

INTERNATIONAL GEWEX PROJECT OFFICE (IGPO)

Reporting Period: 2006

URL: www.gewex.org

Director: Rick Lawford

Overview:

The International GEWEX Project Office (IGPO) facilitates and coordinates GEWEX research across the expanse of GEWEX studies, activities and products. IGPO oversees the implementation of the recommendations of the GEWEX Scientific Steering Group (SSG). It also plays a central role in the outreach of GEWEX through the quarterly newsletter, the web site and organization of science conferences and workshops. IGPO also provides an interface between GEWEX and other World Climate Research Programme (WCRP) activities as well as other international environmental science programs and the space sciences.

Specific IGPO responsibilities include:

- Coordinate and implement the Second Phase of GEWEX through GEWEX Panels, Working Groups, and the SSG;
- Coordinate the formation of new working groups, panels and related activities for areas of GEWEX that are determined to have gaps;
- Report on and assist others in reporting on the activities of GEWEX to international bodies and government agencies;
- Provide direct support to WCRP on all aspects of GEWEX and its implementation;
- Support the GEWEX SSG and its Chair;
- Implement an outreach program for GEWEX consisting of newsletters, a web site and other publications as appropriate;
- Represent GEWEX at scientific conferences and other international forums through scientific presentations and exhibitions;
- Facilitate the development of cross-cutting issues and the linkages of GEWEX with other programs such as the Earth System Science Partnership (ESSP) and the Intergovernmental Panel on Climate Change (IPCC);
- Prepare and publish meeting reports and other documents of relevance to GEWEX;
- Manage the requests from scientists for travel financial assistance to attend GEWEX meetings and meetings where GEWEX attendance is required; and
- Represent WCRP in Integrated Global Observing Strategy Partnership (IGOS-P) through participation on the IGOS Global Water Cycle Observations (IGWCO) theme executive and Science Advisory Group and through the provision of secretariat services, and to contribute to GEO where appropriate.

Funding and Staffing:

With the exception of the European Space Agency (ESA) contribution for the European GEWEX coordinator and the China Meteorological Administration (CMA) for the Chinese GEWEX coordinator, IGPO is funded primarily by the USA as part of its commitment to WCRP. In particular, it is funded by the National Aeronautics and Space Administration (NASA) through a grant to the University of Maryland, Baltimore County GEST Center. The GEST Center employs the IGPO Director, Rick Lawford, and Senior Scientist, Dr. Robert Schiffer, and subcontracts with the Science and Technology Corporation (STC) for its support staff (Dr. Paul Try, Dawn Erlich, Carolyn Ehn). The National Oceanic and Atmospheric Administration (NOAA) supports some of the domestic travel for the IGPO Director through a small grant to University Corporation for Atmospheric Research (UCAR). In addition, ESA pays the salary and travel for the European GEWEX Coordinator, Dr. Peter van Oevelen, and CMA pays the salary of the Chinese coordinator, Dr. Yuping Yan. Dr. Vladimir Ryabinin (and previously Dr. Gilles Sommeria) of the WCRP Joint Planning Staff and Sam Benedict, the international coordinator for the Coordinated Enhanced Observing Period (CEOP) continue to provide support on different aspects of the project.

Status

IGPO develops, publishes and distributes the GEWEX newsletter, *GEWEX News*, every quarter to a circulation of nearly 2300. During 2006, Newsletter issues have featured African Monsoon Multidisciplinary Analysis Project (AMMA) and Africa in February, Water and Energy Budgets in May and Data Sets in August. The November offering will be a more eclectic issue dealing with a number of topics needing

exposure. Recently, more scientists have elected to obtain the Newsletter through the web, rather than receiving hard copies in the mail.

As part of its scientific outreach program, IGPO organized scientific sessions at the Fall meeting of the American Geophysical Union (AGU). In addition, IGPO has planned two sessions for the ESSP Conference in Beijing: one on remote sensing and water management and a joint one with CLIVAR on aerosols and clouds.

IGPO also maintains the GEWEX Home Page (www.gewex.org), which includes recent results, copies of GEWEX reports and publications, overviews of the structure and organization of GEWEX and its projects, and information about GEWEX data sets, recent and planned activities, and project meetings and conferences. The GEWEX Home Page has links to over 200 worldwide web pages, including GEWEX and WCRP project home pages, related projects, and GEWEX data sources. On average, 600 people visit the web site every day. To facilitate more visibility for GEWEX data products, this year IGPO began featuring GEWEX global data products on the home page. These products are also forwarded to WCRP to include on their new website. In the future, regional products will be featured on the GEWEX website. Dawn Erlich who serves as the IGPO webmaster is always looking for new material for the website.

