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Floods Directive

Policy Review



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 642317.

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With thanks to:

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Project coordination and editing provided by Ecologic Institute.

Acknowledgments & Disclaimer

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 642317.

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Floods Directive

Policy Review
Floods Directive
Name/Type of the Legal Act or Policy
<p>FD, Floods Directive, Directive 2007/60/EC on the assessment and management of flood risks</p> <p>No subsequent legal acts could be identified. Those which preceded the directive include the following communication from 2004; Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on Flood risk management: Flood prevention, protection and mitigation. COM(2004)472 final.</p>
Entry into force
November/2007
Departments/Units in charge
<p>DG Environment</p> <p><i>DG ENV, Dir. C Quality of Life, Water & Air, 1. Water</i></p> <p><i>KAVVADAS I.: Policy Officer – Water Framework Directive, Floods Directive & water policy</i></p>
Common Implementation strategy (CIS processes)
<p>FDRDG – Floods Directive Reporting Drafting Group: set up in Oct. 2008 with the task of developing reporting sheets and relevant schemas</p> <p>WGF – Floods Working Group: “As part of the Common Implementation Strategy a Working Group on Floods has been set up to on one hand support the implementation of the Floods Directive, and on the other hand provide a platform for information exchange on flood risk management.” Following this information exchange on current practices, amongst others the following documents have been developed by member states and stakeholders taking part in the working group: “A CIS Guidance document N°24 entitled "River basin management in a changing climate" (2009), includes a chapter on how to take into account climate change throughout the different stages of implementation of the Floods Directive; A Resource document " Floods Working Group (CIS) Resource document Flood Risk Management, Economics and Decision Making Support" was agreed by WG F in October 2012. A number of WGF Thematic workshops on different themes related to the implementation of the Floods Directive have been organised by the WGF and its members. Examples of themes addressed are Flash Flood and pluvial flood management, the Catchment approach to flood management, Flood Risk Management plans, Land use, Floods and economics, and finally Stakeholder involvement in flood risk management. For more information see the floods Risk management library on CIRCABC.” DG Environment developed in March 2011 an information</p>

package (including a note) on “Towards Better Environmental Options in Flood Risk Management” which supports the use of natural water retention measures in flood risk management.

Administrative body handling implementation in MS

“The Floods Directive indicates that Member States may make use of the administrative arrangements made under Art. 3 of the Water Framework Directive. However, different competent authorities may be appointed by Member States for the Floods Directive.”

All reported competent authorities can be found in the EIONET Central Data Repository. In Germany, the competent authorities for implementing the FD are the ministries of environment at the Länder level. In France, management takes place through the water agencies at the level of river basin districts. In Ireland, the Commissioners of Public Works are the appointed competent authority. The Office of Public Works is an agency of Government within the Department of Finance group of services. In Portugal, the Portuguese Environment Agency is the appointed competent authority for the FD. In addition, the Regional Secretariat for Agriculture and Environment is responsible for the FD in the Azores, and the Regional Directorate of Environment for the FD in Madeira.

Main Objective

“The purpose of this Directive is to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community.” (Art. 1, FD)

Principles included in the legal text

Solidarity principle: “The solidarity principle is very important in the context of flood risk management. In the light of it Member States should be encouraged to seek a fair sharing of responsibilities, when measures are jointly decided for the common benefit, as regards flood risk management along water courses.” (Preamble FD)

The preamble of the directive refers to international principles of flood risk management, indicating that effective flood prevention and mitigation requires transboundary cooperation. (Preamble FD)

“This Directive respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union. In particular, it seeks to promote the integration into Community policies of a high level of environmental protection in accordance with the principle of sustainable development as laid down in Art. 37 of the Charter of Fundamental Rights of the European Union.” (Preamble FD)

“Since the objective of this Directive, namely the establishment of a framework for measures to reduce the risks of flood damage, cannot be sufficiently achieved by the Member States and can by reason of scale and effects of actions be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Art. 5 of the Treaty. In accordance with the principle of proportionality, as set out in that

Article, this Directive does not go beyond what is necessary in order to achieve that objective.” (Preamble FD)

Other objectives/Key concepts/key elements of the legislation

“Flood risk management plans should focus on prevention, protection and preparedness. With a view to giving rivers more space, they should consider where possible the maintenance and/or restoration of floodplains, as well as measures to prevent and reduce damage to human health, the environment, cultural heritage and economic activity.” (Preamble FD)

