
Adapting to climate change: what role for the EU?

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BACKGROUND

So far, the discussion on climate change in Europe has focused on mitigation efforts and how to prevent future increases in global temperature by limiting CO₂ emissions. However, even the best mitigation efforts will not stop forest fires or floods, which climate change can cause, and which affect us already today.

More needs to be done on adaptation in Europe in order to reduce the damages caused by extreme weather events such as heat waves, floods and storms. Europe must prepare for changing weather and environmental conditions such as longer warmer periods and sea level rise, and environmental disasters such as forest fires.

This emphasis on adaptation does not mean that Europe should stop its mitigation efforts. Setting up the EU 20-20-20 climate and energy targets has been a starting point and it is now time for the Member States to act. But no matter how successful we are in mitigation, the need for adaptation will remain, given the long time-lag between mitigation measures and their effect on the climate.

Focusing on adaptation is necessary whatever one thinks about the causes of climate change: in the case of natural disasters or weather events, what matters is whether we are prepared for them and can respond and adjust to their consequences. These are events for which Europe can and should prepare itself. In order to protect our ecosystems, citizens and their livelihoods,

we need to find ways to increase their resilience and to reduce their vulnerability to environmental disasters and weather events.

Adaptation can consist of a broad range of measures. These include better preparation for disasters by, for example, organising awareness campaigns and implementing early-warning systems or creating protective infrastructure such as dams and sea walls. It can also require changing practices by, for example, transforming land use and moving homes away from coastlines.

Flooding is an example of an area where actions are already being taken at national, regional and local level, with the EU taking on an informational, financial and regulatory role. The EU has, for example, adopted a Floods Directive, which requires Member States to carry out an assessment to identify the river basins and coastal areas at risk of flooding, by 2011. Flooding provides a good case study about the benefits and challenges of adaptation.

Effective climate policy will need to include both mitigation and adaptation strategies. Development of adaptation strategies does not signal a failure of mitigation efforts. Both are needed so that we can learn to respond effectively to environmental catastrophes, extreme weather events and gradual changes in weather or environment.

STATE OF PLAY

The known-knowns

Extreme weather events, changing weather conditions and environmental disasters are generating, and will continue to generate, environmental, economic and social challenges for Europe.

Although much more scientific data is needed, we can already suggest what some of the short-, medium- and long-term impacts of climate change could be for different European regions and economic sectors. This provides the basis for understanding where adaptation is

needed most urgently and what measures should be taken.

Parts of northern Europe may even benefit from climate change in the short run, experiencing milder winters and benefitting from better crop yields, faster growth of forests and increase in tourism. However, even northern Europe could not escape increased coastal and river flooding. Parts of southern Europe are likely to be hit hard, suffering greatly from extreme temperatures. Negative consequences could include forest fires, droughts, desertification, water scarcity, coastal flooding, increase in diseases and loss of agricultural yields, biodiversity and tourism.

The regions, sectors and people that are most vulnerable to changes in climate are those which are hit by the strongest catastrophes or weather events and which do not have the capacity to protect themselves. Agriculture, forestry, fisheries and tourism are examples of sectors that are most vulnerable to the effects of climate change, such as water shortages, intensive rainfall, high winds and an increase in forest fires. The regions and communities that depend on these economic sectors will feel the effects most heavily and thus need to prepare for these changes.

But these are not the only sectors affected by climate change. Infrastructure damages, for example, melting roads or flood damage in buildings, are costly and can increase difficulties in providing public services such as transport and healthcare. Extreme weather conditions could also put considerable pressure on insurance sectors.

Climate-related health problems, including an increase in diseases such as malaria, could lead to myriad other complications from an increase in mortality to a decrease in labour productivity. During the recent heat waves in Europe, we have seen that the healthcare sector, which already suffers from an over-demand for services, is put under even greater pressure when the elderly seek assistance for heat-related problems.

Many of these impacts will be felt across Europe and will put pressure on EU solidarity. The competition between the EU Member States for financial assistance, medical supplies and natural resources, such as water, could escalate. Migration is also likely to increase both within and from outside EU borders as a consequence of extreme weather events or environmental disasters.

The impacts of climate change are likely to affect the well-being of all Europeans, but so far there is no common understanding about what adaptation measures are needed and the impacts they might have.

