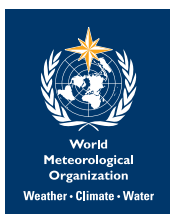


CLIMATE KNOWLEDGE FOR ACTION:

A GLOBAL FRAMEWORK
FOR CLIMATE SERVICES—
EMPOWERING
THE MOST VULNERABLE

FREQUENTLY ASKED QUESTIONS
RELATING TO THE REPORT OF THE HIGH-LEVEL TASKFORCE
FOR THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES



PREFACE

In 2009, the World Climate Conference-3 directed the Secretary-General of the World Meteorological Organization to convene a High-level Taskforce for the Global Framework for Climate Services. Over 2010, the High-level Taskforce met several times and consulted widely while preparing its report, which outlines the current state of climate services, gaps in climate service provisions, and its recommendations for a Global Framework for Climate Services. The Taskforce's report, *Climate Knowledge for Action: A Global Framework for Climate Services – Empowering the Most Vulnerable*, was broadly endorsed by the Sixteenth World Meteorological Congress in May 2011. The Congress decided that, inter alia, the UN-System should proceed to develop a detailed implementation plan for the Global Framework for Climate Services.

This FAQ booklet is intended to provide a quick reference guide for the most essential questions and has been updated in August 2011 to reflect the decisions of the Sixteenth World Meteorological Congress.

I hope that you find this helpful in gaining a better understanding of the proposals of the Taskforce and the response of the Congress.

A handwritten signature in blue ink, appearing to read 'M. Jarraud', is written over a light blue grid background.

M. Jarraud
Secretary-General of the World Meteorological Organization

FREQUENTLY ASKED QUESTIONS RELATING TO THE REPORT OF THE HIGH-LEVEL TASKFORCE FOR THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES

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WHY IS THERE A NEED FOR A NEW GLOBAL INITIATIVE ON CLIMATE SERVICES?

Worldwide impacts and costs of adverse climatic events like droughts, storms and floods can be significantly reduced through greater global cooperation and sharing of expertise and data. This calls for a new global “framework” to organize the efficient flow of climate information to all those who need it.

Climate information is widely used to great advantage, not only to avoid and manage climatic risks but also to take advantage of climatic opportunities. But many people are not aware of the potential benefits, or may lack the necessary expertise and access to information. A major concern is that climate services are weakest where they are needed most – in climate-vulnerable developing countries. This is found to be unacceptable and unjust.

The Taskforce noted that the foundations for the global provision of climate services were already available and could be readily developed and built upon. These include the existing weather and climate observing systems and data exchange, climate research programmes and risk management techniques used in different economic and social sectors.

What is lacking is a global framework to link and develop the available elements and to plug the gaps and fix the shortcomings. The Taskforce envisioned an end-to-end system for providing climate services and for applying them in decision-making at every level of society. This will require a new global mobilization of effort and collaboration across political, sectoral and scientific boundaries. The Sixteenth World Meteorological Congress has asked the WMO to provide leadership so that governments, working through the UN-System, can deliver on this vision.

WHAT ARE “CLIMATE SERVICES” AND WHO USES THEM?

A climate service is the process of providing information to help a government, organization or individual manage climate risks and opportunities. Prominent user sectors are agriculture, water management, health, planning, energy,

marine, construction, tourism, disaster management and insurance – all of which are significantly affected by the climate.

The raw material of a climate service is good data, drawn from national and international databases, on such parameters as temperature, rainfall, wind, soil moisture and ocean conditions. To be most effective, a climate information product must be prepared and delivered to meet users' needs. A product may include data, statistical summaries, predictions and advice. It may be as simple as the average rainfall for a locality, or as elaborate as a countrywide analysis of past and future climatic risks. Products may be automatically generated for widespread use or closely tailored to address a particular user's problem.

Traditional climate information products include historical datasets for particular places; statistical summaries such as long-term averages or maps; analyses of risks of extreme conditions; and assessments of current conditions such as drought or fire risk. Climate data may be combined with industry or economic data to produce assessments or predictions of production levels, demand or prices. New scientific products include predictions of El Niño conditions, seasonal outlooks for rainfall or temperatures as well as long-term projections of climate conditions for climate change scenarios.

WHAT IS THE DIFFERENCE BETWEEN WEATHER SERVICES AND CLIMATE SERVICES?

