adaptation into all EU external policies including [trade policy](#). In addition the White Paper noted that EU external cooperation should make a significant contribution to promoting adaptation in partner countries, suggesting that the Environment Integration Strategy and the Mid-Term Review of EC cooperation strategies will provide opportunities for this. Finally the White Paper called for the Framework for Action on Adaptation, a proposal tabled by the EU in the context of the UNFCCC to foster adaptation in a post-2012 global agreement, to be taken forward.

Further developments

On 6 May 2009 the European Parliament adopted a non-legislative [resolution](#) welcoming the Commission's White Paper and agreeing with the objective of the proposed EU Adaptation Framework, to improve the EU's resilience in dealing with the impact of climate change. The Parliament especially welcomed the emphasis on increasing the resilience of all ecosystems as an essential defence against the impacts of climate change. In its resolution, Parliament moreover highlighted the importance of establishing national adaptation plans based on a common European framework enabling Member States to plan and communicate their adaptation efforts. The resolution also highlighted the importance of mainstreaming adaptation into all EU policies.

On 25 June 2009, the Environment Council adopted a set of [conclusions](#) to its meeting which also welcomed the White Paper and its approach of an initial phase to 2012 laying the foundations for a more comprehensive EU adaptation strategy as from 2013.

In September 2009 a study undertaken for the Commission to design guidelines for the elaboration of regional climate change adaptation strategies was published². The guidelines were intended to stimulate and assist planning for climate change adaptation in regional and

locally based administrations, including municipalities, counties and other regional institutions. They include a review of existing strategies and guidelines, and describe the whole process of regional adaptation strategies development and implementation, with four main steps and three cross-cutting issues, and numerous links to existing tools and databases.

On 7 of October 2009, the Committee of the Regions adopted an opinion on the White Paper, expressing its overall satisfaction, while underlining the importance of local players, the need for the EU budget review and the post 2013 Financial Perspective to make climate change an priority, and drawing attention to the often local nature of adaptation, and therefore a corresponding need to ensure that funding is available to local and regional authorities.

On 5 November 2009, the European Economic and Social Committee adopted an opinion on the White Paper ([2010/C 128/23](#)) welcoming its general approach, but, striking a more critical note than the Committee of the Regions, suggesting that some of the actions proposed by the Commission did not have sufficient urgency and were not specific enough. Specifically the Committee urged: a stronger role for the co-ordinating European Strategy in relation to the national adaptation strategies; a tighter timetable for the further development of the strategy, prioritising the most urgent measures; the establishment of an independent high level committee or body to monitor progress and to draw public attention where progress is falling short; early effort to quantify the scale of adaptation expenditure likely to be needed in Europe; more intense collaboration at least at OECD level and preferably worldwide; greater effort to engage the public and civil society in developing plans and actions for adaptation.

On 30 November 2009, Water Directors of EU Member States issued a [guidance document on adaptation to climate change in water management](#) (see section on the [Water Framework Directive](#)).

Prior to the White Paper a number of Member States had already adopted National Adaptation Strategies (Denmark, Finland, Germany, France, Hungary, Netherlands, the United Kingdom, Sweden and Spain). Most Member States, however, still have to produce adaptation strategies³.

Related legislation and policy

The impacts of climate change and our response to those impacts (adaptation) may clearly affect a very wide range of policy areas. However, some are particularly worth stressing. The White Paper itself makes strong links to water policies. The Water Framework Directive does not, itself, address climate impacts, although, as indicated above, guidance on adaptation under the Directive has been adopted which explicitly explores the interaction with planning and objectives under the Directive. The Marine Strategy Framework Directive refers (in its recitals) to the need to address climate change in its planning within Marine Strategies. Both of these Directives have planning processes that are based on the concepts of adaptive management (which would include, but is not limited to, climate adaptation). The Floods Directive is explicit in addressing climate change in that flood risk assessment and future planning adapting to risks arising from climate change. The policy on water scarcity and droughts also highlights the need to plan water resource management while taking account of climate adaptation. Therefore, the following policies are relevant:

- Water Framework Directive [2000/60/EC](#).
- Marine Strategy Framework Directive [2008/56/EC](#).
- Floods Directive [2007/60/EC](#).
- Policy on [Water Scarcity and Droughts](#).

Adaptation is also an important area of relevance to biodiversity protection, seeking to understand not only the impacts of climate change, but appropriate management responses for the management of protected areas and of species in the wider countryside. The following legislation is, therefore, of relevance to climate policy:

- Habitats Directive [92/43/EEC](#).
- Birds Directive [79/409/EEC](#).

As noted above, the agriculture sector, in particular, will need to adapt to a changing climate. In relation to environmental policies, support for environmentally beneficial farming and forestry practices will need to take this into account, under the European Agricultural Fund for Rural Development Regulation (EC) No 1698/2005.

References

1 EU Climate Change Adaptation Team (Undated document). EU Climate Change Impacts, Vulnerability and Adaption Clearinghouse Consent Note and Minimum Requirements for Phase 1, European Commission, DG Env. Directorate D – Water, Chemicals & Biotechnology. ENV.D.1 – Water.

2 CEC, 2009. Study undertaken for the Commission: Design of guidelines for the elaboration of Regional Climate Change Adaptations Strategies,
<http://ec.europa.eu/environment/climat/adaptation/pdf/RAS%20Final%20Report.pdf>

3 CEC, living with climate change in Europe, Commission webpage,
http://ec.europa.eu/environment/climat/adaptation/index_en.htm