“Member States should base their assessments, maps and plans on appropriate ‘best practice’ and ‘best available technologies’ not entailing excessive costs in the field of flood risk management.” (Preamble FD)

“Considerable flexibility should be left to the local and regional levels, in particular as regards organisation and responsibility of authorities.” (Preamble FD)

objectives for flood risk management should focus on the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage and economic activity, and, if considered appropriate, on non-structural initiatives and/or on the reduction of the likelihood of flooding. (Art.7.2, FD)

“Flood risk management plans shall take into account relevant aspects such as costs and benefits, flood extent and flood conveyance routes and areas which have the potential to retain flood water, such as natural floodplains, the environmental objectives of Art. 4 of Directive 2000/60/EC, soil and water management, spatial planning, land use, nature conservation, navigation and port infrastructure.” (Art.7.3, FD)

“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.” (Art.7.3, FD)

The directive reinforces the rights of the public to access information and encourages public participation in the planning process (Art. 10, FD)

Flood risk management programmes are most effective if they include 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 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.

Terminology

“For the purpose of this Directive, in addition to the definitions of ‘river’, ‘river basin’, ‘sub-basin’ and ‘river basin district’ as set out in Art. 2 of Directive 2000/60/EC, the following definitions shall apply: *Flood* : the temporary covering by water of land not normally covered by water. This shall include floods from rivers, mountain torrents, Mediterranean ephemeral water courses, and floods from the sea in coastal areas, and may exclude floods from sewerage systems. *Flood risk* : the combination of the probability of a flood event and of the potential adverse consequences for human health, the environment, cultural heritage and economic activity associated with a flood event.”

Types of management measures

The following types of measures /groups of aggregated measures have been identified for the FD according to the CIS guidance document no. 29 on reporting under the FD:

Aspects of flood management	Type of risk	Description
No Action	No Action	No measure is proposed to reduce the flood risk in the APSFR or other defined area
Prevention	Avoidance	Measure to prevent the location of new or additional receptors in flood prone areas, such as land use planning policies or regulation
	Removal or relocation	Measure to remove receptors from flood prone areas, or to relocate receptors to areas of lower probability of flooding and/or of lower hazard
	Reduction	Measure to adapt receptors to reduce the adverse consequences in the event of a flood actions on buildings, public networks, etc....
	Other prevention	Other measure to enhance flood risk prevention (may include, flood risk modeling and assessment, flood vulnerability assessment, maintenance programmes or policies etc...)
Protection	Natural flood management / runoff and catchment management	Measures to reduce the flow into natural or artificial drainage systems, such as overland flow interceptors and / or storage, enhancement of infiltration, etc and including in-channel, floodplain works and the reforestation of banks, that restore natural systems to help slow flow and store water.

	Water flow regulation	Measures involving physical interventions to regulate flows, such as the construction, modification or removal of water retaining structures (e.g., dams or other on-line storage areas or development of existing flow regulation rules), and which have a significant impact on the hydrological regime.
	Channel, Coastal and Floodplain Works	Measures involving physical interventions in freshwater channels, mountain streams, estuaries, coastal waters and flood-prone areas of land, such as the construction, modification or removal of structures or the alteration of channels, sediment dynamics management, dykes, etc.
	Surface Water Management	Measures involving physical interventions to reduce surface water flooding, typically, but not exclusively, in an urban environment, such as enhancing artificial drainage capacities or through sustainable drainage systems (SuDS).
	Other Protection	Other measure to enhance protection against flooding, which may include flood defence asset maintenance programmes or policies
Preparedness	Flood Forecasting and Warning	Measure to establish or enhance a flood forecasting or warning system
	Emergency Event Response Planning / Contingency planning	Measure to establish or enhance flood event institutional emergency response planning
	Public Awareness and Preparedness	Measure to establish or enhance the public awareness or preparedness for flood events
	Other preparedness	Other measure to establish or enhance preparedness for flood events to reduce adverse consequences
Recovery and Review	Individual and societal recovery	Clean-up and restoration activities (buildings, infrastructure, etc.)

(Planning for the recovery and review phase is in principle part of preparedness)		<p>Health and mental health supporting actions, incl. managing stress</p> <p>Disaster financial assistance (grants, tax), incl. disaster legal assistance, disaster unemployment assistance</p> <p>Temporary or permanent relocation</p> <p>Other</p>
	Environmental recovery	<p>Clean-up and restoration activities (with several sub-topics as mould protection, well-water safety and securing hazardous materials containers)</p> <p>Other</p>
	Other recovery and review	<p>Lessons learnt from flood events</p> <p>Insurance policies</p> <p>Other</p>

Art. 7.3 specifies furthermore that “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.”

