



WORLD METEOROLOGICAL DAY 2005

WEATHER, CLIMATE, WATER AND SUSTAINABLE DEVELOPMENT

**Message from Mr M. Jarraud
Secretary-General of WMO**

World Meteorological Day celebrates the entry-into-force of the Convention creating the World Meteorological Organization (WMO) on 23 March 1950. For this Day in 2005, the theme "Weather, climate, water and sustainable development" has been selected in recognition of the vital role and outstanding contribution of meteorology, hydrology and related geophysical sciences to human progress, sustainable socio-economic development, environmental protection and poverty alleviation.

The establishment of WMO heralded a new era, engendering rapid progress in these sciences, related technologies and international cooperation. These developments were rapidly translated into the establishment of global operational systems for the protection of life and property, mitigation of natural disasters and applications to a wide range of socio-economic activities in support of sustainable development defined as "*meeting the needs of the present generation without compromising the ability of future generations to meet their own needs*".

In 2000, the United Nations refined and refocused its efforts in promoting social and economic development without harming the environment by calling on all UN Members to achieve the Millennium Development Goals (MDGs). Some of these, which are to be achieved by 2015, are of particular interest to WMO:

- Halve the proportion of people living on less than a dollar a day or suffering from hunger;
- Halve the proportion of people who are unable to reach or afford safe drinking water;
- Address vulnerability, risk assessment and disaster management including prevention, mitigation, preparedness, response and recovery, as an essential element for a safer world;
- Address issues related to climate change, including monitoring, projection and implementation of relevant strategies at national, regional and international levels;
- Ensure environmental sustainability;
- Develop a global partnership for development.

WMO's contributions to these initiatives take various forms. A primary focus is on improved observations and prediction of the state of the Earth's atmosphere and water, their interaction with one other and with other Earth systems and on early warnings.

Progress in remote-sensing observations such as radars and satellites and other monitoring facilities, as well as in data processing and communications, have led to significantly improved scientific understanding of the dynamical and physical processes of the atmosphere and ocean and their interactions with other components of the Earth's system. As a result, unprecedented improvement has been achieved in the quality and accuracy of weather forecasts and warnings. It is now possible to make deterministic weather forecasts seven to ten days in advance in the extra-tropical regions and three to four days ahead in the tropical regions. Another outstanding development is the seasonal prediction of phenomena such as El Niño and La Niña. Thanks to the enhanced knowledge and network of facilities that are available today, it is possible to produce useful forecasts of such phenomena a few months to a year ahead.

WMO has been a major driving force behind the achievements in the knowledge and awareness of the physical environment. WMO derives its strength from the fact that weather and climate do not recognize political or economic boundaries and from the unflinching commitment of its Members. WMO Programmes are formulated by its Members, owned and operated by them to meet their sustainable development goals. This unique arrangement has earned WMO the reputation of being a model of international cooperation, as well as a leader in disaster mitigation and prevention and a major contributor to sustainable socio-economic

development.

Such development has greatly improved the well-being of humankind. However, new challenges have arisen such as the increased concentration of greenhouse gases in the atmosphere, climate change, depletion of the stratospheric ozone layer, dwindling freshwater resources and increasing pollution of the atmosphere and water.

While no one can control the weather, accurate observations, predictions with higher levels of accuracy and lead-time can radically improve people's chances of living in relative safety, building more comfortable lives and protecting precious natural resources more effectively. For vulnerable countries, endogenous capacity building and global partnerships are essential in fulfilling these goals. WMO and NMHSs are uniquely placed to contribute to national and global efforts. In the context of its mandate, WMO will further strengthen its scientific and technical programmes, enhance its strategic alliances and partnerships, and make renewed efforts for capacity building and resource mobilization.

The improvement of forecasting capabilities with emphasis on high-impact weather is a priority. This should enable the delivery of more accurate, timely and reliable warnings of severe events to ensure greater preparedness and awareness and reduce vulnerability. Greater emphasis will be placed on the transition from research results to operational applications which will contribute to the protection of life and property, the mitigation of natural disasters, the promotion of sustainable social and economic development, and protection of the environment.

In the longer term, sustainable development also requires that the climate system is better understood with the possibility to project future climate changes and their potential impacts on climate variability, socio-economic activities and the environment. Planning to meet the threat of climate change requires more detailed scenarios at regional level, including variability in storm and rainfall patterns, impacts of sea-level rise and threat to urban areas. WMO will pursue its efforts in improved monitoring and the development of better climate models to reduce uncertainty in climate projection in order to assist in successful adaptation and enable sound political and economic policies to be implemented at the national and international levels.

As we celebrate this Day, it is my wish that the year 2005 will mark increased recognition and use of NMHS products in a wider range of sustainable development activities. We look forward to further strengthening WMO's collaboration with decision-makers and other national authorities, the scientific community, partner organizations, non-governmental organizations, the private sector, the media and the public in order to ensure improved communication and effectively address the environmental and developmental challenges in the areas of weather, climate and water facing humanity in the 21st century.
