



World Meteorological Organization  
Working together in weather, climate and water

## WMO Disaster Risk Reduction Programme

Disaster risk reduction is at the core of the mission of the World Meteorological Organization (WMO), and the [National Meteorological and Hydrological Services \(NMHSs\)](#) of its 188 Members. WMO, through its [scientific and technical programmes](#), its network of [Global Meteorological Centres](#) and [Regional Specialized Meteorological Centres](#), and the NMHSs, provides scientific and technical services. This includes observing, detecting, monitoring, predicting and early warning of a wide range of weather-, climate- and water-related hazards. Through a coordinated approach, and working with its partners, WMO addresses the information needs and requirements of the disaster risk management community, effectively and in a timely fashion.

Every year, disasters related to meteorological, hydrological and climate hazards cause significant loss of life, and set back economic and social development by years, if not decades. Between 1980 and 2005, nearly 7500 natural disasters worldwide took the lives of over 2 million people and produced economic losses estimated at over 1.2 trillion US dollars. Of this, 90 per cent of the natural disasters, 72.5 per cent of casualties and 75 per cent of economic losses were caused by weather-, climate- water-related hazards such as droughts, floods, windstorms, tropical cyclones, storm surges, extreme temperatures, land slides and wild fires, or by health epidemics and insect infestations directly linked to meteorological and hydrological conditions ([Global distribution chart](#)).

Despite the rising global trend in the occurrence of disasters and associated economic losses, global loss of life associated with meteorological, hydrological or climate-related hazards in 2005, decreased to one-tenth of levels in the 1950's ([comparison chart](#)).

This remarkable decline is a demonstration that preparedness and prevention, combined with effective emergency management and early warning systems, can significantly contribute to reducing impacts of hazards on human life. This was acknowledged during the [Second World Conference on Disaster Risk Reduction \(Hyogo, Kobe, Japan 18-22 January 2005\)](#) when 168 countries adopted the [Hyogo Framework for Action 2005-2015 \(HFA\): Building the Resilience of Nations and Communities to Disasters](#).

HFA calls for a paradigm shift: from emergency response to disaster risk management, a more proactive, holistic and systematic approach. Implementation of HFA at the international, regional and national levels is critically dependent on contributions to be made by WMO and the NMHSs

## About the Disaster Risk Reduction (DRR) Programme

WMO established its DRR Programme (in 2003) to strengthen and integrate disaster risk reduction processes related to meteorological, hydrological and climate services of its WMO operational and research networks in all countries, particularly those with least resources. Through this crosscutting Programme, WMO is developing an organization-wide coordinating framework to achieve these objectives at the international, regional and national levels.

### Vision

The vision of the DRR Programme is :

***"To enhance the contributions of National Meteorological and Hydrological Services, in a more cost-effective, systematic and sustainable manner, towards the protection of lives, livelihoods and property, through enhanced capabilities and cooperation in the field of disaster risk reduction at national to international levels."***

### Strategic Goals

WMO strategic goals in disaster risk reduction are derived from key activities of the Hyogo Framework for Action (HFA) falling under the mandates of the NMHSs. The strategic goals were approved by WMO Congress (the supreme governing body of WMO) in 2007:

- Development, improvement and sustainability of early warning systems, in particular related to scientific and technical infrastructures, systems and capabilities for research, observing, detecting, forecasting and warning of weather-, water-, climate-related hazards;
- Development, improvement and sustainability of systems, methods, tools and applications of modern technologies such as geographic information systems for recording, analyzing and providing hazard information for risk assessment, sectoral planning and other informed decision-making;
- Development and delivery of warnings, specialized forecasts and other products and services that are timely, understandable to those at risk, and driven by requirements of disaster risk reduction decision processes and operations;
- Stimulate a culture of disaster preparedness through strengthening of capacities for better integration of NMHSs' products and services in disaster risk reduction, and continued public education and outreach campaigns;
- Strengthen WMO and NMHSs cooperation and partnerships for implementation of disaster risk reduction in national, regional and international mechanisms and structures.

## Implementation Plan

WMO's strategic goals in disaster risk reduction are being realized through an action plan, built upon the following five major thrusts:

1. Modernize NMHSs and observing networks
2. Implement national operational multi-hazard early warning systems
3. Strengthen hazard analysis and hydrometeorological risk assessment tools
4. Strengthen NMHSs cooperation with civil protection and disaster risk management agencies; and
5. Coordinate training and public outreach programmes.

This action plan is being implemented through national and regional projects involving [WMO Programmes](#), [Technical Commissions](#), [Regional Associations](#) and [partner organizations](#) that assist Members in strengthening their capacities in disaster risk reduction.