The same article mentions that flood risk management plans shall take costs and benefits into account.

Spatial coverage

Flood risk is to be assessed for the river basin districts as defined in the WFD, or any coastal areas or river basins assigned as management units by the Member State.

“Flood hazard maps shall cover the 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 \geq 100 years); (c) floods with a high probability, where appropriate.” (Art. 6.3)

Reporting units – what are the specific transposition requirements

Reporting units are river basin districts defined under the WFD, or any coastal areas or river basins assigned as management units by the Member State.

Management unit

Management units of the FD are: River basin districts, or unit of management referred to in Art. 3(2)(b), or the portion of an international river basin district lying within their territory. (Art. 4, FD)

Timelines

Directive 2007/60/EC on the assessment and management of flood risks set out clear deadlines for each of the requirements. The key milestones are listed below.

Issue	Deadline	Reference
Entry into force	26.11.2007	Art 18
Transposition	26.11.2009	Art 17
Reporting format Preliminary Flood Risk Assessment	22.12.2009	Art 11
Administrative arrangements to be in place and to be notified to the Commission	26.5.2010	Art 3
Cut-off date transitional measure (availability of existing tools)	22.12.2010	Art 13
Preliminary flood risk assessment	22.12.2011	Art 4 & 5
Public participation process starts (publication of mechanism and timetable for consultation)	22.12.2012 *	Art 9.3 & 10
Flood hazard and risk maps	22.12.2013 **	Art 6
Flood risk management plans	22.12.2015 ***	Art 7
2nd Preliminary Flood Risk Assessment, specific requirement on climate change Commission's first implementation report due.	22.12.2018	Art 14.1 & 4
2nd Flood hazard and risk maps	22.12.2019	Art 14.2
End of 1st flood risk management cycle 2nd Flood Risk Management Plans, specific requirement on climate change. 3rd Water Framework Directive River Basin Management Plans.	22.12.2021	Art 14.3 & 4

Review /update every 6 years thereafter. Reporting to the Commission: 3 months after. * = coordination with Art. 14 (WFD) requirements ; ** = date of 1st review of pressure and impact analysis under the WFD ; *** = date of 1st review of WFD river basin management plans

Revisions: "The elements of flood risk management plans should be periodically reviewed and if necessary updated, taking into account the likely impacts of climate change on the occurrence of floods." (Preamble FD) "In particular, the Commission should be empowered to adapt the Annex to scientific and technical progress." (Preamble FD) Also: "The

Commission may, taking into account the periods for review and updating, adapt the Annex to scientific and technical progress.” (Art. 11.2 (FD)) Dates for reviews for the preliminary flood risk management, the flood hazard and the flood risk maps as well as the flood risk management plan are fixed in Art. 14 of the FD (every six years).

Integration/coordination issues with other related pieces of legislation

The FD requires that flood risk management plans should seek for relevant coordination within river basin districts and promote the achievement of environmental objectives laid down in Community legislation. The FD foresees in particular the coordination with the WFD: “Development of river basin management plans under Directive 2000/60/EC and of flood risk management plans under this Directive are elements of integrated river basin management. The two processes should therefore use the mutual potential for common synergies and benefits, having regard to the environmental objectives of Directive 2000/60/EC, ensuring efficiency and wise use of resources while recognising that the competent authorities and management units might be different under this Directive and Directive 2000/60/EC.” (Preamble FD, see also Art. 3). Art. 9 of the FD is dedicated to the coordination with the WFD. Inter-linkages with reporting processes under the WFD and the FD are further detailed in the CIS guidance document no. 29.

Annex A.4 (FD) specifies that flood risk management plans shall include also a summary of “flood related measures taken under other Community acts, including Council Directives 85/337/EEC of June 1985 on the assessment of the effects of certain public and private projects on the environment (...) and 96/82/EC of 9 December 1996 on the control of major accident hazards involving dangerous substances (...), Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (...) and Directive 2000/60/EC”.

In addition, both the EU Adaptation Strategy and the Green Infrastructure Strategy, which have been adopted after the Floods Directive, provide for integration and cooperation with the FD. Whereas the first emphasises the importance of taking climate change into account when thinking about flood protection measures, the second promotes flood protection as one of the benefits of green infrastructure (in particular linked to the restoration of flood plains, but not only). Finally, the EU Action on Water Scarcity and Droughts can be seen as a complement to the Floods Directive, as these are the two policies addressing water quantity aspects.

