



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

I **EU Directive** **on the assessment and management of flood risks**

II **EU White Paper** **Adapting to Climate Change: Towards a European Framework for Action**

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I. EU - Directive on Floods

DIRECTIVE 2007/60/EC: of 23 October 2007 on the assessment and management of flood risks

Purpose:

- to establish a framework for assessment and management of flood risks,
- aiming at reduction of adverse consequences for human health, environment, cultural heritage and economic activity associated with floods in the Community.

Transposition in National Law (including regulations and administrative provisions necessary to comply with this directive):

- before 26 November 2009 (Article 17)



I. EU - Directive on Floods

DEFINITIONS shall apply (Article 2)

"flood,,

...means the temporary covering by water of land not normally covered by water (including floods from rivers, mountain torrents, Mediterranean ephemeral water courses, floods from the sea in coastal areas, (particular cases like pluvial floods, floods caused by ground water, reservoir dam breaks are also included; floods from sewerage systems are excluded)

"flood risk,,

...combination of probability of a flood event and of the potential adverse consequences for human health, environment, cultural heritage and economic activity associated with a flood event.



I. EU - Directive on Floods

PRELIMINARY FLOOD RISK ASSESSEMENT

by 22 December 2011 (Article 4)

...for **each river basin** district, or unit of management or the portion of an international river basin district lying within their territory

...**based on available** or readily derivable information, in particular impacts of climate change on the occurrence of floods

...a **preliminary flood risk assessment** shall be undertaken to provide an **assessment of potential risks** which shall include at least the following:

MAPS of the river basin district at the appropriate scale (borders of river basins, sub-basins, topography, land use)



I. EU - Directive on Floods

DESCRIPTION of floods which

- ...have occurred in the past,
- ...had significant adverse impacts on human health, environment, cultural heritage, economic activity and
- ...for which the likelihood of similar future events is still relevant (including their flood extent and conveyance routes/assessment of adverse impacts);

DESCRIPTION of significant floods in the past, where significant adverse consequences of similar future events might be envisaged; and depending on specific needs of MS, it **shall include**:

...**assessment of potential adverse consequences of future floods** taking into account as far as possible other issues (topography, watercourses and their hydrological/geo-morphological characteristics, floodplains as natural retention areas, effectiveness of existing man-made flood defence infrastructures, populated areas, areas of economic activity, long-term developments (including impacts of climate change on the occurrence of floods)).



I. EU - Directive on Floods

FLOOD HAZARD MAPS AND FLOOD RISK MAPS

by 22 December 2013 (Article 6)

MS shall prepare **flood hazard maps** and **flood risk maps**, at the most appropriate scale

Maps shall cover geographical areas which could be flooded according to the following scenarios:

- (a) floods with a low probability, or extreme event scenarios;
- (b) floods with a medium probability (likely return period ≥ 100 years);
- (c) floods with a high probability, where appropriate.

For **each scenario** the following elements shall be shown:

- (a) flood extent;
- (b) water depths or water level, as appropriate;
- (c) where appropriate, the flow velocity or the relevant water flow.



I. EU - Directive on Floods

FLOOD RISK MANAGEMENT PLANS

by 22 December 2015 (Article 7)

...On the basis of maps (Article 6), MS establish **flood risk management plans** at level of river basin district, or unit of management

...MS establish appropriate objectives for the **management of flood risks** focusing on reduction of potential adverse consequences of flooding for human health, environment, cultural heritage and economic activity, and on non-structural initiatives and/or on reduction of the likelihood of flooding.

...in the interests of solidarity, flood risk management plans established in one Member State shall not include measures which, by their extent and impact, significantly increase flood risks upstream or downstream of other countries in the same river basin or sub-basin, unless these measures have been coordinated and an agreed solution has been found among the Member States.



I. EU - Directive on Floods

...**Flood risk management plans** shall take into account **relevant aspects** (costs, benefits, flood extent, flood conveyance routes, areas which have potential to retain flood water-natural floodplains, environmental objectives, soil and water management, spatial planning, land use, nature conservation, navigation and port infrastructure).

...**Flood risk management** plans shall address **all aspects of flood risk management** focusing on prevention, protection, preparedness, including flood forecasts and early warning systems and taking into account the characteristics of the particular river basin or sub-basin.

...**Flood risk management plans** may **also include** the promotion of sustainable land use practices, improvement of water retention as well as the controlled flooding of certain areas in the case of a flood event.



