

NATIONAL REPORT ON IHP RELATED ACTIVITIES

JAPAN

Various activities of UNESCO have been implemented under the support of the Japanese National Commission for UNESCO with financial contribution in the form of Fund-in-Trust (JFIT) for the Promotion of Science for the Sustainable Development. The following summary includes the activities of Japanese National Committee for the International Hydrological Programme (IHP) of UNESCO undertaken during September 2004 to June 2006.

1. ACTIVITIES UNDERTAKEN IN THE PERIOD SEPTEMBER 2004 – JUNE 2006

1.1 Meetings of the IHP National Committee

1.1.1 Decisions regarding the composition of the IHP National Committee

New members of the IHP National Committee have just been appointed in June 2006 as follows.

Chairman: TAKEUCHI Kuniyoshi, Prof., Univ. of Yamanashi

NAKANISHI Hisae, Prof., Nagoya Univ.

KOIKE Toshio, Prof., Univ. of Tokyo

UEDA Hiroshi, Prof., HyARC, Nagoya Univ.

SHIMIZU Yoshihisa, Assoc. Prof., Kyoto Univ.

JINNO Kenji, Prof., Kyushu Univ.

TAKARA Kaoru, Prof., DPRI, Kyoto Univ.

TAKEMON Yasuhiro, Assoc. Prof., DPRI, Kyoto Univ.

TANAKA Tadashi, Prof., Univ. of Tsukuba

NAKAYAMA Mikiyasu, Prof., Univ. of Tokyo

WATANABE Tsugihiko, Prof., Research Institute for Humanity and Nature (RIHN)

TERAKAWA Akira, Mr., ICHARM, Public Works Research Institute (PWRI)

KURAJI Koichiro, Dr., Univ. of Tokyo

1.1.2 Status of IHP-VI activities

(1) Catalogue of Rivers: The Catalogue of Rivers for Southeast Asia and the Pacific, Vols. 1 and 2, published in book form in 1995 and 1997 respectively, were compiled in a CD-ROM with the aid of Special Coordination Funds for Promoting Science and Technology (Prof. Takara, DPRI, Kyoto University). The CD-ROMs for Vols. 1 and 2 were distributed at the Asian-Pacific FRIEND (Flow Regimes from International Experimental Network Datasets) Workshop and Kuala Lumpur on 6-7 June 2005, as well as at the 13th Session of IHP Regional Steering Committee (RSC) for Southeast Asia and the Pacific (SEAP) in Kuta, Bali, Indonesia on 24-25 November 2005.

(2) Asian Pacific FRIEND: Prof. Takara attended the Asian Pacific FRIEND Workshop, Kuala Lumpur on 6-7 June 2005 and reported the current status of IDF analysis and practice in Japan. Based on an action item decided at the Workshop, he collected rainfall data at five rain gauges in

Aichi Prefecture and distributed them to AP FRIEND members. He also analyzed the rainfall data provided by the members and reported the preliminary results at the APF Technical Sub-Committee (TSC) on 21 November 2005 at the occasion of the 13th Session of RSC in Bali, Indonesia.

(3) Hydrology for Environment, Life and Policy (HELP): Dr Tachikawa submitted the second report of the Yasu River basin, a HELP candidate basin in Japan, to HELP Secretariat for their review.

1.1.3 Decisions regarding contribution to/participation in IHP-VII

Dr. Kuraji has joined in preparation of the IHP-VII as an expert from Japan. The Japanese National Committee for IHP sent comments on IHP-VII Draft Plan to the UNESCO-IHP Secretariat, taking into account the importance and necessity of prevention of water-related disaster.

1.2 Activities at national level in the framework of the IHP

1.2.1 National/local scientific and technical meetings

(1) IHP Training Course Working Group Meeting was held at Shin-Kokusai Building, Tokyo on 24 May 2005. The courses for FY 2005 and 2006 were decided to name as “Water and Carbon Cycles in Terrestrial Ecosystems” and “Oceanography Basics”. The composition of Training Course Working Group was determined as well. Prof. Ueda, HyARC, Nagoya University is the head of the Working Group since 2005.

