ENHANCE MONITORING, MODELLING AND FORECASTING SYSTEMS

OBJECTIVE

Allow faster and more precise forecasting of flood events and make an earlier warning to people.

DESCRIPTION

Coping with climate variability and its manifestations in the daily weather requires the availability of timely and reliable climate information, as well as up-to-date information on the occurrence and severity of extreme events, possible impacts and their duration.
Systems of critical communication on climate-related human activities. To improve the forecasting capacity and risk management, there are several technical options that allow a more precise forecast of the development of flood events and a more timely warning to the affected population.
As part of EU policies, the measure can be promoted through the Floods Directive (DFAE) which requires Member States to assess whether waterways and coastal areas are at risk of flooding, to map the extent of flooding, the assets and people at risk present in these areas and to adopt adequate and coordinated measures to reduce the risk of floods.
The World Meteorological Organization (WMO) recognizes that in many parts of the world forecasting remains the only effective measure of protection that can be realistically implemented in the face of extreme weather events.

EXPECTED RESULTS

The important direct benefits usually derive from a combination of the monitoring, modeling and forecasting systems and the early warning system and can be quantified in the reduction of citizenship pre-alert times.

RESULT INDICATORS

Floods return time [T=1/p; years]

INVOLVED ACTORS

Public sector at various levels, decision–makers, environmental agencies.

EXPECTED TIMELINE FOR ACTION

- Short term (1-4 years)

BEST PRACTICES

- Austria
- UK
- UK
- France
- Hungary

- Italy

CRITICALITIES

Limited spatial resolution, potential errors that must be minimized during design and recognized during data interpretation.
The necessary coordination between the institutions that collect the data is not easy to achieve and is often one of the crucial limiting factors.

SCOPE OF THE ACTION

- Adaptation
- Mitigation

TYPE OF PROPOSED ACTIONS

- Soft

SECTOR OF ACTION

- Agriculture / Forests / Land use
- Public health
- Transport and infrastructure

CLIMATE IMPACTS

- Other

IMPLEMENTATION SCALE

- Municipality
- Province
- Region / Country

SOURCE

https://climate-adapt.eea.europa.eu/metadata/adaptation-options/monitoring-modelling-and-forecasting-systems