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Regional Accession Network **ECRAN**

The Role of Early Warning Systems as an Adaptation Measure to Climate Change

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IPA Project: Building Resilience to Disasters in Western
Balkans and Turkey

WMO



This Project is funded by the European Union



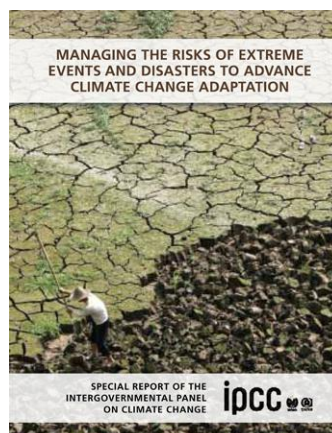
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Challenges in the region

- A changing climate leads to changes in extreme weather and climate events.
- Very significant impacts to human lives, properties and functioning of the key sectors.
- Need for improved protection of life and property related to the impacts of hazardous weather, climate and water and other environmental events.



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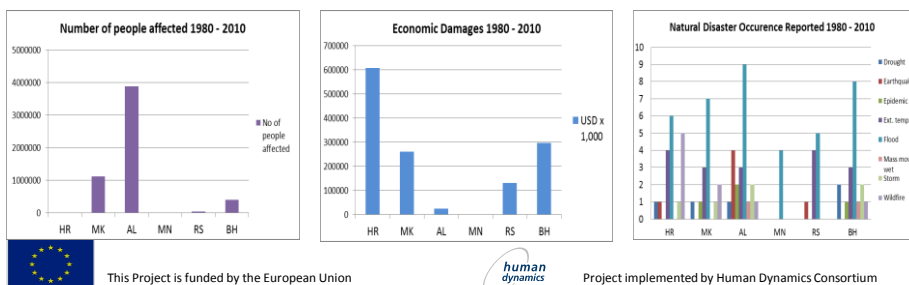
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Disasters in the region

- Western Balkan region is prone to variety of hydrometeorological and climate related hazards, including heavy precipitation causing floods and landslides, droughts and forest fires, prolonged cold and heat waves, severe thunderstorms and hailstorms.



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Disaster Risk Management

- Effective disaster risk management must be founded on scientifically sound risk assessment, to quantify and understand the risks associated with the hazards and their impacts.
- The National Meteorological and Hydrological Services (NMHSs) have crucial role in the assessment of the hazards related to meteorology, hydrology and climate.
- The goal of the NMHS is to provide and deliver useful and reliable information, products and services such as forecast and warning products or hazard information to meet needs of the country, especially when an extreme weather-related event occurs.



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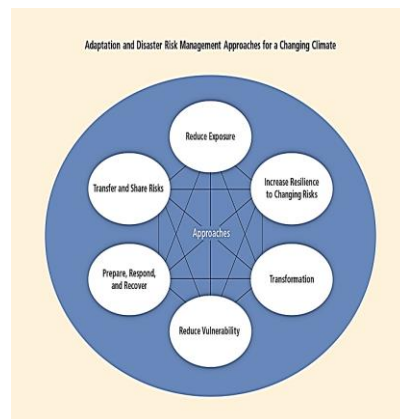
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Disaster Risk Reduction

- With the reliable information of the risks the countries can reduce risks by:
 - Early warning systems and preparedness;
 - Medium and long-term sectoral planning (land use planning, infrastructure development, agricultural management, water resource management, etc.);
 - Transfer the remaining risks through utilization of weather-indexed insurance and financing mechanisms to reduce and transfer the economic impacts of disasters.



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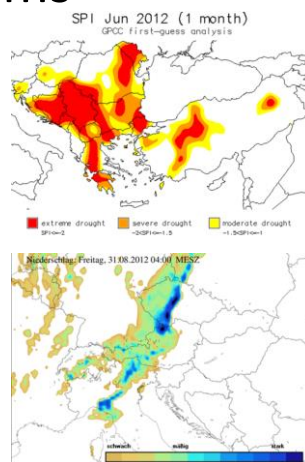
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Early Warning Systems

- Early Warning System (EWS) an effective tool for reducing loss of life and livelihood through improved emergency preparedness and response.
- The NMHSs key role in the establishment of the effective EWS:
 - Multi-hazard approach;
 - Accurate, reliable and understandable warnings in timely fashion;
 - To enable preventive actions to reduce the impacts of potential disasters;
 - Regional approach in the Western Balkans.



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IPA Project – WMO Focus areas



Enhance the regional risk assessment and mapping capacities through improved capacity of beneficiaries in hazard analysis and mapping



Enhance IPA beneficiaries' capacity to forecast hazardous meteorological and hydrological phenomena and deliver timely warnings to support DRR



Develop capacity needed to support climate risk management and climate change adaptation into a national and regional DRR agenda



Design a regional Multi-Hazard Early Warning System composed of harmonized national Early Warning Systems within a regional cooperation framework



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Development needs in the region

- Need for support is significant for the countries to be able to adequately address the risks rising from the increased frequency and severity of the hazards.
- Improvement of the NMHSs infrastructure:
 - Meteorological and hydrological station networks;
 - Weather radar networks;
 - IT infrastructure;
 - Forecasting facilities.
- Strengthening of the institutional cooperation within the countries and the region.



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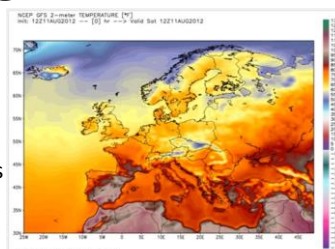
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Possibilities in the region

- Most of the successful large-scale projects related to the infrastructure development of the NMHSs have been realized through external funding.
- Preparation of acceptable project proposals and finding the appropriate external funding mechanisms with government support is vital in the heavy economic situation most of the countries in the region are.
- NMHSs are in competition for public funding with other crucial sectors.
- The need for sustaining and modernizing infrastructure, information technology, human resources need to be continuously demonstrated and advocated.



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