(2) An IHP-VII proposal was presented by a group of Univ. of Tsukuba on the basis of discussions on IHP-VII at the IHP National Committee meeting on 3 August 2004. The proposal title was “Capacity Building and Education for Observers for Continuous Monitoring of Terrestrial Environments in Asia: An Integrated program of Flux Observation, Tracer Analysis and Numerical Modeling”, which is appeared in Newsletter “IHP” No. 18 (June 2005).

(3) ICHARM Inauguration Symposium: “Towards Global Water Disaster Reduction - Cooperating through ICHARM (International Centre for Water Hazard and Risk Management) -” was held on 10 May 2006 at the United Nations University (UNU), Tokyo, Japan.

(4) IHP Training Course Working Group Meeting was held at the MEXT, Tokyo on 24 May 2006. The courses for FY 2006 were discussed.

1.2.2 Participation in IHP Steering Committees/Working Groups

The Japanese National Commission for UNESCO provides UNESCO with financial contribution in the form of Fund-in-Trust (JFIT) for the Promotion of Science for the Sustainable Development. Using JFIT, the UNESCO Jakarta Office organizes the UNESCO-IHP Regional Steering Committee (RSC) for Southeast Asia and the Pacific and IHP Training Courses in collaboration with the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), Japanese Universities and Research Institutes.

(1) Regional Steering Committee (RSC)

- a) The 12th RSC was held in November 2004 in Adelaide, Australia. The cost for participants from Asia and Pacific (Cambodia, Indonesia, Rep. of Korea, Lao PDR, Myanmar, NZ, Niue Island, the Philippines, Thailand and Vietnam) was financially supported by JFIT. The Review of the Catalogue of Rivers and maintenance of the current system of RSC were decided in the RSC. Prof. Takara was re-elected as the Secretary of RSC.
- b) The 13th RSC was held in November 2005 in Kuta, Bali, Indonesia. Prof. Tanaka (Univ. of Tsukuba), Prof. Takara and others participated in the meeting. The policy of IHP governance in the region was discussed and confirmed. The RSC adopted a resolution for encouraging Lao PDR, Myanmar and Mongolia to officially participate in the RSC in the near future.

1.2.3 Research/applied projects supported or sponsored

The MEXT bestowed Prof. Takara, Kyoto University on a Grant-in-Aid for Scientific Research for FY 2004-2006 in order to promote a climate- and disaster-related international cooperative research in East Asia. For FY 2002-2004, Special Coordination Fund for Promoting Science and Technology for coordination of international meetings on monitoring, forecasting and mitigation of water-related disasters was allocated by the MEXT to Prof. Takara, Kyoto University. These funds are used in part for meetings related to UNESCO-IHP such as RSC meetings.

The MEXT Grant-in-Aid for Scientific Research was awarded to “Downscaling of Global Earth Observation Products to Locally Useful Information” led by Prof. Kuniyoshi Takeuchi, University of Yamanashi for FY2004-2006 to promote the research on PUB, Predictions in Ungauged Basins, an IHAS-initiated science program supported by IHP IGC Resolution XV-7.

The MEXT Special Coordination Funds for Promoting Science and Technology (Leadership for international scientific cooperation) was awarded to “Leadership on the Hydrological Science for Mitigating World Water Issues” led by Assoc. Prof. Taikan Oki, University of Tokyo for FY2004-2006. The fund was used to promote international activities including PUB and other IHP-related initiatives.