It's time to adapt

We need ambitious and creative adaptation strategies. However, EU Member States have differed greatly in their responses, with only ten out of 27 having adopted national adaptation strategies.

The envisaged impacts of climate change should be the starting point for adaptation strategies. The avoidable losses, the necessary measures and the costs of adaptation differ. Different climatic zones of Europe need diverse regional responses, and different economic sectors call for their own solutions.

Early action and adaptation to climate change can bring great benefits and help to prevent significant losses. A study by Swiss Re estimates that, for example, in the city of Hull in the United Kingdom, 65% of the expected losses due to extreme events could be avoided cost-effectively. Measures to be taken could include flood-awareness campaigns, staff training in emergency response, improving sea defences, flood proofing of floors and increasing drainage systems. Early action and adaptation can minimise threats to ecosystems and human health, support economic development and help to adjust our infrastructures to cope with the worst scenarios.

Adaptation can also provide new business opportunities. For example, the building sector would benefit from the demand for houses, sanitation systems and roads, designed and built to withstand the impacts of climate change. On the other hand, adjusting agriculture to environmental challenges would promote new technologies, processes and products and would help to make European agriculture more competitive and sustainable.

An EU adaptation strategy?

So far the EU has paid scant attention to developing policies in the field of climate-change adaptation. It has mainly focused on reducing greenhouse gas emissions, and has been slow in taking action on adaptation measures. However, this is now likely to change.

Climate change has been given more weight with the establishment of the Directorate-General (DG) Climate Action in the European Commission, and the newly-created Commissioner for Climate Action in early 2010. Having a Unit for adaptation is likely to help the European Commission to build up its expertise.

The Europe 2020 Strategy highlights climate change as one of the key areas for action and this will carry weight in the budget negotiations in 2011. The recently-published Budget Review lays the

ground as it notes that the budget for 2014-2020 should reflect EU's key priorities and support, for example, environmental and climate objectives.

The ball on climate-change adaptation has started rolling: the Green Paper in 2007 was followed by the White Paper on 'Adapting to climate change: towards a European framework for action', and three sectoral papers on water, coasts and marine ecology; agricultural; and health issues in 2009. In March 2010 the European Parliament's Committee on the Environment, Public Health and Food Safety published a report on the White Paper.

The White Paper promised to form the basis for a future adaptation strategy, which is expected to be published by 2013. It suggested 33 non-legislative actions, of which 27 are ongoing or have been completed. The actions aim to strengthen the knowledge base on adaptation, to assist the

integration of adaptation into EU policies, to help to finance adaptation and to increase international co-operation. The Commission has focused on what it considers to be achievable, and has put emphasis on sharing information and trying to integrate adaptation into other policy areas, such as agriculture and regional policy.

But a number of questions remain to be answered. Into which policies should adaptation be mainstreamed? What policy instruments will be needed to promote adaptation policy? What level of legislation will be needed? How could impact assessments be improved so that they would take the economic, social and environmental impacts of adaptation better into account? How can national and regional adaptation policies be compared, as the costs, benefits and measures are local? What kind of a role should and could the EU play in adaptation?

PROSPECTS

A role for the EU

Although most action on climate-change adaptation will need to be taken at national, regional or local level, there are compelling reasons why the EU should also play a role.

First of all, the EU can do more to gather and share knowledge. For example, the European Clearing House on Climate Change, a web-based information system, which is expected to be operational by 2012, needs to become the key source of best practices and easily applicable cost-effective solutions for European decision-makers. Allocating resources from the 2007-2013 Seventh EU Framework Programme for transnational research and from structural funds for its operation at the regional level could provide it with a stronger foundation.

Secondly, the expected impacts such as floods can have cross-border consequences for the natural environment and for people's lives and livelihoods. Adaptation measures such as dams can be more cost-effective if Member States co-operate in their construction, and the EU should play a role in enhancing this co-operation.

Thirdly, the EU already has competence in climate-change mitigation policies and in a number of other policies that are affected by climate change – and adaptation should be integrated into these as well. This should start by finding and understanding the interlinkages between mitigation and adaptation measures, and moulding these strategies together so they can deliver greater benefits. Achieving 20% energy savings by 2020 is a perfect example of how

jointly-planned mitigation and adaptation strategies can bring significant synergies. For example, by improving energy efficiency in both old and new buildings, Europe can help to reduce greenhouse gas emissions, adapt infrastructure to the impacts of climate change and increase the economic and social well-being of Europeans by creating new jobs and increasing social benefits for the poorer households.

