



EU and the problems relating to flooding - summary of documents

Our survey of EU documents show that there are numerous, and very extensive, documents related to problems with flooding.

Below is a summary of the documents we believe can have the greatest relevance for the European project FAIR.

1. The EU Floods Directive

Directive 2007/60/EC on the assessment and management of flood risks entered into force on 26 November 2007.

This Directive now requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. With this Directive also reinforces the rights of the public to access this information and to have a say in the planning process.

The Directive was proposed by the European Commission on 18/01/2006, and was finally published in the Official Journal on 6 November 2007. Its aim is to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity.

The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU. The Directive shall be carried out in coordination with the Water Framework Directive, notably by flood risk management plans and river basin management plans being coordinated, and through coordination of the public participation procedures in the preparation of these plans. All assessments, maps and plans prepared shall be made available to the public.

Member States shall furthermore coordinate their flood risk management practices in shared river basins, including with third countries, and shall in solidarity not undertake measures that would increase the flood risk in neighbouring countries.

Member States shall take into consideration long term developments, including climate change, as well as sustainable land use practices in the flood risk management cycle addressed in this Directive.

The legal instrument is proposed to be ambitious in its scope but not prescriptive in its tools. It intends to translate the approach outlined in the Communication on Flood risk management of July 2004 and the discussions during the stakeholder consultation process into operational actions. It includes the following proposed obligations for the Member States:

1. Preliminary flood risk assessment : it is essential that action will only be taken in areas where potential significant flood risks exist or are reasonably foreseeable in the future. If in a particular river basin, sub-basin or stretch of coastline no potential significant flood risk exists or is reasonably foreseeable in the future, Member States would be able to identify them in the preliminary flood risk assessment. For these river basins and/or sub-basins no further action would have to be taken.

2. Flood risk maps : taking into account the possible exceptions provided for in the preliminary flood risk assessment, flood risks would be mapped for the river basins and sub-basins with significant potential risk of flooding, in order to:

- increase public awareness;
- support the process of prioritising, justifying and targeting investments and developing sustainable policies and strategies;
- support flood risk management plans, spatial planning and emergency plans.

Where maps conforming to the requirements of the directive already exist for river basin and stretches of coast line, Member States may use these existing maps for the purposes of satisfying the directive.

3. Flood risk management plans: taking into account the possible exceptions provided for in the preliminary flood risk assessment, flood risk management plans would be developed and implemented at river basin/sub-basin level to reduce and manage the flood risk. These plans would include the analysis and assessment of flood risk, the definition of the level of protection, and identification and implementation of sustainable measures applying the principle of solidarity: not passing on problems to upstream or downstream regions and preferably contributing to reduction of flood risks in upstream and downstream regions.

To take account of the diversity in flood events and impacts throughout Europe , the following issues would *not* be prescribed in a legal instrument, but would be left to the Member States:

- detailed objectives and deadlines for managing flood risks, e.g. setting a Community wide common level of protection which has to be achieved everywhere and within a certain time frame;
- accompanying measures.

Clearly the appropriate level of protection will vary from river basin to river basin and even within each river basin. For example, high levels of protection might be required in the vicinity of major cities, or near sites of particular cultural or historic significance. Within each river basin the Member States will determine the level of protection most appropriate for each locality.

As flood risks may change over time due to climate change and changes in land use, it would be important to regularly review and where necessary update the three elements of the legal instrument.

For more information: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060>

2. The Marine Directive

The Marine Directive aims to achieve Good Environmental Status (GES) of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. It is the first EU legislative instrument related to the protection of marine biodiversity, as it contains the explicit regulatory objective that "biodiversity is maintained by 2020", as the cornerstone for achieving GES.

The Directive enshrines in a legislative framework the ecosystem approach to the management of human activities having an impact on the marine environment, integrating the concepts of environmental protection and sustainable use.

In order to achieve its goal, the Directive establishes European marine regions and sub-regions on the basis of geographical and environmental criteria. The Directive lists four European marine regions – the Baltic Sea, the North-east Atlantic Ocean, the Mediterranean Sea and the Black Sea – located within the geographical boundaries of the existing Regional Sea Conventions. Cooperation between the Member States of one marine region and with neighbouring countries which share the same marine waters, is already taking place through these Regional Sea Conventions.

In order to achieve GES by 2020, each Member State is required to develop a strategy for its marine waters (or Marine Strategy). In addition, because the Directive follows an adaptive management approach, the Marine Strategies must be kept up-to-date and reviewed every 6 years.