The main difference lies in the time frames involved. Weather services provide descriptions of the weather over short time frames – what is happening now and most importantly how the weather will evolve today and over the next few days, sometimes up to ten to fifteen days ahead. By contrast, climate services are concerned with the overall patterns of conditions over longer time frames: both over past decades, and over the next few months, or years and decades ahead.

Most people are familiar with the daily weather forecast, which gives outlooks for temperature, precipitation and wind conditions over coming days, as well as specific warnings of severe weather conditions. Weather services are based on

detailed observations of current weather conditions and on how these are likely to develop in the hours and days ahead.

Climate services focus on the longer-term “climate” of places at different times of the year, such as the mean temperature and rainfall for different localities and months, or the average occurrence of extreme events like heatwaves or floods. These products are very important for planning and design purposes. With the recent growth of knowledge of the climate system and climate change, the traditional statistical products are, for some users, being complemented by predictions and projections of climatic conditions for seasons and years ahead.

WHAT IS MEANT BY THE DIFFERENT TERMS: CLIMATE DATA, CLIMATE DATA PRODUCTS, CLIMATE INFORMATION AND CLIMATE SERVICES?

Climate data are sets of measurements of climate variables, such as temperature or wind. Climate data products are the result of an analysis or processing of climate data, and include maps of average rainfall, the average wind speed and direction for a site, or an outlook for next month’s rainfall. Some climate data products may also incorporate non-climate data, such as soil type or crop conditions. Climate information is a more general term for any combination of data, data product, knowledge and expert advice.

A climate service is best described as the process of providing climate information and products, which involves interaction between a provider and a recipient, along with the means to access and process information. A simple example of a climate service is a farmer (user) receiving seasonal outlooks for rain or drought (information) from his national meteorological and hydrological organization (provider).

While the general meaning of these terms is fairly clear to those involved, they may be used in different ways by different people. In particular, service providers sometimes describe their products as “services”.

WHAT ORGANIZATIONS CURRENTLY PRODUCE CLIMATE SERVICES?

The sources of climate services vary greatly among countries, depending on national circumstances and government policies. National meteorological and national hydrological organizations are the most common provider of climate services, but a number of other organizations are involved in this work, such as oceanographic and agricultural institutes, climate research centres, satellite operators, universities and businesses.

Some organizations are mainly concerned with the front-end provision of data or research outputs, while others are mainly concerned with users and climate-sensitive sectors. The private sector is increasingly active in a growing number of countries in producing commercial value-added information to serve particular clients.

National meteorological and hydrological organizations have a key position in climate services because of their core role of contributing to public safety and their responsibilities for weather observations. The weather data they collect is a vital source for the climate data archives. Authoritative climate datasets and summaries are usually produced by the national meteorological organization. Many national meteorological and hydrological organizations are very active in climate research and in assisting national policymaking on climate change.

For these reasons, the High-level Taskforce recommended that the organization of the Global Framework for Climate Services be coordinated internationally under the auspices of the United Nations' World Meteorological Organization.

HOW IS THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES RELATED TO CLIMATE CHANGE?

While not designed to uniquely address the climate change issue, the Global Framework for Climate Services nevertheless will significantly assist climate change policymaking and responses, especially for developing countries, first by improving the collection and availability of climate data and information and second by strengthening adaptation capabilities in countries.

The main focus of the Global Framework for Climate Services is the existing climate and its variations and patterns. Climate is a fundamental consideration for agriculture, health, water supply, energy, tourism and many other industries, and its extremes can cause great loss of life and damage to livelihoods and property.

Climate change provides an added incentive to manage climate risks well. Industries need to know what is happening in the climate system and to be prepared and organized to deal with future climate events whatever their cause. Good management of the existing climatic risks today is the foundation for managing the changed climatic risks of tomorrow.

The Framework will also contribute essential information to support new policies on climate change and development, such as expanded renewable energies, better water management, re-forestation and energy efficiency.

WHAT IS THE HISTORY OF THE FRAMEWORK?

The proposal for a framework for climate services was developed at the World Climate Conference-3, which was held in Geneva, Switzerland, from 31 August to 4 September 2009. A three-day expert segment of the Conference reviewed a range of economic sectors that required climate services to support decision-making and found that many sectors and users were unable to access adequate information for their purposes.