1.2.4 Collaboration with other national and international organizations and/or programmes

The Japanese IHP National Committee has been closely collaborating with:

- (1) The Liaison Committee on Hydrological Science, Science Council of Japan.
- (2) The GAME Sub-Committee of the Special Committee on WCRP, Science Council of Japan.
Recognized by Science Council of Japan, (1) and (2) will be reformed in 2006. The GEWEX Asian Monsoon Experiments (GAME) was reformed into Monsoon Asian Hydro-Atmosphere Scientific Research and Prediction Initiative (MAHASI) last year led by Prof. Matsumoto, University of Tokyo, and so as in SCJ.
- (3) The national government and its branches relating to hydrology and water resources

administration.

(4) Nagoya University for IHP Training Courses and graduate school.

Other universities and research institutes.

(5) The Japan Water Forum (JWF).

(6) World Meteorological Organization (WMO).

(7) International NGOs/NPOs such as the International Association of Hydrological Sciences (IAHS), the International Water Resources Association (IWRA) and the International Consortium on Landslides (ICL).

1.2.5 Other initiatives

N/A

1.3 Educational and training courses

1.3.1 Contribution to IHP courses

(1) Doctor of Science degree on atmospheric and hydrospheric science:

The Graduate School of Science and the Graduate School of Environmental Studies of Nagoya University accepts students from Asia and the Pacific region, with the financial support from the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT).

(2) IHP Training Courses:

The Hydrospheric Atmospheric Research Center (HyARC) of Nagoya University offers IHP Training Courses for both foreign students of Graduate School of Science, Nagoya University and trainees chosen by UNESCO Regional Science Bureau for Asia and the Pacific in Jakarta. The training courses are financed by the Japanese Fund-in-Trust (JFIT) for IHP.

a) The 14th IHP Training Course on “Hydrology in Asia” was carried out in Kuala Lumpur, Malaysia in October 2004, gathering many participants (11 lecturers from Japan and 29 trainees from 14 countries in Asia and Pacific regions including 16 trainees from Malaysia). The Humid Tropics Centre, Kuala Lumpur (HTC KL) kindly hosted the training course. This was the first attempt for Japan to organize the IHP Training Course in abroad. The past 13 courses were reviewed at this occasion. The cost of participants from Indonesia, PNG, Philippines, Thailand, Vietnam, China, India, Lao PDR, Sri Lanka and NZ was financially supported by JFIT. Prof. Nakamura (HyARC, Nagoya Univ.), Prof. Takara and others participated in the course.

b) The 15th Training Course was organized in Nagoya and Chiba in February-March 2006 under the theme of “Water and Carbon Cycles on Terrestrial Ecosystems“. JFIT financially supported 7 participants.

1.3.2 Organization of specific courses

In cooperation with the Mongolian National Committee for UNESCO-IHP and the UNESCO Beijing Office, the Japanese National Committee for UNESCO-IHP co-organized the Mongolian National Training Workshop “Groundwater Hydrology and Management” in Mongolia on 14 and 15 June 2006. Five Japanese experts participated in the Training Workshop at their own expense as lecturers. The Japanese experts are: Prof. Dr. Kaihotsu (Hiroshima Univ.), Prof. Dr. Takara (Kyoto Univ.), Prof. Dr. Jinno (Kyushu Univ.), Dr. Tsujimura (Univ. of Tsukuba) and Dr. Hamaguchi (Kyoto Univ.). The Mongolian National Committee for IHP, the organizer of the workshop, supported staying expenses for the lecturers.

1.3.3 Participation in IHP courses

N/A

1.4 Cooperation with the UNESCO-IHE Institute for Water Education and/or international/regional water centers under the auspices of UNESCO

ICHARM: International Centre for Water Hazard and Risk Management under the auspices of UNESCO was established in Tsukuba, Japan in March 2006, after getting accreditation by the member states of UNESCO at the 33rd General Conference of UNESCO. Dr. Kuniyoshi Takeuchi, the chairman of the Japanese National Committee for UNESCO-IHP, was assigned as the founding Director of ICHARM. ICHARM was established as the core of research, training, and information networking activities on water-related disasters at global levels. The activities are expected to contribute in the prevention and reduction of water-related disasters, such as floods. It is important to cooperate with existing UNESCO Centers such as IHE in the Netherlands, IRTCES in China, CATHALAC in Panama and HTC in Malaysia, etc. The outline of ICHARM is as follows.