During 2006, IGPO documented and either assigned or tracked action items arising from GEWEX SSG and Panel meetings. This includes sending out periodic reminders of required actions and ensuring that SSG feedback is received and acted on by the GEWEX Panels. The GEWEX SSG plans to hold their next meeting in Honolulu at the East-West Center at the University of Hawaii. In coordination with Dr. McCreary's staff at the International Pacific Research Center, IGPO is handling the logistical arrangements for the meeting, as well as sending out invitations and developing the agenda. A meeting website will also be established by IGPO.

Dr. Robert Schiffer has been assisting with organizing a visit by the new Director of WCRP, Dr. Ann Henderson Sellers, to the Washington, DC, area. This has involved ensuring access to senior agency managers as well as providing time for WCRP briefings to CRC. Rick Lawford has organized meetings with agencies and provided briefings regarding agency funding of specific projects (e.g., AMMA).

IGPO frequently responds to requests for reviews of plans from WCRP and other environmental programs, provides inputs to WCRP planning documents and elsewhere, and responds to requests for information about the GEWEX program and data sets. Rick Lawford has given more than ten presentations regarding GEWEX activities at meetings and workshops since the start of 2006 (See the list of meetings and workshops below).

IGPO is also coordinating a special issue of the *AMS Journal of Hydrometeorology* composed of papers from the 5th International Science Conference held in June 2005. This involved the solicitation and review of more than 20 manuscripts. Rick Lawford is serving as the guest editor for this special issue and Carolyn Ehn has provided excellent support in terms of coordinating this activity.

IGPO planned the Pan-GEWEX Meeting, Frascati, Italy, 9-13 October 2006. This is the first time that all GEWEX Panel members have met at the same time for a programmatic meeting. It provides a unique opportunity to initiate some cross Panel activities and to develop cooperative plans for the GEWEX Roadmap.

IGPO is working together with Soroosh Sorooshian to establish a process for planning the Sixth International Global Energy and Water Cycle Conference. Current plans are to hold the meeting in South America (possibly Buenos Aires) and to make it collaborative with iLEAPS. IGPO is working closely with Brazilian and other colleagues who are exploring the feasibility of this idea. It is proposed that a plan for the conference be presented to the 2007 SSG meeting as a first decision point in the process.

European GEWEX Coordinator:

During the past year the European Space Agency (ESA) continued to host the European GEWEX Project Coordinator, Dr. Peter van Oevelen. He represented GEWEX and reported on program activities at a number of meetings (See the list of meetings and workshops) and participated in other international coordinated activities (such as International Geosphere-Biosphere Programme (IGBP)-International Land Ecosystem-Atmospheric Processes Study (iLEAPS), WCRP-CLIVAR) and reported on GEWEX at the iLEAPS SSC. He has coordinated support activities for GEWEX-CLIVAR interactions with A. Bussalacchi.

Dr. van Oevelen has also supported the GEWEX Continental-Scale Experiments (particularly AMMA) in their quest for data, funding and observational instrumentation, liaised with Soil Moisture and Ocean Salinity Mission (SMOS) (still on-going), and promoted BALTEX to the European Union. Through his work with the Coordinated Enhanced Observing Period (CEOP) on both scientific and programmatic levels (ESA data request handled for MERIS and ENVISAT ASAR) he has aided in soil and vegetation characterization and in preparing a category-1 proposal for ESA. He also contributed to the recently approved WATCH Project, which will bring together the hydrological, water resources and climate communities to analyze, quantify and predict the components of the current and future global water cycles. GEWEX is expected to organize some workshops related to GEWEX and WATCH deliverables.

Chinese GEWEX Coordinator

In January 2006, the China Meteorological Administration agreed to host a Chinese GEWEX Project Coordinator, Dr. Yuping Yan. Some of her responsibilities include organizing a meeting on Chinese water cycle interests to provide feedback on the areas of interest in China for GEWEX activities, and organizing collaborative field projects to validate satellite data products. Dr. Yan spent a week in Washington DC in March to learn about the GEWEX project.

New Directions

Programmatically, IGPO is assisting GEWEX to respond to new directions to make its research related to climate change more visible. Administratively, IGPO has been requested by WCRP to manage the allocation of WCRP travel funds for GEWEX meeting related travel. In the past WCRP has made these arrangements. The pan-GEWEX meeting is the first event where IGPO has taken responsibility for identifying priorities and recommending travel support levels.

Key Results

During the past year IGPO has successfully carried out the following initiatives:

- Development of the GEWEX Roadmap,
- Preparation of minutes for the GEWEX SSG and BSRN meetings,
- Planning and organization of travel for the First Pan-GEWEX Meeting,
- Publication of four GEWEX Newsletters,
- Launch of a Chinese GEWEX Office,
- Development of three discussion papers for the JSC (GEWEX, Monsoons, IGWCO Theme),
- Organization of two sessions at the ESSP conference,
- Transfer of responsibilities for Chairing the IGWCO Executive from GEWEX to WMO,
- Contributions to discussions on a possible CEOP/GHP merger, and
- Preparation of several papers for publication.