The high-level segment of the meeting, which was attended by 13 Heads of State/ Heads of Government and over 80 government ministers (or senior officials of equivalent rank), responded to the problems identified by the expert segment and decided to establish a Global Framework for Climate Services.

The Conference also called for the establishment of a Taskforce to develop, among other things, a costed implementation plan for the Framework. The terms of reference for the Taskforce and its membership were agreed at a follow-up intergovernmental meeting convened by the Secretary-General of the World Meteorological Organization in Geneva on the 11th and 12th of January 2010.

The Taskforce's report, *Climate Knowledge for Action: A Global Framework for Climate Services – Empowering the Most Vulnerable*, was completed over 2010 and was presented to the Sixteenth World Meteorological Congress in May 2011 for its consideration and decisions on the further design and implementation of an operational Framework. The report provides valuable material that will merit further consideration by the United Nations System.

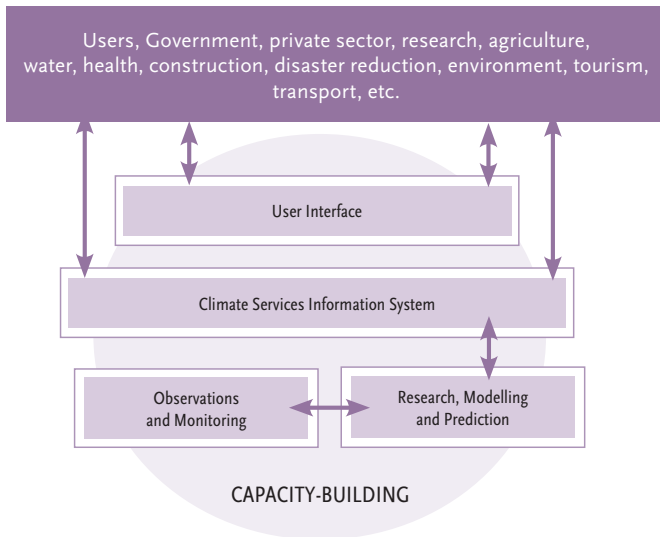
The World Meteorological Congress took a number of decisions relating to the Taskforce Report and its Recommendations including that the GFCS should report to Governments through the Congress and that the WMO should lead the UN-System in the development of a detailed implementation plan which should include options for governance of the Framework, and should be considered by an extraordinary World Meteorological Congress in 2012.

IN PRACTICAL TERMS, HOW WILL THE FRAMEWORK OPERATE?

The Global Framework for Climate Services is best seen as a new globally coordinated collective comprised largely of the organizations that are already engaged in producing and using climate information and services. The Framework will enable producers, along with researchers and user organizations, to collaborate and lift the quality and volume of climate services worldwide, particularly for developing countries.

The Framework will build on and strengthen the existing capabilities. Climate services identified within the Framework will be produced by existing operational organizations, mostly national organizations. A key task will be to establish agreements and protocols among the world's governments and technical organizations describing what information will be exchanged, between which governments, organizations and individuals, and by what means.

The Framework will organize collaborative action on five areas of importance: observations and monitoring; research, modelling and prediction; systems for information exchange; user interface; and capacity-building. International expert committees will lead the work in each area. (See later FAQs for more explanation of these elements.)



A schematic illustration of four components (in rectangular boxes) and the capacity-building component (represented by a circle that encompasses the other components) of the Global Framework for Climate Services proposed by the High-level Taskforce. The arrows indicate channels of flows of information and interaction, with arrows from the Climate Services Information System to the users showing the flow of products and user feedback, while the arrows from the User Interface Platform to the users depict the flow of requirements and technical advice.

WHAT IS NEW AND INNOVATIVE ABOUT THE FRAMEWORK?

The core ideas underpinning the Global Framework for Climate Services are first that climate risks should be systematically managed by all countries, industries and communities, and second that new levels of cooperation and collaboration are needed to achieve this capability globally.

A new and innovative component is the Framework's end-to-end package of five organizational elements that will be systematically and closely interlinked in order to develop the necessary global collaboration and operational functions. These are: the User Interface Platform, a forum to promote and develop user interests; the Climate Services Information System, a networked system for exchanging data and data products; Observations and Monitoring, to assemble climate-related data from diverse national and international systems; Research, Modelling and Prediction, to develop and communicate new knowledge; and Capacity-Building, to support all parts of the Framework's development.