- 1) Objectives: The objective of the Centre is to be the world centre of excellence to provide and assist implementation of best practicable strategies to localities, nations, regions and the globe to manage the risk of water related disasters including flood, drought, landslide, debris flow, storm surge, tsunami and water contamination. The Centre conducts research, capacity building and information networking activities in an integrated manner for preventing and mitigating the impacts of water related disasters and thus to achieve sustainable and integrated river basin management.
- 2) Functions:
 - (i) to promote scientific research and to undertake effective capacity-building activities at the institutional and professional levels;
 - (ii) to create and reinforce networks for the exchange of scientific, technical and policy information among institutions and individuals;
 - (iii) to develop and coordinate cooperative research activities, taking advantage particularly of the installed scientific and professional capacity of the IHP networks, WWAP, the IFI/P and relevant

- programmes of non-governmental organizations, international institutions and networks;
- (iv) to conduct international training courses for practitioners and researchers on the global level;
and
- (v) to organize knowledge and information transfer activities including international symposia or workshops, and to engage in appropriate awareness-raising activities;
- 3) Structure: The center is established as a part of the Public Works Research Institute (PWRI) and be operated under the responsibility of its Chief Executive, with the advice from the Advisory Board.

1.5 Publications

1. « IHP Papers presented at the International Conference on Water Sensitive Urban Design ‘Cities as Catchment’ », IHP-VI Technical Documents in Hydrology No. 3, UNESCO Jakarta Office, (Eds.) R. James, T. Daniell and K. Takara, November 2004.
2. « MPMD-2005: Monitoring, Prediction and Mitigation of Water-Related Disasters », Proceedings of International Conference on Monitoring, Prediction and Mitigation of Water-Related Disasters, (Eds.) K. Takara, K. Tachikawa and NMNS B. Nawarathna, January 2005.
3. Catalogue of Rivers for Southeast Asia and the Pacific Vol. 1 (1995) and Vol. 2 (1997) CD-ROM version (March 2005).
4. « IHP », Newsletter on IHP activities of Japan, No.18, June 2005 (in Japanese).
5. The booklet of the Portfolio of Water Actions (PWA) was published in March 2005 to show the current progress of the PWA created by Japanese Government. 98 plans of action or commitments are listed in the PWA. The booklet was used for facilitating efforts to initiate concrete actions, and bring desirable results.
6. T. Oki, C. Valeo and K. Heal (Eds.), Hydrology 2020: An Integrating Science to Meet World Water Challenges, IAHS Publication 300, 190 +xxxii pp, 2006.

1.6 Participation in international scientific meetings

1.6.1 Meetings hosted by the country

- (1) MPMD-2005 (Kyoto Univ., 12-15 Jan. 2005): The International Conference on Monitoring, Prediction and Mitigation of Water-Related Disasters, Kyoto University, Kyoto, Japan, 12-15 January 2005, was co-organized by UNESCO-IHP with a sponsorship by a three-year (2002-2004) research programme “Contribution to International Cooperation for Monitoring, Prediction and Mitigation of Water-Related Disasters” (PI: Prof. Takara, DPRI, Kyoto University) under the framework of the Special Coordination Funds for Promotion of Science and Technology, MEXT. The discussion outcomes at this conference were brought to the World Conference on Disaster Reduction (WCDR), Kobe, Japan, 18-21 January 2005.
- (2) WCDR Session (Kobe, 19 Jan. 2005): A proposed session “New International Initiatives for Research and Risk Mitigation of Floods (IFI/P) and Landslides (IPL)” was held. Numerous scientists and representatives of NGOs, GO and the UN grouped around the “International Consortium of

