

INTERNATIONAL METEOROLOGICAL ACTIVITIES

International Meteorological Activities focuses on Australia's involvement in the programs and activities of the United Nations' World Meteorological Organization (WMO), a central feature of which is the Bureau's operation of one of three World Meteorological Centres (WMCs) of the WMO World Weather Watch (WWW) Programme. The WMO involvement is complemented by participation in the activities of the Intergovernmental Oceanographic Commission (IOC) of the UN Educational, Scientific and Cultural Organization (UNESCO) and a range of other multilateral and bilateral activities with neighbouring countries in the southwest Pacific and South-East Asia.

A fundamental principle embodied in the Convention and traditions of the WMO is that of voluntary contribution to the total international system and the free exchange of essential data and products between National Meteorological and Hydrological Services (NMHSs) of all countries. Australia benefits greatly under this system, particularly through free access to the meteorological satellite data of Japan, the USA, China and Europe.

The Bureau's International Meteorological Activities are coordinated by the International Affairs section of the Executive and International Affairs Branch in the Bureau Head Office. Most Branches of the Bureau are involved in activities that have an international impact. The International Affairs section provides the focal point for the planning and coordination of these activities and provides support to the Permanent Representative of Australia with WMO and the Australian members of WMO Technical Commissions.

PLANNED OUTCOME 2007-08

<p>Outcome</p>	<p>International cooperation and goodwill including the benefits of global meteorological cooperation under the Convention of the World Meteorological Organization and related international meteorological treaties and agreements.</p>
<p>Objective</p>	<p>To meet Australia's international obligations, advance Australia's interests and support the operations and services of the Bureau through participation in international meteorology.</p>
<p>Effectiveness indicators</p>	<p>The extent to which:</p> <ul style="list-style-type: none"> • Australia meets agreed international requirements for data exchange; the National Meteorological and Oceanographic Centre in Melbourne provides the products and services prescribed for a World Meteorological Centre, two Regional Specialised Meteorological Centres (RSMCs) and a Joint WMO/IOC Commission for Oceanography and Marine Meteorology (JCOMM) Specialised Oceanographic Centre; and the Darwin Regional Forecasting Centre provides the products and services prescribed for a RSMC; • Australia can use its standing in international meteorology to influence international developments to national advantage; • participation in international activities can be shown to contribute to the effectiveness and efficiency of Bureau operations and services; • the Bureau contributes to improved international tsunami warning systems; and • the contribution of Australian expertise and support improves the quality and performance of National Meteorological and Hydrological Services (NMHSs) in the southwest Pacific and South-East Asia.

OUTPUTS 2007-08

Meteorology is one of the most inherently international of all fields of science and human endeavour. Accordingly, international cooperation plays a vital role in the operation of the Bureau, enabling it to draw on, and benefit from, scientific, technological and operational developments and expertise in other countries while contributing, within its own capability, to the effectiveness of the total international effort from which all countries benefit. This helps to ensure that the Australian community receives the best services possible within the limitations of available resources and the international state of the art in meteorological science and technology.

International Meteorological Activities forms one of the Bureau's eight Major Outputs as well as Output Group 1.4 - International Meteorological Activities. Outputs include: effective Australian participation in the various constituent bodies, programs and activities of the WMO including the provision of data, products and services to overseas NMHSs and overseas user communities; participation in the international meteorological and related programs of other international organisations; bilateral cooperation with other advanced countries; and bilateral cooperation with, and assistance to, NMHSs of developing countries in the southwest Pacific and South-East Asia.

OUTPUT PERFORMANCE 2007-08

Output performance is measured against quality, quantity and price targets. The results achieved for 2007-08 are provided below.

Quality	Target	Actual
Australian influence is exercised through occupancy of important senior positions in the World Meteorological Organization (WMO), the Intergovernmental Oceanographic Commission (IOC) and related organisations	1 position occupied	5 positions occupied
The value achieved from scientific exchange visits and cooperative projects undertaken with other countries is maintained	value maintained	value maintained
The flow of accurate observational data to Australia is increased through provision of technical assistance and meteorological training to the National Meteorological and Hydrological Services (NMHSs) of developing countries	Assistance / training provided	Assistance/ training provided
Percentage of the formal obligations of roles for the Melbourne World Meteorological Centre (WMC) and the Melbourne and Darwin Regional Specialised Meteorological Centres (RSMCs), as designated by the WMO, fulfilled	100%	100%
A high level of demand for Australian officers to participate in WMO activities is maintained	level maintained	level maintained
A high level of satisfaction of regional developing NMHSs with Australian technical cooperation is maintained	level maintained	level maintained