Coordination issues with the EU Biodiversity Strategy

Amongst others, flood risk management plans shall take into account soil and water management and nature conservation (Art. 7.3, FD). With regards to flood protection measures, the EU Commission promotes more environmentally sensitive options like natural water retention measures, or green infrastructure in general. This allows for important synergies with the EU Biodiversity Strategy. Wider, it is asked for integrated flood risk management, which focuses “on sustainable water management and measures which work with nature are becoming more important, as they contribute to the strengthening of resilience of nature and society to extreme weather events”. The promotion of natural water retention measures is fully in line with Target 2 of the Biodiversity Strategy (Maintain and

restore ecosystems and their services), and in particular Action 6 on setting priorities to restore and promote the use of green infrastructure. However, the opposite is the case with ‘traditional’, structural flood protection measures which may destroy ecosystems and might impede the delivery of ecosystem services.

Relevance to ecosystems/habitats?

The text of the FD mentions “bodies of water”: “In cases of multi-purpose use of bodies of water for different forms of sustainable human activities (e.g. flood risk management, ecology, inland navigation or hydropower) and the impacts of such use on the bodies of water, Directive 2000/60/EC provides for a clear and transparent process for addressing such uses and impacts, including possible exemptions from the objectives of ‘good status’ or of ‘non-deterioration’ in Art. 4 thereof.” (Preamble FD) Also “natural floodplains” are specifically mentioned in the FD, as areas which should be taken into account in flood risk management plans for their potential to retain water (Art. 7.3; FD).

Measures to reduce or prevent flood risk are affecting in particular river and coastal ecosystems, but also floodplains.

Neither aquatic biodiversity nor ecosystem services are directly mentioned in the directive. It is depending on the choice of flood management measures, whether aquatic biodiversity and ecosystem services are positively or negatively affected. The EU Commission is promoting “better environmental options” for flood risk management, with a presumable positive effect on aquatic biodiversity and ecosystem services. Examples of positive effects are: measures to increase retention capacity reduce surface flow and erosion, thus reduce pollutants input ; green “flood protection measures“ improve hydromorphology/structure of the river banks and in this way improve water and habitat quality in the flood plain; restoration of groundwater related ecosystems (to increase retention capacity) have benefits for ecology; the restriction of urban development in flood plains will have positive impact on aquatic ecosystems.

Examples of negative effects: technical flood protection infrastructure, e.g. dikes, can have negative impacts on ecological status of water bodies, including the related ecosystems and species ; weirs and dams built to support flood protection are barriers for migrating species ; flood protection through natural floodplains for example can be seen as an ecosystem service promoted by the directive. Also all ecosystem services linked to natural water retention can be seen as indirectly promoted by the directive. This includes for example removal of pollutants through infiltration in soil, groundwater recharge, climate regulation, etc.

Drivers

There is no definition of drivers in the directive.

Floods as such are a natural process, and there is no direct (human) driver behind. However, assuming that flood frequency and importance increase with climate change, activities accelerating climate change can be seen as drivers for floods.

Furthermore, and more relevant for the implementation of the FD, some drivers are increasing the risk of damages caused by floods. This includes for example house