Landslides” (ICL) and the “Joint UNESCO/WMO Flood Initiative” (JUWFI) propose, in order to overcome years of under-investment in and poor coordination of the scientific and technical infrastructure activities needed to reduce the vulnerability notably of developing countries to natural hazards, to sign a joint ‘Memorandum of Understanding’ (MoU) between major stakeholders concerning “Strengthening Cooperation in Research for Earth System Risk Analysis and Sustainable Disaster Management within the Framework of the UN-ISDR”. Based on existing networks and institutional, national and international expertise the new MoU shall contribute to the overall strategy of disaster reduction of the UN, including the objectives of the UN-WCDR, and is intended to provide a better and formal platform to promote research and preventive activities for an integrated Earth system risk analysis and sustainable development targeting landslides, floods, and other disasters like earthquakes, tsunamis, or volcanic eruptions. The session shall be completed by presenting a ‘letter of intent’ to finalize in due course the above-mentioned MoU to be signed by the representatives of UNESCO, WMO, FAO, UN/ISDR, UNU and ICSU

- (3) Asian Water Cycle Symposium (Univ. of Tokyo, 2-4 Nov. 2005) was held for Asian GEOSS kick off convened by Prof. Toshio Koike. Dr. Andras Szollosi-Nagy (UNESCO) and a number of Asian national representatives came including from non-signed members of GEOSS (Global Earth Observation System of Systems). It was stressed that Asian FRIEND especially Catalogue of Rivers and its Water Archive can contribute GEOSS. It is an agenda how APF can contribute GEOSS and what kind of resources we need to do so. It is suggested by Szollosi-Nagy that we consider the submission of GEOSS support resolution to the next Council. What kind of resolution do we submitted.
- (4) Asian PUB is developing quite well under Dr. Yasuto Tachikawa's initiative. Quite a few national representatives came to Nanjing and had Asian PUB national working group meeting (Hohai Univ., 31 Oct.-2 Nov. 2005). The attended were Korea, Nepal, Thai, China and Japan. Sri Lanka PUB did not attend. Strong national interests were demonstrated towards hydrological sciences for improving prediction.
- (5) Post-GAME MAHASRI led by Dr. Jun Matsumoto (Univ. of Tokyo) is now official with many participants from Asian countries. A meeting was held in Univ. of Tokyo on 1 Nov. They requested the collaboration with IHP FRIEND as well as with PUB.
- (6) Round Table Discussion: Strengthening Research and Learning on Earth System Risk Analysis and Sustainable Disaster Management within UN-ISDR as Regards “Landslides” : Towards a dynamic global network of International Programme on Landslides (IPL), Elizabeth Rose Hall, United Nations university, Tokyo, Japan, 18-20 January 2006, organized by International Consortium on Landslides (ICL), UNESCO, WMO, FAO, UN-ISDR, UNEP, UNU and Kyoto University.
- (7) International Workshop on Flood Risk Management, Tsukuba International Congress Center EPOCHAL TSUKUBA on 24-26 January 2006, organized by the Public Works Research Institute (PWRI), UNESCO and WMO.

- (8) UK-Japan Flooding and Coastal Defense Workshop, British Embassy, Tokyo, Japan, 31 January to 4 February 2006. From UK, Prof. Ian Cluckie, Prof. Brian Golding and six others and from Japan, Prof. Takeuchi, Prof. Takara, Mr. Terakawa and others attended.
- (9) UNESCO-GRAPHIC (Groundwater Resources Assessment under the Pressures of Humanity and Climate Changes) International Symposium was held at the new facility of the Research Institute for Humanity and Nature (RIHN), Kamigamo, Kyoto, Japan, 4-6 April 2006 with supports by GWSP (Global Water System Project), IAH (International Association of Hydro geologist), IGRAC (International Groundwater Resources Assessment Center), etc. Dr. Makoto Taniguchi (RIHN) organized this symposium.