The User Interface Platform and the Climate Services Information System are two important new developments. The Framework's proposed multiparty leadership and coordination arrangements will also require considerable innovation.

HOW WILL THE FRAMEWORK'S USER INTERFACE PLATFORM WORK?

The User Interface Platform is intended to provide a forum to make users' interests a driving force in the development and operation of the Framework. It is a new concept that remains to be designed in practical terms. The main functions will be to clarify user needs, exchange user methodology, establish standards for climate services, and support learning activities and capacity development.

Because of the large number and diverse nature of user communities, the User Interface Platform will need to maintain extensive networks in order to inform users, and also to enable users to provide their views on existing services and to express their needs for new services. It is expected that electronic networking tools will be particularly important for both service delivery and feedback collection.

A key challenge will be to identify the organizations best placed to represent user interests. Most likely the User Interface Platform will be modelled on the networked mechanisms that exist in international associations for various professions, business and non-governmental sectors, whose members are largely national actors.

Parallel arrangements will be fostered at the national level, through platforms of national associations and networks. In the initial stages these are likely to require active promotion by organizations that currently provide climate services.

HOW WILL THE CLIMATE SERVICES INFORMATION SYSTEM BE ORGANIZED?

The purpose of the Climate Services Information System is to provide a reliable, globally coordinated mechanism to exchange authoritative climate-related information among national agencies on an automated real-time basis. The

ultimate goal is to ensure that users can get the information they need in their day-to-day climate risk management work.

The system will be largely based on existing communication networks, particularly those operated by meteorological and hydrological services, satellite operators and research institutes. Vast volumes of weather data and satellite observations are already exchanged among countries using these systems.

The Climate Services Information System will require some hardware upgrading, especially in developing countries. However, the major tasks are to establish the intergovernmental agreements and technical protocols to enable the exchange of data and the technical standards that will apply to the data being exchanged. A key defining aspect of the system will be the ability of those participating to meet these agreed standards.

WHO WILL BENEFIT FROM THE FRAMEWORK?

The main beneficiaries will be communities and industries that are vulnerable to climate variations, particularly poor communities in developing countries affected by droughts, floods, tropical storms and other extreme conditions. Land and ocean-based industries such as agriculture, health, water resources, tourism and transportation also will be primary beneficiaries.

Public agencies responsible for national economic and social policies and programmes will benefit significantly, such as those in health, housing, construction, land-use planning, environmental management and disaster management. For example, climate information is essential for land-use regulation and environmental protection and for designing building codes to avoid collapse of buildings. It is heavily used in agricultural and water supply planning and in managing the social and economic impacts of drought. Some malaria prevention programmes now routinely use climate information in their decision making.

Businesses and city managers will also benefit as they face complex questions about locating industries and residential areas and investing in infrastructure, as well as managing seasonal fluctuations and crises in supply and demand of energy and water, and sometimes food. Communities will benefit from better

access to climate information when making decisions about local risks and opportunities.

Those participating in the Framework will benefit from the improved clarification of needs and opportunities for greatest benefits. For instance, data gatherers will see their data being used and will learn which data are most needed, climate service operators will develop better knowledge and more innovative products, researchers will see their results put into practice, and users will be better able to voice their needs and experience.

WHAT ARE THE NEXT STEPS IN IMPLEMENTING THE FRAMEWORK?

Governments and technical organizations have already expressed their strong support for the Global Framework for Climate Services and are taking practical actions. The report of the Taskforce sets out initial priorities and plans for implementing the Framework. A top priority is to address the requirements of vulnerable developing countries. Existing studies provide the basis for early practical action in some countries. A number of development agencies have already expressed interest in supporting this work, and it is expected that implementation of initial country projects could begin in 2012.

Through the end of 2011 and up until an extraordinary World Meteorological Congress currently planned for late October 2012 a Task Team of members of the WMO's Executive Council will lead and oversight the work of a number of technical groups that will be consulting widely as they develop a draft implementation plan that brings together, in an integrated fashion, the different components of the Framework.

Relevant national and international technical organizations are now being asked to take account of the objectives of the Framework in their plans and work programmes and to support the work of developing the implementation plan.