<p>construction in floodplains, urbanisation increasing soil sealing, agriculture/forestry (e.g. practices increasing erosion), or navigation (canalisation).</p>
<p>Pressures</p>
<p>There is no definition of pressures in the directive. Pressures indirectly addressed are for example hydromorphological alterations (e.g. abstractions (pumping), modification of floodplains, canalisation of rivers) or reduced infiltration.</p>
<p>Assessment of Environmental State</p>
<p>The characterisation of the flood risk of an area could be interpreted as a kind of characterisation of the environmental state.</p> <p>The (preliminary) flood risk assessment shall take into account in particular past flood events (including flood extent and conveyance routes and an assessment of the adverse impacts they have entailed) as well as “an assessment of the potential adverse consequences of future floods for human health, the environment, cultural heritage and economic activity, taking into account as far as possible issues such as the topography, the position of watercourses and their general hydrological and geomorphological characteristics, including floodplains as natural retention areas, the effectiveness of existing man-made flood defence infrastructures, the position of populated areas, areas of economic activity and long-term developments including impacts of climate change on the occurrence of floods”. (Art. 4)</p> <p>Indicators to be informed in flood hazard maps are listed under question 9.</p>
<p>Data</p>
<p>Art. 11 (FD) foresees that the Commission may adopt technical formats for the purpose of processing and transmission of data, including statistical and cartographic data, to the Commission. However, an informal arrangement in the form of Reporting sheets and a voluntary commitment of MS to submit this information to WISE has been chosen (CIS guidance no. 29).</p> <p>Guidance for reporting under the Floods Directive is given through the CIS guidance document no. 29. It provides a compilation of reporting sheets adopted by Water Directors and includes sections from the “Floods Directive 2007/60/EC: Concept paper on Reporting and compliance checking”, which was endorsed by Water Directors in November 2009.</p> <p>Reporting requirements in the FD are going back to the following articles: Art. 3 (Competent Authority and Units of Management); Art. 4 and 5 (Preliminary Flood Risk Assessment); Art. 6 (Flood Hazard Maps and Flood Risk Maps); Art. 7 and 8 (Flood Risk Management Plans); Art. 15.</p> <p>According to Art. 6 (FD), flood hazard maps for example shall show for the different flood scenarios the following information: the flood extent; water depths or water level; where appropriate, the flow velocity or the relevant water flow; the indicative number of inhabitants potentially affected; type of economic activity of the area potentially affected; IPPC relevant installations which might cause accidental pollution in case of flooding; potentially affected</p>

protected areas identified in Annex IV(1)(i), (iii) and (v) to Directive 2000/60/EC; other information which MS consider useful.

Reporting sheets have been translated to electronic reporting schemas. More information on the reporting schemas can be obtained from the Floods Directive reporting resources webpage, which includes several support files for the Floods Directive reporting.

Several supporting documents, tools and services facilitate the workflow for electronic Floods Directive reporting under WISE: Document No.1: Floods Directive reporting: User manual; Document No.2: Floods Directive reporting: User Guide to the reporting schema; Document No.3: Floods Directive reporting: User Guide to reporting spatial data; Document No.4: Guidance on reporting for FHRM of spatial information.

The document “Floods Directive reporting. A user guide for electronic reporting” (document 1) includes background information on reporting tools and QA/QC validation rules for reporting under Art. 3 (Competent Authority and Unit of Management), Art. 4 and 5 (Preliminary Flood Risk Assessment) and Art. 13 (Availability of transitional measures).

To facilitate the submission of information according to the schemas to WISE, the following tools have been developed: Access database (back-end). This complements the schemas and organizes the information into database tables. The database allows for manual entry, but also bulk data import can be used, depending upon the skill and the needs of the user; Access database (front-end). The front-end of the Access database is a user interface that also complements the schemas and organises the information into the back-end database tables. The front-end user interface only allows for manual entry and is only developed for the reporting of the CA (Competent Authority) and UoM (Unit of Management); XML Conversion tool which generates the schemas from the Access database; QA/QC rules help ensure the information is filled out correctly. The QA/QC is run from ReportNet and a Desktop validation tool. The document “User Guide to the Floods Reporting Schema” (Document No. 2) provides background information on the general issues in the schemas, the common schema and the key elements for reporting under Art. 3 (CA and UoM) and Art. 4 and 5 (PFRA).

The document “Support for reporting of Floods Directive. Guidance on reporting of spatial Data” (Document No. 3) provides a short guidance in the preparation and reporting of geographic data under the Floods Directive (FD) focusing on spatial information data to be provided for Art. 3 (CA and UoM) and Art. 4 and 5 (PFRA). According to Art. 6 of the Floods Directive, Member States shall produce flood mapping according to some minimum recommendations which are summarized in support Document No. 4 on “Reporting of spatial data for the Floods Directive (Part II). Guidance on reporting for flood risk and hazard maps of spatial information”. This document aims at providing guidance on the visualisation of the information to be shown on the flood maps, providing a technical framework for the setting up of Member State flood maps on national servers (INSPIRE) and describing how the information and maps will be used. Furthermore, the document “CIS Guidance Document No. 22: Updated Guidance on Implementing the Geographical Information System (GIS) Elements of the EU Water policy”, shall be taken into account for reporting purposes. Templates for shape file(s) are available for the purpose of reporting of the Floods Directive. Floods Directive data reported through ReportNet is visualised in the Floods Directive Viewer on WISE.