Future

During the coming year IGPO will place priority on the following activities:

- Support to Panels in implementing new initiatives (such as the Hydrologic Applications Project (HAP), CEOP II Implementation, LandFlux and the CEOP/GHP merger),
- Implementation of the GEWEX Roadmap,
- Strengthening of the GEWEX coordination function in China,
- Support to the WCRP Strategic Plan and the ESSP conference,
- Strengthening agency support for GEWEX,
- Support to the organization of the Sixth International Global Energy and Water Cycle Science Conference,
- Staffing of the IGPO Director position, and
- Support to GEO and IGWCO, as required.

Issues

1. Implementation by IGPO of new responsibilities for travel funding (requested by WCRP) are being undertaken without additional resources for the office.
2. Implementation of the GHP/ CEOP merger

Contributions to WCRP Strategic Framework

IGPO has developed a summary of GEWEX anthropogenic related activities for the WCRP strategic framework and, on behalf of GEWEX, completed summary inputs to a survey done to support this framework.

GEWEX Roadmap

During the past year, and continuing into the next year, GEWEX under the leadership of IGPO has worked towards developing a roadmap that defines the direction for GEWEX research over the next 7 years. IGPO developed the template for this roadmap, solicited inputs and then based on its own knowledge of the GEWEX projects refined those inputs to produce a preliminary overall plan. This roadmap has defined five to eight milestones for each of the five GEWEX objectives. In most cases the milestones are mutually supportive leading to major results in the 2011 to 2013 time frame relative to the objective. The purposes of the roadmap are to focus the use of the intellectual and financial resources available to GEWEX and to provide a basis for communicating the coherent nature of GEWEX plans to funding agencies and the science community at large. GEWEX plans to achieve these objectives in the context of specific science questions that are critical for the WCRP Strategic Plan. IGPO will be integrating the efforts and coordinating the milestones to be achieved by building on the heritage of research results, models and data products that have been developed during the first phase of GEWEX.

Contributions to Society and to WCRP/GEWEX Visibility

World Water Forum IV:

GEWEX participated in the World Water Forum IV in Mexico City by co-sponsoring a session with IAHS and UNESCO, co-sponsoring a side event on remote sensing and water management with the GEO Secretariat, and sponsored a booth (staffed by Jose Marengo, Rick Lawford and others) that provided information of WCRP, GEWEX and related activities to a number of 15,000 people who attended the conference.

IGWCO Theme:

In April 2006, the responsibility to chair the Executive of IGWCO was passed from WCRP (GEWEX-IGPO) to the World Meteorological Organization. However IGPO Director (Rick Lawford) continues to chair the IGWCO Science Advisory Committee. The Science Advisory Group continued to be active and teleconference calls (funded by JAXA) are being held regularly. During the past year, the IGPO Director has made more than eight presentations related to IGWCO activities to different science and satellite groups. IGPO also organized a Capacity Building workshop for Asia in Bangkok Thailand and is helping GEO to develop an on-going capacity building program in Latin America.

GEO:

During the past year, IGPO continued to contribute to GEO as a topic leader for water. Inputs were provided to the 2005, 2006 and 2007 Work Plans. Rick Lawford represents WCRP on the GEO User Interface Committee and serves as the Task leader for Tasks WA-06-01, WA-06-06 and WA-06-7. Peter van Oevelen has participated in several meetings of the Capacity Building Committee.

In addition, Rick Lawford and Peter van Oevelen have given a number of talks of GEWEX to university and government audiences.

Summary

IGPO has had a productive year in 2006. It is learning to cope with an increased workload due to the new task of administering travel for GEWEX meetings. The outreach activities continue as normal and it expected that more climate change messages will be communicated where the necessary supporting information base has been developed.

Budget

NASA has advised IGPO that it will fund the International GEWEX Project Office for three more years. Due to inflation eroding the purchase power of the budget, the IGPO must accomplish more with effectively less.

Key Publications/Reports

- US Contributions to Coordinated Enhanced Observing Period (CEOP)—BAMS, 2006.
- Overview article for the GEWEX Special Issue of the Journal of Hydrometeorology,
- Water and Energy Cycles: Investigating the Links—An Overview of the GEWEX Program and its Two Phases, WMO Bulletin, April 2005.
- Towards a Capability for Global Flood Forecasting--WMO Bulletin 55(3), July 2006.
- A chapter in the Encyclopedia of Hydrological Sciences on international hydrological programs
- Report of the 18th Meeting of GEWEX SSG, Dakar, Senegal, January 2006.
- Report of the 9th Baseline Surface Radiation Network (BSRN) Scientific Review and Workshop, Lindenberg, Germany, May 2006 (in preparation).