Upon agreement of an implementation plan by the extraordinary Congress, the technical organizations will start work on implementation. Many of the urgent tasks will be carried out by these same organizations that assisted in developing the plan, in particular through actions to strengthen their own existing

climate-related programmes. An important task will be to develop working methods to build the new cooperative association of the organizations.

WHO NEEDS TO BE INVOLVED IN LEADING AND COORDINATING THE FRAMEWORK?

Climate services span multiple interests and knowledge areas and cannot be left to only one type of organization. The Global Framework for Climate Services will succeed only if all the relevant parties are engaged in its design and coordination. The three main groupings are governments, technical organizations, and representatives of users and those affected by climate.

Governments are important because they are responsible for public safety and welfare and shoulder many of the costs of adverse climate-related impacts on their communities and economies. They also undertake most of the climate data-gathering and climate-related research.

Technical organizations, including academia, bring essential and wide-ranging expertise, ranging from how to measure rainfall to strategies for development investment. Experts are needed in climate science as well as practical climate operations and services, while sector specialists can advise on the most effective methodologies and applications in their sector.

Participation by representatives of users and those affected by climate is crucial, including development organizations, industries, businesses and non-governmental organizations. Many sectors have organizational homes in United Nations agencies or programmes, as with agriculture, health, environment and tourism, and most also have international professional or industry associations. Non-governmental organizations often have a role in giving voice to the humanitarian and development issues and the concerns of poor and marginalized communities.

WHAT ARE THE PRIORITIES FOR IMPLEMENTING THE FRAMEWORK?

The decision to implement an operation Framework was taken by the Sixteenth World Meteorological Congress in Geneva from 16 May to 3 June 2011.

The High-level Taskforce identified a set of priority projects that could be developed and implemented relatively quickly, starting in 2012. These include strengthening developing-country capacities for data collection and interfacing with users; establishing regional support capacities; upgrading the Global Climate Observing System; and developing the Framework's secretariat operations. The Taskforce recommended that the water, health, disaster risk reduction and agriculture sectors be considered initially as the main candidates for high-priority activities.

Resource mobilization and the technical design of priority projects are being treated in parallel as the implementation plan is being developed. A communication programme to build awareness and generate support for the Framework and its projects is also being initiated.

HOW LONG WILL IT TAKE TO IMPLEMENT THE FRAMEWORK?

The Framework will be progressively implemented over the next 10 to 20 years. It will involve agreements among nearly 200 governments, the participation of hundreds of different organizations, and the development of many technical capacities. Nevertheless, the forces are aligned for rapid action on the Framework and significant elements of progress will be evident after two years.

There is already a strong basis of knowledge and information upon which to base improvements in the Global Climate Observing System and to target the developing countries where quick upgrading is possible. Some projects could begin in 2012, though it is expected that major multi-country initiatives would start in 2013, depending on funding.

Many technical organizations are ready and waiting for the call to contribute to the design of the Climate Services Information System and to related data questions. These organizations are now providing concrete advice for the development of the implementation plan for the CSIS component.

The development of the plan for the Framework's new User Interface Platform and the regional support capacities require careful consultation with the many actors involved and considerable innovation in organizational arrangements

and practical objectives. The nature and timeline for implementation activities will become clearer through 2012 with significant institutional development expected to follow in 2013.

WHO WILL IMPLEMENT THE FRAMEWORK?

The Framework will be mainly implemented by those already engaged in climate services. This includes National Meteorological and National Hydrological Services, other government agencies, technical organizations, sectoral entities, and research institutions. Organizations concerned with user groups and vulnerable populations also will actively participate.

Substantial elements of the Framework will be implemented on a voluntary basis by the participating organizations. Aid-funded projects to assist developing countries will be undertaken and contracts will be concluded with organizations selected on merit by the governments and aid agencies involved.

The Framework's secretariat will play a key role in advocacy, information exchange and coordination of effort. It has been agreed by the Sixteenth World Meteorological Congress that the secretariat be based at the World Meteorological Organization in Geneva. It will become a nerve centre for action and a clearinghouse for information. It will support the technical advisory groups, committee chairs and government focal points and will organize the international meetings necessary for the Framework's functioning.

HOW MUCH WILL THE FRAMEWORK COST AND WHO WILL PAY FOR IT?