In addition, adaptation should be consistently taken into account across EU policies that are affected by climate change. For example, agriculture and public health need to be checked against adaptation criteria. The Commission has started to revise relevant sectoral policies in order to determine the potential impacts of climate change, the costs of both action and inaction in these fields, and how policies could be amended to facilitate adaptation. It is important that the Communication on mainstreaming and integrating adaptation into other EU policy areas, which is expected by the end of 2011, provides a comprehensive basis for implementing and enforcing adaptation.

Adaptation should also be reflected in the next EU multi-annual budget. Future payments across policy areas should support both mitigation and adaptation. Whatever we build or create today needs to withstand climate changes over the next 50 years. The budget should allow for the EU to provide more financial assistance to the poor and vulnerable regions, which do not yet have the capabilities to make adaptation plans or to adapt to potential impacts of climate change.

Fourthly, the key to building a comprehensive climate strategy is to base it on comprehensive impact assessments. For example, the EU's Environmental Impact

Assessment (EIA) and Strategic Environmental Assessment (SEA) aim to ensure that plans and projects with possible impacts on the environment are assessed before they are approved. However, much more emphasis should be given to economic and social impacts of climate change and associated policy decisions for both mitigation and adaptation measures.

For example, elderly, disabled, or the poorest citizens stand to suffer most as they are more vulnerable to extreme temperatures. The less wealthy are also more likely to lack insurance to protect them against environmental catastrophes. More discussion is needed on how climate change would affect different groups of people in Europe and adaptation measures should also reach the poorest and most vulnerable people. Adaptation should not be only about big infrastructure projects and providing solutions for the wealthy.

The EU needs to consider the impacts of the adaptation policies and measures in detail. Some adaptation measures such as air conditioning, artificial snow and construction of flood defenses can weaken mitigation efforts by increasing greenhouse gas emissions. But they can also have social and economic impacts, for example, on employment, new businesses, poverty, inequalities and health. These need to be considered thoroughly before deciding on action.

An important starting point is to analyse the costs of adaptation for different regions and economic sectors. We need evidence and socio-economic modeling in order to manage the impacts of climate change and to propose policies and actions. The economic and social arguments for mitigation and adaptation measures need to be brought into the political debate.

Finally, the EU's role in providing post-disaster financial assistance and its capacity to respond to environmental catastrophes should be strengthened. However, just providing more money for the EU Solidarity Fund is not the solution, nor the right signal. Rather than offering unconditional post-disaster assistance, the Fund should encourage EU Member States to invest in cost-effective risk-reduction measures. This could be done by reforming the Fund into a reinsurance mechanism for national and regional insurance pools. Solidarity

would be met by offering capital to poorer countries at lower or no cost.

Building a strengthened framework for solidarity and sharing the risk of natural disasters should start with EU Member States adopting national adaptation strategies and be followed by external evaluation and benchmarking at the EU-level.

In search of capacity and willingness to adapt

To be successful, adaptation strategies require socio-economic and institutional capacity to adapt – and willingness to take the required actions. The EU can provide information, guidelines and an institutional framework for adaptation, but it is up to the Member States and the regions to show their commitment and to act.

A key challenge for adaptation is if Member States continue to consider the costs and benefits of adaptation based on purely local criteria. They will need to take wider considerations into account as the impacts of climate change also affect regions, economic sectors and projects right across the EU – and will lead to increasing requests for support from the EU budget.

Adaptation policies and measures cannot wait. Whether or not the cause of man-made climate change, environmental catastrophes, extreme weather events and gradual changes in weather or environment will continue to affect Europe. Preventing and adjusting to these changes would benefit Europe's environment, help to minimise losses and increase economic and social well-being. But do Member States recognise the scale of the challenge? And will the EU be given a meaningful role in the adaptation efforts in Europe? Only time will tell.



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She leads the work on the just-launched Task Force which will examine the EU's role in adaptation, study the importance and impacts of adaptation in various sectors, consider the benefits and opportunities associated with adaptation and make policy recommendations for future EU action.

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