

**European Climate Change Programme**

**Working Group II  
Impacts and Adaptation**

**Insurance  
Sectoral Report**



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## **The EU's Adaptation Programme**

Adaptation is a new policy area for the European climate change policy. The Impacts and Adaptation Workgroup has been set up as part of European Climate Change Programme (ECCP II). The main objective of the workgroup is to explore options to improve Europe's resilience to Climate Change Impacts, to encourage the integration of climate change adaptation into other policy areas at the European, national and regional level and to define the role of EU-wide policies complementing action by Member States.

The aim of this initial programme of work is to identify good practice in the development of adaptation policy and foster learning from different sectoral experiences and explore a possible EU role in adaptation policies.

The Commission has led a series of 10 sectoral meetings looking at adaptation issues for different sectors. One of these meetings looked at the impacts on the role of the insurance industry in particular. This report summarises the state of play in the insurance industry in relation to adaptation to climate change on the basis of the information gathered at the stakeholder meeting on June 13, 2006.

### **Key impacts of climate change on the insurance industry**

The impacts from climate change on the insurance industry are most likely to be felt via increase in damage costs through changes in the frequency and intensity of extreme weather events, such as floods, storms and droughts. Increasing damage costs as reported by re-insurers in recent years are even considered as one indicator for observed climate change in this regard. However, increases in exposure also play an important role.

Perils for which there is strong evidence for a climate change signal are Atlantic hurricanes and European heat waves (and wildfire). Perils for which there is likely to be a climate change signal are extreme European summer floods (100 year return period) and flash flooding. Perils for which there is no evidence (as yet) of any change are European winter storms and hailstorms.

Climate change may affect not only property insurance, but also other categories, such as health/life, agricultural insurance (animals, crops), construction, professional risks (liability for inadequate advice or design), business interruption, transport (marine and aviation), and also motor insurance.

Furthermore, there are secondary economic impacts in case of major damaging events. The global interconnection of the sector (through global re-insurers and capital markets) can trigger impacts on the finance sector and/or higher cost of premiums even when extreme events occur in other continents.

It is anticipated that in risky locations eventually mortgage providers and insurers could be dictating construction standards, if properties were uninsurable and unmortgageable, unless climate change impacts are properly considered and addressed.

### **Existing/relevant policies at the EU level**

The EU has installed a so-called Solidarity Fund<sup>1</sup> after the catastrophic flooding in central Europe and France in 2002. The fund compensates for economic losses due to major natural disaster, and has an annual budget of one billion euro.

Other important regulations include:

- Insurance Mediation Directive,
- European Reinsurance Directive,
- Solvency II,
- Financial Services Action Plan.

### **Examples of existing initiatives at Member State level**

Weather and climate change impacts, as well as exposure of assets and infrastructure are highly variable over Europe.

Also, the property insurance markets, and the involvement of the government sector in covering losses from extreme weather vary considerably.

For instance, all weather related hazard risks are taken up by the private sector in the UK. In some EU countries, on the other hand, different government operated schemes, often on the basis of some sort of 'solidarity', can be distinguished; either financed from tax money or through a levy on private insurance premiums.

In France the government provided data to the industry for building a common website open to all, including companies, citizens, and communities. This is an example of a successful public-private partnership. Other successful examples include constructions in Spain (natural hazards) and The Netherlands (crop insurance for losses from extreme precipitation). In the UK, the private insurance sector has lobbied the government to increase flood protection along the river Thames.

The private insurance sector in some Member State countries is actively involved in the subject of climate change through:

- participation in and initiation of research,
- being active in a number of international lobbying and research organisations,
- private-public cooperation, for example lobbying for improved flood defences,
- discussing with local authorities issues of risk management and land-use planning.

There is thus not one single solution to the problem for the impacts of climate change on weather related losses.

### **Gaps identified**

The different manners by which catastrophe losses are covered also result from different historic evolutions of politics, institutions and land-use management. However, the different ways of handling catastrophe losses in different European countries is an important barrier for transmitting price signals, and signals toward citizens for reducing risks.

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<sup>1</sup> <http://europa.eu/scadplus/leg/en/lvb/g24217.htm>

There is currently no harmonised framework for reinsurance supervision in the EU that could cover specific climate impact adaptation needs (potential gap in the financial services regulation).

There is no comprehensive overview available on how climate impacts are being dealt with in the various Member States insurance sectors – with potential scope for the need to harmonise the European market.

It is debatable whether government compensation of losses that would be privately insurable is consistent with the state aid rules and whether this can or should be generally regarded as inefficient. This also holds for the EU Solidarity Fund, which may give negative incentives to risk minimisation and adaptive investments. Government operated compensation often requires the government to declare a particular event a disaster, which may lead to a rather selectively operated schemes. Currently no comprehensive reporting and monitoring of these activities exist in the EU. However, there are a number of reasons, often relating to equity and solidarity, for these systems to exist today.

In order to make insurance cover for certain types of hazards (in particular flooding) possible, public-private partnerships are needed in many locations, successful examples exist (see above), and these could be expanded.

The absence of private insurance, for instance against flood losses, prohibits the possibility to transmit signals of the cost of living in at-risk areas to citizens. Economic incentives for adaptation from insurance can be very powerful. Insurances secure financial stability, but they may also give incentives for risk reduction activities. However, insurers may be reluctant to monitor whether risk reduction measures have actually been taken.

