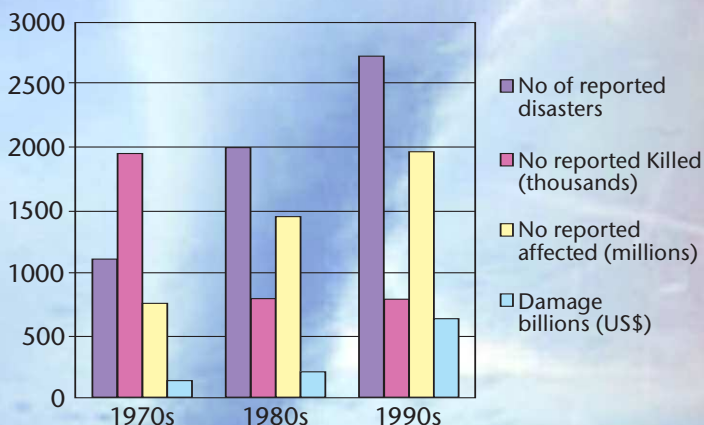


Networking the Commonwealth... Your National Meteorological and Hydrological Services

National Meteorological and Hydrological Services (NMHSs) are **Networking the Commonwealth**. Operating in every country, their principal mission is to forecast and alert citizens to hydro-meteorological events that impact on the safety of life, property and livelihood. NMHSs are unique, with a strong team of operational scientists continually monitoring the weather and providing early warning of significant events every minute of every day of every year.

Their success depends not only on strategic partners like local media and academia, but also strongly relies on the network of other NMHSs. Together, they form a global infrastructure of research and observations, and a collectivity to monitor, predict and warn of hazards that pose challenges and risks to society. Cooperation among NMHSs through exchange and integration of scientific knowledge, technology and information ensures readiness to best serve their governments and warn their citizens.

But the challenges are mounting...



An increasingly vulnerable society

The world is becoming increasingly vulnerable to the risks and challenges posed by natural hazards. Over the past two decades, more than 200 million people on average have been affected every year by disasters (Hyogo Framework).

Disasters, the majority of which are weather or water related, are on the rise, with grave consequences for the survival and livelihood of individuals, particularly those living in small island states and lesser

developed countries where disasters can quickly retard their hard-won economic gains (up to 10-15% of GDP).

Factors such as changing socio-economic conditions, poorly planned urbanization, aging infrastructures, and changing climate variability, point to a future where disasters could increasingly threaten the world's economy, its population and the sustainable development of developing countries.

Reducing risks and poverty through preparedness

Declarations such as the "Hyogo Framework, an International Strategy for Disaster Reduction" recognize the importance of disaster risk reduction strategies and increased disaster response capacity. The World Resources Institute noted that \$1 spent on preparedness can prevent \$7 in disaster-related economic losses – a very considerable return on investment.

Similarly, these declarations underscore the mutually supportive nature of the goals of sustainable development, poverty reduction and good governance with disaster risk reduction. Accelerated efforts are essential to build capacity at community and national levels to reduce disaster risk. Such an approach is recognized as an important element for the achievement of internationally agreed development goals, including those contained in the "Millennium Development Goals" declaration and the "Mauritius Strategy for... the Sustainable Development of Small Island Developing States".

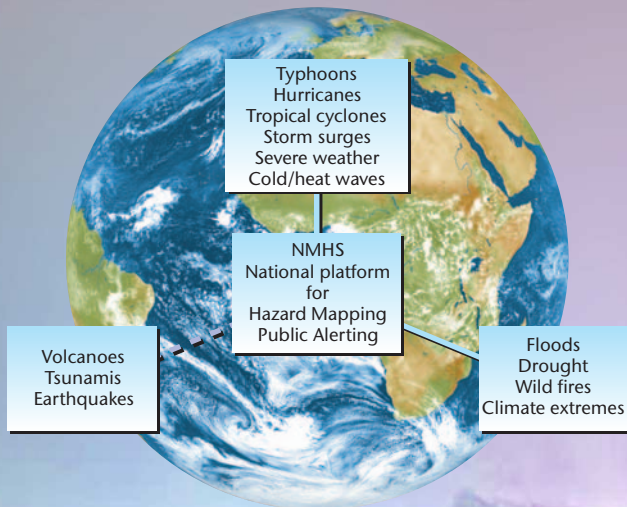
Disaster prevention and mitigation – a role for NMHSs

The NMHS is an essential part of a country's arsenal to reduce the impacts of natural disasters. Mapping hazards, understanding risks, prediction, early warning and education are all pivotal foundations for disaster prevention – all roles served by NMHSs.

With their local expertise, round-the-clock operations and access to the global enterprise of science, technology, observations and model outputs from specialized regional meteorological forecast centers, well resourced NMHSs in lesser developed countries,

can expand their capacity and expertise quickly to support disaster prevention and mitigation.

Platform for Disaster Risk Reduction



National Meteorological and Hydrological Services

Linked through dedicated global telecommunications, NMHSs form an integrated, mature, frequently tested operational early warning system which can provide a national platform for countries to alert their citizens of other non weather related hazards, like volcanoes and tsunamis. Some NMHSs are already doing this, in conjunctions with other relevant organizations (e.g. Geological Surveys).

Adapting to a changing climate — a role for NMHSs

NMHSs are archivists of local knowledge of their climate system. They play a significant role in communicating this knowledge as well as the science and consequences of climate change. The Intergovernmental Panel on Climate Change identified the risks of sea-level rise impacting on small island states and coastal communities, and pointed to a future where disasters could be more frequent or more intense in some parts of the world.

The expertise of NMHSs is invaluable in working with local and national authorities to design and implement measures to minimize these harsh impacts and adapt to a changing climate. Working with others, NMHSs offer expertise to guide building construction standards, flood plain mapping and

effective land use policies, to name but a few.

Through the commonwealth family of NMHSs, different countries possess differing capacities and levels of expertise. A few major centers operate large-scale global weather and climate models predicting short-term weather changes to seasonal to inter-annual and decadal climate variability. The outputs of these weather models and climate scenarios are distributed to all countries. NMHSs can use these outputs to create locally-specific weather and climate products to help decision makers adopt measures to adapt to changing climate.

A call for action

Promoting a culture of prevention, including resource mobilization for disaster risk reduction, is an investment for the future with substantial returns. NMHSs play a significant role in addressing safety across all Commonwealth countries, as they function 24/7 and are heavily involved in disaster risk mitigation. Through enhanced and sustained investment, NMHSs can help build resilient communities and offer scientific capacity to address their country's unique and particular vulnerabilities. It is in every country's best interest to invest and draw on the expertise of their local NMHS as part of their disaster prevention and mitigation response.

Because the strength of the network lies in the strength of all its members — who gather and share information — political action is required to ensure the capacity of all NMHSs of the network is maintained and developed to meet this important role. Assets of even the smallest countries are important to the overall success of the entire global meteorological and early warning system.

For more information on how your NMHS can benefit your country, visit

www.commonwealthmet.org