For more information: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

3. White Paper on adapting to climate change

In April 2009 the European Commission presented a White Paper on adapting to climate change which presents the framework for adaptation measures and policies to reduce the European Union's vulnerability to the impacts of climate change.

The White Paper highlights the need "to promote strategies which increase the resilience to climate change of health, property and the productive functions of land, inter alia by improving the management of water resources and ecosystems".

For more information: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52009DC0147>

4. Policy paper on Water, Coasts and Marine issues

The Policy paper on Water, Coasts and Marine issues provide an in-depth analysis of the role of water and ecosystems in the transmission of potential climate change impacts to the economy and society.

For more information: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52009SC0386>

5. Flood risk management according to the EU

According to the EU flood risk management aims to reduce the likelihood and/or the impact of floods.

Experience has shown that the most effective approach is through the development of flood risk management programmes incorporating the following elements:

- **Prevention:** preventing damage caused by floods by avoiding construction of houses and industries in present and future flood-prone areas; by adapting future developments to the risk of flooding; and by promoting appropriate land-use, agricultural and forestry practices;

- *Protection*: taking measures, both structural and non-structural, to reduce the likelihood of floods and/or the impact of floods in a specific location;
- *Preparedness*: informing the population about flood risks and what to do in the event of a flood;
- *Emergency response*: developing emergency response plans in the case of a flood;
- *Recovery and lessons learned*: returning to normal conditions as soon as possible and mitigating both the social and economic impacts on the affected population.

For more information:

http://ec.europa.eu/environment/water/flood_risk/key_docs.htm#communication

6. How the EU works with the flooding problem

The question is organisationally under the DG Environment.

We can conclude that the flooding issue mainly seems to be the responsibility of the national and regional authorities and decision-making bodies than for the EU. The EU is working on the issue by developing policy documents, white papers and financing of projects.

7. EU funding possibilities for flood related projects

- Structural and cohesion funds : Making the Structural & Cohesion Funds Water Positive, a document by the European Network of Environmental authorities (ENEA), February 2006.
- Common Agricultural Policy includes support for agri-environmental measures as rural development projects, which can contribute to flood related projects.
- A number of pre-accession funds such as SAPARD can provide funding for flood-related projects.
- European Union Solidarity Fund can respond in a rapid, efficient and flexible manner to come to the aid of any Member State in the event of a major natural disaster.
- The LIFE programme can fund implementation projects.

8. Flooding in Europe: health risks

This is not the subject for the FAIR-project, but EU puts a special focus on flooding and health risks.

Flooding is one of the most widespread of climatic hazards and poses multiple risks to human health, yet there has been little systematic research work on health outcomes and the means by which vulnerable populations and health systems respond to those risks. Given the prospect that flood hazards may increase as a result of climate change, it is timely to make a strategic assessment of the existing knowledge base on health and flood risk (Tyndall Centre for Climate Change Research, 2004).

Flood events can take many forms, including slow-onset riverine floods, rapid-onset (flash) floods, accumulation of rainwater in poorly-drained environments, and coastal floods caused by tidal and wave extremes. Both inland and coastal flooding may be associated with windstorm events. Floods also vary greatly in scale and impact, according to depth, velocity of flow, area covered, content, speed of onset, duration and seasonality.

A flood event that has severe consequences (variously defined) may be termed a flood disaster, and the human impact of flood disasters is concentrated disproportionately in developing countries. Though major limitations remain in our ability to make robust projections of future rates of climate change and its effects, increasing predictive evidence of heightened global risk of inland and coastal flooding is emerging.

Over the next 100 years, flooding is likely to become more common or more intense in many areas, especially in low-lying coastal sites and in areas that currently experience high rainfall. Marginal changes in the geographical distribution of flooding are also possible. However, it is not feasible to predict the precise locations at increased risk of flooding due to climate change: part of the problem is that flood risk dynamics have multiple social, technical and environmental drivers.

Flood events are the most frequently occurring natural disasters worldwide, and may increase in the future as a result of climate change. A limited number of short term epidemiological studies have been conducted to assess the health impacts of flooding, but studies of long-term health and economic impacts are lacking.

Limited data on flood events shows that the greatest "burden of mortality" is from drowning, heart attacks, hypothermia, trauma and vehicle-related accidents. The speed of onset of floodwaters is a determining factor in the number of immediate flood-related deaths.

For more information:

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=2947>