Quantity	Target	Actual
Representation in all WMO constituent bodies (viz. Congress, Executive Council, Regional Association V, all Technical Commissions)	11	11
Number of major international meteorological meetings hosted in Australia	3	3
Number of active bilateral cooperative programmes for which a Memorandum of Understanding or treaty has been signed	10	10
Support of all AusAID projects offering capacity building by the Bureau, especially its Training Centre in Melbourne, to help develop meteorology in developing countries	support maintained	support maintained
Maintenance of the WMC Melbourne, RSMCs Melbourne and Darwin and the Joint Technical Commission for Oceanographic and Marine Meteorology (JCOMM) Specialised Oceanographic Centre, Melbourne	Centres maintained	Centres maintained
Australia is a member of the IOC's Intergovernmental Coordination Group of the Indian Ocean Tsunami Warning and Mitigation System	membership retained	membership retained
Australia is a member of the Pacific Ocean Tsunami Warning and Mitigation System (ICG/PTWS)	membership retained	membership retained
Price		
International Meteorological Activities	\$3.899m	\$3.582m

Comments on output performance

The five influential international senior positions occupied by Bureau officers were: (a) Member of the WMO Executive Council; (b) President of the WMO Commission for Hydrology; (c) Vice-Chair of the Intergovernmental Oceanographic Commission (IOC); (d) Co-president of the Joint WMO/IOC Commission for Oceanography and Marine Meteorology (JCOMM); and (e) Member of the Group on Earth Observations (GEO) Executive Committee.

ACHIEVING THE OUTCOME

International Meteorological Activities are delivered through a single output that contributes to the achievement of the desired outcome. The developments relating to this output during 2007-08 and their contributions to the outcome are described below.

International Meteorological Activities outputs are delivered through either multilateral or bilateral channels. Multilateral channels include the WMO, IOC and the International Civil Aviation Organization (ICAO). Of specific note is the Bureau's participation in the WMO World Weather Watch, which is a globally coordinated system for the collection, processing and distribution of meteorological information in real-time on a worldwide basis. It provides the common infrastructure to support a wide range of WMO activities at the national and international levels. The facilities of the WWW are used by other international organisations, in particular the ICAO, the IOC and the International Atomic Energy Agency, and provide the essential foundation for the development of the Global Climate Observing System (GCOS) and the Global Earth Observation System of Systems (GEOSS).

The *Meteorology Act 1955* empowers the Bureau to cooperate on a bilateral basis with the NMHS of any other country. At the close of 2007-08, the Bureau had bilateral protocols with the following 13 countries: China, India, Indonesia, Iran, New Zealand, Peru, Qatar, Republic of Korea, Russian Federation, South Africa, the UK, the US and Vietnam.

OVERVIEW OF 2007-08

During 2007-08, two additional Memoranda of Understanding (MOU) were signed with NMHSs of other countries. An MOU was signed with the New Zealand Meteorological Service on back-up arrangements for the Volcanic Ash Advisory Service, and another with the South African Weather Service on cooperation in meteorological training and research. This took the total number of active bilateral cooperation protocols in which the Bureau is involved to 13.

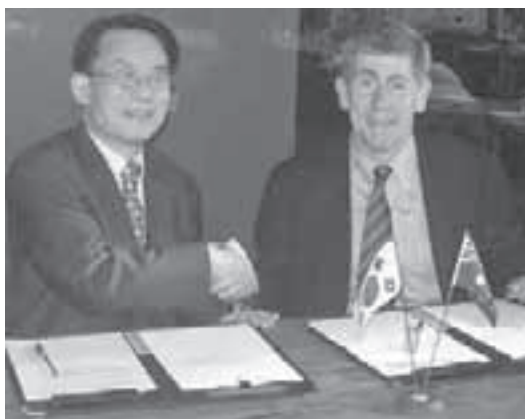
The Bureau was also active during the year in helping to improve the governance of Pacific Island Countries by its participation in the Pacific Governance Support Program (PGSP), funded by the Australian Agency for International Development (AusAID).

Major developments 2007-08

- The Bureau provided critical input on scientific issues as part of the Australian delegation to the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties and Subsidiary Bodies, in particular contributing to a reporting framework for work to improve systematic observations and to establishing a process for the UNFCCC to deal with advice from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report.
- Australia, through the Bureau, participated at the 12th SPREP (Secretariat of the Pacific Regional Environment Programme) Meeting of Regional Meteorological Service Directors in Rarotonga in July, and joined a WMO fact-finding mission to Fiji to evaluate the performance of the tropical cyclone warning centre at Nadi. This led to Bureau involvement in a PGSP-funded study that will provide a basis for a major regional project that

would benefit all the NMHSs of the Pacific Island Countries. As part of this study, the Bureau helped to prepare a successful proposal for funding from AusAID for a consultancy to review the weather, climate and severe weather operations and procedures of Pacific Island Country NMHSs.