Funding

Under the Solidarity Fund it is possible to grant rapid financial assistance in the event of a major disaster to help the people, natural zones, regions and countries concerned to return to conditions that are as normal as possible. However the Fund may only intervene for emergency operations, and not for the phases preceding an emergency. (Preamble of the FD) The text of the FD makes reference to the cost recovery principle of the WFD: “Directive 2000/60/EC provides for cost recovery in Art. 9.” (Preamble FD)

The communication on flood risk management from 2004 specifies that the “Structural Funds, in particular the European Regional Development Fund, and the Cohesion Fund can fund preventive (infrastructure) investments including for flood protection. The European Regional Development Fund can also contribute to financing infrastructure related research and technological development.” Furthermore, the “INTERREG initiative under the European Regional Development Fund, has supported improved cross-border cooperation on flood protection”.

National funds are the most important source of funding for flood risk management (FRM) measures. Agricultural flood-relevant Natural Water Retention Measures (NWRM) can be financed by the European Agricultural Fund for Rural Development (EAFRD), and hence under the Rural Development Programme (RDP – Pillar 2 of the CAP). The following table lists the articles of the Rural Development Regulation with relevance for NWRM implementation and gives examples of NWRM included in actions eligible for funding ([CIS WG Agriculture, 2014](#))

Rural Development Regulation – Articles	Examples of NWRM included in actions eligible for funding
Art. 17 – Investments in physical assets	Artificial wetlands for treatment and reuse of waste water; Reconnection of floodplains; Creation of natural banks; Re-meandering of rivers; Pond restoration and creation; Restoration of terraces
Art. 18 – Restoring agricultural production potential damaged by natural disasters and catastrophic events, and introduction of appropriate prevention actions	Flood prevention measures (e.g. afforestation upland to prevent erosion)
Art. 22 – Afforestation and creation of woodlands	Establishment of forests and their maintenance – if done in the right place with the right species can maintain stable water tables, protect and improve water quality, and slow down flows (reduce flash floods; Targeted woodland creation to improve water quality and flood alleviation, eg,

	<p>afforestation of montane areas, of reservoir catchments, of riparian areas, and targeted planting in Mediterranean areas for catching precipitation; Plant tree shelter belts on slopes; Preserve or re-establish native trees along river margins/buffers</p>
Art. 23 – Establishment of agro-forestry systems	<p>Establishment of agro-forestry systems in agricultural land and corresponding infrastructures – if done in the right place with the right species can maintain stable water tables, protect and improve water quality and slow down flash floods.</p>
Art. 28 – Agri-environment-climate	<p>Wetland creation, restoration and management; Restoration/management/protection of sediment capture ponds; Riparian buffer strips (with vegetation or woodland); Riparian trees in agricultural landscapes; Soil management practices, tillage methods, diversified crop rotations and patterns, catch crops, cover crops, winter cover crops, nitrogen fixing crops, choice of drought tolerant species or varieties; Planting hedgerows; reintroducing/maintaining terraces</p>
Art. 30 – Natura 200 and Water Framework Directive payments	<p>Large buffers, wetlands, conversion of arable to forestry/extensive grassland</p>
<p>In the current programming period of the LIFE+ programme, funding has been introduced for integrated projects. Within those, funding can be granted to RBMPs, Natura 2000 networks and cross-border flood protection strategies.</p>	

About AQUACROSS

Knowledge, Assessment, and Management for AQUATIC Biodiversity and Ecosystem Services across EU policies (AQUACROSS) aims to support EU efforts to protect aquatic biodiversity and ensure the provision of aquatic ecosystem services. Funded by Europe's Horizon 2020 research programme, AQUACROSS seeks to advance knowledge and application of ecosystem-based management (EBM) for aquatic ecosystems to support the timely achievement of the EU 2020 Biodiversity Strategy targets.

Aquatic ecosystems are rich in biodiversity and home to a diverse array of species and habitats, providing numerous economic and societal benefits to Europe. Many of these valuable ecosystems are at risk of being irreversibly damaged by human activities and pressures, including pollution, contamination, invasive species, overfishing and climate change. These pressures threaten the sustainability of these ecosystems, their provision of ecosystem services and ultimately human well-being.

AQUACROSS responds to pressing societal and economic needs, tackling policy challenges from an integrated perspective and adding value to the use of available knowledge. Through advancing science and knowledge; connecting science, policy and business; and supporting the achievement of EU and international biodiversity targets, AQUACROSS aims to improve ecosystem-based management of aquatic ecosystems across Europe.

The project consortium is made up of sixteen partners from across Europe and led by Ecologic Institute in Berlin, Germany.

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