Most of the cost of implementing the Framework will be absorbed as part of the ongoing improvement of existing national programmes. The additional costs to manage and develop the Framework are mainly for priority projects to assist developing countries, and were estimated by the High-level Taskforce to be about US\$ 400 million and US\$ 550 million for the ten-year period 2012–2021. These average to about US\$ 55 million per year. In addition to these costs, there will be a smaller amount of around US\$ 2 million to 3 million per year to support the meetings of experts and a small secretariat for coordination of the technical systems.

The estimates cover the costs of priority activities: strengthening developing country capacities for data collection and interfacing with users; establishing regional support capacities; upgrading the Global Climate Observing System; and supporting the Framework's secretariat operations.

The projected costs of the Framework are small compared to those of the many hundreds of national and international programmes that already collect and distribute climate data and generate data products and other climate information. The existing expenditures are not well known but in total are most likely to exceed several billion US dollars annually.

Development assistance organizations and multilateral funds will play a big role in funding developing countries to help them upgrade their capacities and participate in the Framework. For the more developed countries, the extra work to implement the Framework may require only small adjustments of existing programmes, with little extra cost. In many countries the Framework is likely to be strongly supported as a component of the national adaptation programme.

The outline implementation plan put forward by the Executive Council's Task Team will be reviewed and "stress tested" as experts from all sectors and components assist in the development of the detailed implementation plan to be considered by the extraordinary World Meteorological Congress scheduled for late October 2012, in Geneva, Switzerland.

HOW WILL THE FRAMEWORK BE GOVERNED?

At the highest level a new intergovernmental board within the United Nations System will be created which reports through the World Meteorological Congress. The extraordinary session of the World Meteorological Congress, to be held in late October 2012 will review a proposal for an implementation plan that includes a description of the governing mechanisms for the Framework, and make the necessary decisions for the Framework to begin its operational activities.

The primary role of the governing mechanism will be to provide high-level ownership and direction for implementing the Framework and for overseeing its ongoing planning and management. It will be a key means to motivate

international cooperative action and to mobilize and guide the use of financial resources. It will guide the extensive technical work of the Framework and will appoint executive and technical committees as required.

The governance and coordination mechanisms are likely to evolve over time. The High-level Taskforce noted that lessons could be learned from the experience of related interagency mechanisms in the United Nations, such as those for water and for disaster risk reduction.

HOW SHALL WE KNOW IF THE FRAMEWORK IS A SUCCESS?

The intended high-level outcome of the Framework is the long-term global reduction of climate-related losses in lives, livelihoods and assets and increased efficiency and effectiveness in economic sectors. Since many factors other than the Framework affect climate-related losses and gains, special studies will be needed to estimate the impact of the Framework.

In practice, the success of the Framework will be determined principally by improvement in the access to and effective use of climate information by those communities and industries that are especially vulnerable to climate variations and extremes.

Measures of this success remain to be defined in the implementation plan but will likely include the adequacy of national and international climate observation programmes, the reliability of systems to exchange climate data, the ease of access to data and data products by users, the availability of national and regional expertise and user support, and the level of systematic use of climate information in different sectors.

In the short term, an important measure of success will be the level and breadth of support provided to the Framework by potential participants, particularly from developing countries, sectoral organizations, user representatives and funding agencies.

GLOSSARY

Climate-vulnerable country: A country with a high risk of negative impacts from climate due to its geography or infrastructure.

Global Climate Observing System: Co-sponsored by the World Meteorological Organization, the Intergovernmental Oceanographic Commission of UNESCO, the United Nations Environment Programme and the International Council for Science, this programme stimulates, encourages, coordinates and otherwise facilitates the taking of the needed climate observations by national or international organizations in support of their own requirements, as well as of common goals.

High-level Taskforce: A group of 14 high-level independent advisors appointed by an intergovernmental meeting convened by the Secretary-General of the World Meteorological Organization with consideration given to expertise, geographical and gender balance.

National Adaptation Programme: A method, developed under the United Nations Framework Convention on Climate Change, for least developed countries to identify their most immediate climate risks and outline activities to address those risks.

World Climate Conference–3: A gathering in 2009 of more than 2000 climate scientists, sectoral experts and decision-makers initiated by the Fifteenth World Meteorological Congress; composed of an expert segment and a high-level segment. A major outcome of the conference was to request the World Meteorological Organization to convene a High-level Taskforce for developing proposals for a Global Framework for Climate Services.

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