## **Opportunities for the EU level**

### *Information and knowledge*

Reporting and monitoring of government compensation schemes of losses and their effectiveness may help to identify best practice in this area. One aspect of best practice could be that public compensation is conditional on "resilient reinstatement", i.e. relocation to a safer site, or reconstruction to higher standards that will reduce future losses.

An overview of 'good practices' in Europe of risk sharing arrangements for weather related risks between government and private sector could be provided.

- There is a high cost for retrieving basic (climate) data, which could be improved,
- indirect effects from natural disasters can be much larger than the direct economic losses. This is partly depending on the definition of impacts. Data on indirect impacts, however, are rarely assessed and are difficult to collect,
- there is a need to collect data on the benefits of disaster prevention,
- practical science is needed - projections for 2080 are too far away. Annual changes should be considered,
- a more widespread use of Geographical Information Systems (GIS) to assess risks could be supported,
- implementation of early warning systems could be promoted.

### *Policy planning process*

More pro-active risk management would have a number of advantages over traditional post-disaster assistance. Further harmonised climate impact adaptation requirements may trigger amendments of existing legal instrument dealing with reinsurances or other financial services, but would need further exploration.

For instance a proper and EU-wide harmonised risk management of climate change would allow the insurance sector to continue to provide an effective risk-transfer mechanism for natural catastrophes in Europe.

- There is a need to have a calculated annual commitment for disaster risk reduction, instead of unpredictable (ad hoc) support for post-disaster recovery,
- it would leverage limited funds by sharing responsibility,
- it would encourage disaster prevention, and would lower the need for financial support and recovery over the long term,
- it would focus attention on the risks before the disaster strikes, and it would encourage more sustainable land-use planning,
- it would provide a secure planning horizon for countries, and encourage investments,
- it would support social solidarity.

Flood control programs such as the EU Flood Initiative should be promoted.

Building codes, for instance wind resistant construction techniques, should be improved and enforced.

The assessment and response to climatic risks like sea-level rise, river flood and drought should be integrated into procedures for land use planning.

### *Economic stimuli*

There is a need to better communicate risks. This could be very effectively achieved through the use of economic incentives, in particular through adequately priced insurance premiums.

Financial support for disaster losses through the EU solidarity/catastrophe fund is a concern for the European insurance industry as such compensation is counterproductive for private insurance and can also be a disincentive to minimise risks. Therefore compensation should be provided only for uninsurable risks (i.e. when cover does not exist on a market) and funding should furthermore be mandatorily linked to reconstruction that reduces the future risk, using the fund to finance relocation, or upgrading from previous standards. Government support for disaster losses may be counterproductive in locations where the risks are insurable.

The Solidarity Fund could be reoriented towards supporting uninsurable risks, and risk reduction. This might be less effective than a pure market-based mechanism, but would improve the present situation in many countries.

Relief however will remain an important part of the Fund, as the EC needs to step in after a disaster and provide relief and gain visibility. There is a possibility for the development cooperation (donor) community to help establish such a reinsured pool in developing countries as well. Sponsor schemes are needed for the disadvantaged, for instance through the UNFCCC and EU. The rural development funds of the EU

could be used to subsidise insurance premiums or to set-up insurance for catastrophes.

The regulation of alternative risk transfer (ART) (e.g. weather derivatives, catastrophe bonds) also needs to be reviewed. ART in Europe, however, remains quite limited today.

A new accounting regulation of the EU may make it impossible to have multiyear contracts or catastrophe reserves for the insurance industry. This will make it very difficult to have reserves available for catastrophe payouts. It is important that accounting regulations do not prohibit insurance companies from having catastrophe reserves for these non-annual events. Otherwise, also smaller risks have to be transferred or even avoided by insurers, likely leading to decreased competition and increased premiums for the consumer. Multiyear contracts would be much more useful, because catastrophes are non-annual events. Mutuals can only build up reserves through raising premiums. This is a problem for the consumer, but not for companies, as they can increase the premiums.

### **Actions relevant at national/regional/local level**

Partnerships:

- insurance or government compensation for particular hazards (in particular flooding) may become more efficient when organised as a combination of private and government efforts. Partnerships appear to be crucial for creating possibilities to insure risks that are currently not covered.

Create incentives for risk reduction at the local level:

- there is a need to educate people about risks. However, there is also a need to train local authorities on risks. Signals are needed for better land-use planning. Giving incentives to continue building houses in certain areas is mal-adaptive,
- in order to give economic incentives for risk reduction, rates should be differentiated according to risk and people should pay accordingly,
- when risks become known, people may move out of risky areas. However, the system cannot be changed suddenly, so transitional arrangements will be necessary. The question remains also how feasible it is, for instance in view of property rights, to move people out of risky areas. A stronger role for the central government, that can act in favour of general interests, would be needed in order to more appropriately regulate land-use and building codes,
- local authorities should take account of risks before supporting development. There is a big problem however as the central government does not have responsibility for land-use planning, which is decided on by local government. In the UK, for instance, local authorities sometimes grant planning consent against the advice of the Environment Agency with regards to flood risk,
- health insurance could potentially be affected by climate change, but this is generally a public sector responsibility.

Data and modelling:

- catastrophe modelling can provide insights in risks with low return periods,
- catastrophe modelling development is still slow in Europe and needs improvement,
- basic data on climatic risks is expensive or unavailable,
- the private sector and public sector need to work together in order to develop better access to GIS data, and climate projections for the next years, decades and up to 2050.