- The Bureau also successfully led AusAID-sponsored visits to the Solomon Islands, Fiji, Vanuatu, Samoa and Cook Islands, to conduct National Capacity Assessments on Tsunami Warning and Mitigation Systems as part of the PGSP. The Bureau actively participated in IOC Tsunami-related activities for the Pacific Ocean and launched a second Deep Ocean Assessment and Reporting of Tsunamis (DART™) buoy, in the Coral Sea.
- The completion of Phase II of the AusAID-funded Pacific Islands - Climate Prediction Project saw the transfer of upgraded climate prediction systems, capable of generating high-standard reports, to 10 Pacific Island Countries. As part of this work, the introduction of an Online Climate Outlook Forum for the South Pacific will enable Pacific Island Countries to receive and share updated climate information more effectively.
- The Bureau provided observational equipment to Kiribati under the WMO Voluntary Cooperation Programme. This project helped to strengthen the GCOS Surface Network station at Tarawa in Kiribati and increase the flow of data from this region into regional and global prediction systems.
- To facilitate involvements in capacity building for developing countries, Australia became a member of the GEO Capacity Building Committee and the Chair of a WMO Regional Association V (South-West Pacific) Group of International Advisers.
- The Bureau continued to coordinate Australian participation in the GEOSS initiative. To assist in the national coordination process, the Bureau has developed a national web page that acts as a coordination mechanism to distribute relevant domestic material as well as information from the GEO Secretariat to other interested agencies. It also chaired an interdepartmental committee that provided high-level advice to the Australian delegation, and along with other relevant Australian Government departments, provided financial support to the GEOSS Secretariat.
- Bureau officers were involved in several projects under Australian bilateral partnerships with countries such as the USA, New Zealand, the EU, Japan and China. In particular, the Bureau managed a number of projects



Mr Man-Ki Lee, Administrator of the Korea Meteorological Administration (KMA) with Dr Geoff Love, Director of Meteorology, in Melbourne on 7 December, after signing the Report of the fifth session of the Joint Working Group under the Memorandum of Understanding between the Bureau and the KMA.

focused on Pacific Island Countries, including Papua New Guinea, which were supported through funding programs operated by AusAID and the Department of Climate Change (formerly the Australian Greenhouse Office), and hosted two Joint Working Group meetings in Melbourne with China and the Republic of Korea.

- The Bureau supported the Asia-Pacific Network for Global Change Research – an inter-governmental network for the promotion of global change research and links between science and policy making in the Asia-Pacific Region - through its membership on several committees.
- The Bureau continued its role in the management of the IOC and of its subsidiary body JCOMM, with Bureau staff holding a vice-chairmanship of the IOC and a co-presidency of JCOMM.

Contribution towards outcome

- Bureau participation in the UNFCCC, its Subsidiary Body for Scientific and Technological Advice and the IPCC strengthened the meteorological science perspective in UN negotiations on climate change. Bureau scientists shared in the 2007 Nobel Peace Prize, awarded jointly to the IPCC and former US Vice-President Al Gore, through their membership of the IPCC.
- The Bureau’s commitment to AusAID-supported activities for developing countries, including the Pacific Islands - Climate Prediction Project and the PGSP, has led to Australia achieving a reputation for excellence in this important area of global interest. This participation by the Australian Government also helps ensure international standardisation of meteorological practices.
- The Bureau’s participation in WMO technical cooperation programs, including Voluntary Cooperation Programmes, increases the availability of more timely and accurate observational data, particularly from data-sparse areas in the South-West Pacific (see table below). These observations in turn help the Bureau to improve its weather prediction products covering Australia, the South-West Pacific Region and the globe.

The number of operational observation stations* available in WMO Region V (South-West Pacific)		
Year	Surface observations	Upper-air observations
2004	273	55
2005	273	51
2006	281	55

*recorded during the WMO 15-day Annual Global Monitoring Period

- Participation in international programs such as those of WMO and GEO enables the Bureau to provide a range of services, especially in weather, climate, hydrology and

oceanography, to major economic sectors such as agriculture, aviation and marine, in conformity with international standards.

- Bureau-coordinated Australian input helped to shape GEOSS so that it will best serve the future needs of the Australian community for meteorological and related data. The aim of the initiative is to build on existing global observing systems to develop a comprehensive, well-coordinated and sustainable system for earth observation. Through the establishment of an interoperability framework, users across a wide range of socio-economic benefit areas will be able to access and exchange environmental and related data to improve the quality and efficiency of decision-making at many levels.
- Successful projects managed by the Bureau under bilateral partnerships enhance Australia's international reputation, contribute to the maintenance of international cooperation and goodwill, and increases Australia's level of influence on international developments in the fields of meteorology and related sciences.
- Through the Asia-Pacific Network for Global Change Research, Australia contributes to activities that enhance capacity building within the developing countries of the Pacific region. Both the UNFCCC and IPCC stress the importance of such activities.
- The leading roles undertaken by the Bureau in IOC and JCOMM provide Australia with a major voice in the development and implementation of international policies and strategic plans, giving Australia international leverage to support national plans and projects in the development and provision of oceanographic services, and in support of national and regional activities dealing with disaster mitigation and climate change.



Delegates gathered for the Plenary Session of the 60th meeting of the WMO Executive Council on 19 June. Australia continued to hold a seat on the Executive Council during 2007-08.