Meetings/Workshops

In 2006 IGPO staff supported or attended the following meetings:

(* means person gave a talk, ** means a person give two talks, etc.)

9-13 Jan 2006 - GEWEX SSG-18, Dakar, Sengal (Lawford**, van Oevelen*, Erlich)

21-26 Jan 2006 - 1st iLEAPS Science Conference, Boulder, Colorado (van Oevelen*)

29 Jan - 2 Feb 2006 - 86th Annual American Meteorological Society Meeting, Atlanta, Georgia (Lawford)

22-24 Feb 2006 - 1st NEESPI Science Team Meeting, Vienna, Austria (Lawford*)

26 Feb - 3 Mar 2006 - 5th CEOP Implementation Planning Meeting and 2nd IGWCO Workshop, Paris, France [Lawford***, van Oevelen***, Ehn (nee Serey)]

6-11 Mar 2006 - 27th Session of the WCRP Joint Scientific Committee, Pune, India (Lawford*)

16-22 Mar 2006 - Fourth World Water Forum: Local Actions for a Global Challenge, Mexico City, Mexico (Lawford*)

22 -24 March – ESA Workshop on In-situ Soil Moisture Networks – ESTEC, the Netherlands (van Oelevelen*)

22 – 24 March – Global Water System Science Committee meeting – Oaxaca Mexico (Lawford*)

3 – 7 April – European Geophysical Union Meeting – Vienna, Austria (Lawford*, van Oevelen)

22-25 April – Earth Observation Symposium – Madrid, Spain (Lawford*)

4-5 May 2006 - US AMMA Workshop, Silver Spring, Maryland (Lawford*, Erlich)

15-19 May 2006 – SMOS Workshop, Copenhagen Denmark (Van Oevelen*)

22-24 may 2006 – Baltic Sea Conference, Gothenburg (Van Oevelen)

23-26 May 2006 - AGU/GS/MAS/MSA/SEG/UGM 2006 Joint Assembly, Baltimore, Maryland (Lawford, Schiffer)

29 May - 2 June 2006 - 9th Baseline Surface Radiation Network (BSRN) Scientific Review and Workshop, Lindenberg, Germany (Erlich, van Oevelen*)

May – Seminar at Howard University (Lawford*)

1 June 2006: Global Water System Initiatives: Overview of Water Cycle Research, IISD, Winnipeg, MB. (Lawford*)

16 June 2006: Briefing to the World Bank on Water Cycle Observations and Opportunities for Capacity Building in Africa, World Bank, Washington, DC (Lawford*).

24 July – July 28 – Western Geophysical Meeting, Beijing, China (Lawford**)

29 July – Chinese Meteorological Administration (Lawford*)

28-30 Aug 2006 - 2nd Session of the WCRP Observation and Assimilation Panel, Ispra, Italy (Lawford*)

4 – 8 September 2006 – European Meteorological Society Meeting, Ljubljana, Slovenia (van Oevelen*)

5 – 7 September – The GEO User's Interface Committee meeting, Ottawa (Lawford*)

14-15 September – GEO Capacity Building Committee meeting, Brussels, Belgium (van Oevelen)

20-22 September – Meeting NDRD in Hamburg (GKSS, univeristy of Hamburg) (van Oevelen)

26 – 28 September – The Eastern Asia Capacity Building Workshop, Bangkok, Thailand (Lawford*)

Planned Meetings

16-17 October – IGOS-P Cryo meeting, ESA-ESTEC, Noordwijk, The Netherlands

7-8 Nov 2006 - WCRP Officers, Chairs and Directors meeting, Beijing, China

9-12 Nov 2006 - Global Environmental Change: Regional Challenges--An Earth System Science Partnership Open Science Conference, Beijing, China

16-17 Nov 2006 – GEO Workshop on an Americas Capacity Building Program, Buenos Aires

04-07 Dec – ISDEHS Conference, Dubai, UAE

11-15 Dec 2006 - Fall AGU Meeting, San Francisco, California

14-18 Jan 2007 - 87th Annual AMS Meeting, San Antonio, Texas

22-26 Jan 2007 - 19th Meeting of the GEWEX Scientific Steering Group, Honolulu

IGPO Staff

Current IGPO Staff and approximate percentage of time spent on GEWEX-related activities:

- Dawn Erlich: 95%
- Rick Lawford: January to July: 100%; August onward: 50%
- Bob Schiffer: 20%
- Carolyn Serey: 90%
- Paul Try: 10%.
- Peter van Oevelen: 50%
- Yuping Yan: 20%