I. EU - Directive on Floods

WG on Floods (2007) within the Common Implementation Steering Process (CIS-Process) of the EU-Water Framework Directive (Directive 2000/60/EC):

- ...Coordination of early activities, discussion process and information/knowledge exchange between MS within the EU
- ...Platform for coordination with other EU-Directives (e.g. Agriculture, Hydromorphology, Research, Climate Change, etc.)
- ...Members: 27 MS, NGO's, International River Commissions
- ...2 Meetings a year



I. EU - Directive on Floods

Organisation of workshops:

„Land Use Planning“ (Austria/Slovenia) – April 2008

„Flood Mapping“ (Ireland) - September 2008

„Implementation of FD – Preliminary Flood Risk Assessment“ (CZ)
25-26 May 2009

„Adaptation to Climate Change“ (Sweden)
8-10 September 2009

„Flood Risk Management Plans“ (Netherlands)
1. Term 2010



II. EU - White Paper

EU takes leadership in addressing climate change mitigation (baseline: maximum increase of global average temperature of 2 degrees C above pre-industrial levels)

Adaptation to climate change impacts is needed

Impacts are often uncertain and different scenarios exist

Impacts differ per region and per sector/social group

Early action will bring economic, environmental and social benefits

Action at EU level is needed to guarantee cohesion, to address transboundary impacts and to adjust existing EU policies



II. EU - White Paper

EU + EXTERNAL

UN
Framework Conv.on
Climate Change
Article 4

Communications
Disaster
Prevention and
Reduction

Green Paper
Adaptation
June 2007

**ADAPTATION
FRAMEWORK**

White Paper
Adaptation
April 2009

WATER- EU

Communication
Water Scarcity & Droughts

Water Framework
Directive

Floods Directive



II. EU - White Paper

Scope

- ...is a follow-up of the Green Paper COM(2007)354
(Adapting to climate change in Europe – options for EU action)
- ...is accompanied by an Impact Assessment
- ...focuses on added value of action at EU level, **therefore complementing national and regional adaptation strategies**
- ...establishes a cross-cutting policy framework
- ...has a dual nature:
 - To set up a conceptual framework following principles and a phased approach, allowing for a gradual uptake of actions depending on severity of impacts, uncertainties and decision-making cycles
 - To propose concrete actions can already be undertaken
 -
- ... to strengthen international cooperation in the field of adaptation (EU-External relations and climate negotiations).



II. EU - White Paper

Framework for action focusing on four key pillars: (phase 1 - 2009-2012)

Building a stronger knowledge base

- ...Information availability still differs considerably across regions,
- ...European-wide monitoring programmes and spatially detailed information including climate change impact scenarios are needed
- ...better understanding of socio-economic aspects, costs and benefits of different adaptation options and information on good practices are also required.

Taking climate change impacts into consideration in key EU policies

- ...a number of sectors with strong EU policy involvement, where climate risk and adaptation measures will need to be considered, in order to reduce, in the long-term the vulnerability of sectors such as
 - agriculture and forests,
 - bio-diversity and protection of ecosystems (including water)
 - fisheries,
 - infrastructure (energy and transport),
 - water and health.



II. EU - White Paper

Financing – combining different policy measures to the best effect

- ...financial constraints as one of the main barriers to adaptation
- ...Climate change is one of the priorities for the EU's current multiannual financial framework (2007-2013)
- ...Consideration should also be given to the role of specialised Market Based Instruments (Guidance, Public Private Partnership).

Supporting wider international efforts on adaptation

- ...urgent need to improve resilience and capacity to adapt to adverse effects.
- ...EU external cooperation should make a significant contribution to promoting adaptation in partner countries; particularly neighbouring countries
- ...Bilateral and regional financial assistance programmes will aim to integrate adaptation considerations into all relevant sectors.



leading to elaboration of a comprehensive adaptation strategy for the EU - implementing during phase 2 commencing in 2012.



II. EU - White Paper

Focus on Water

Water is considered a cross-cutting issue

EU water legislation able to cope with adaptation:

- Water Framework Directive
- Floods Directive
- Marine Strategy Directive

Water scarcity and droughts: Communications 2007 and 2008

Stronger and better integration of water aspects is needed

- EU Common Agriculture Policy
- Energy policy
- Transport, tourism, ...
- External dimension



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Thank you for your attention!

More information can be found at:

European Flood Directive 2007/60/EC

http://ec.europa.eu/environment/water/flood_risk/index.htm

European White Paper

http://ec.europa.eu/environment/climat/adaptation/index_en.htm

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