1.6.2 Participation in meetings abroad

Japan has played important role in the IHP Intergovernmental Council as a member. In particular, Prof. TAKEUCHI had been the Chairperson of the Council and Bureau of IHP from 1998 to 2000. Japan participated in the establishment of the Regional Steering Committee (RSC) for Southeast Asia and the Pacific in 1993. The first RSC chairperson was Prof. Yutaka Takahashi (Univ. of Tokyo). Since then at least a couple of National Committee members have attended and participated actively in all of the annual meetings of the RSC. The Chairman of the Japanese National Committee for the IHP, Prof. Takeuchi, had served as the RSC Secretary (1993-1999) and the Chairman of the Technical Sub-Committee (TSC) for Asian Pacific FRIEND (APF) Phase 1 (1997-2001) in the framework of the RSC, while Prof. Takara is playing a role of the RSC Secretary (1999-2006) and a member of TSC-APF Phases I and II (2002-2007).

- (1) The 7th IHP/IAHS George Kovacs Colloquium, Paris, 17-18 September 2004 (Prof. Takeuchi and Prof. Takara)
- (2) The 16th Session of Intergovernmental Council (IGC), UNESCO, Paris, 20-24 September 2004 (Prof. Kuniyoshi Takeuchi, Prof. Kaoru Takara, Mr. Kazuo Akiyama (MEXT), Mr. Masaru Kunitomo (MLIT), Mr. Kiyofumi Yoshino (MLIT), Ms Mariko Kobayashi (Permanent Delegation to UNESCO), Dr Tadahiko Sakamoto (PWRI), Mr. Akira Terakawa (PWRI), Mr. Daisuke Kuribayashi (PWRI), Mr. Shigenobu Tazou (PWRI), Mr. Kenji Suzuki (MLIT) and Mr Seiji Ito (MLIT)).
- (3) The 2nd GRAPHIC meeting (Univ. of East Anglia, UEA, 3 April 2005): Dr Makoto Taniguchi (RIHN) attended and had discussions on database management system for GRAPHIC (Groundwater Resources Assessment under the Pressure of Humanity and Climate Change) project and review of the past research themes. The 3rd meeting was held at the Research Institute for Humanity and Nature (RIHN) in Kyoto, Japan in April 2006.
- (4) The 4th World Water Forum (Mexico City, Mexico, 16-23 March 2006): Water-related ministries or agencies, various sectors, and stakeholders participated in the Forum. (ICHARM, Prof. Takeuchi, Prof. Watanabe, Prof. Takara and others).

1.7 Other activities at regional level

1.7.1 Institutional relations/cooperation

Japanese National Committee supported the proposals for the UNESCO Participation Programme 2006-2007 for the “Regional Conference on Regional Conference on Hydrology and Water Resources Management for Hazard Reduction and Sustainable Development,” based on a request from the Philippines National Committee for IHP.

1.7.2 Completed and ongoing scientific projects

N/A

2. FUTURE ACTIVITIES

2.1 Activities planned until December 2007

- 1) The 14th Session of the IHP Regional Steering Committee (RSC) for Southeast Asia and the Pacific will be held in Bangkok, Thailand, in conjunction with the 3rd Asia Pacific Association of Hydrology and Water Resources Conference (APHW2006), in October 2006.
- 2) The 16th IHP Training Course with the theme “Oceanography Basics” will be held in Nagoya, Japan, in December 2006.

2.2 Activities foreseen for 2008-2009

- (1) Participation in RSC activities including Asian Pacific FRIEND and the Catalogue of Rivers.
- (2) Nagoya University IHP Training Courses in 2008 and 2009.
- (3) Implementation of projects related to IHP-VII.
- (4) Activities related to the International Center for Water-related Hazards and Risk Management (ICHARM).
- (5) Research on HELP basins.
- (6) Collaboration with UNESCO-MAB activities.

2.3 Activities envisaged in the long term

- (1) Participation in IHP-VII projects and RSC activities.
- (2) Nagoya University IHP Training Courses.
- (3) Information dissemination through a web page of the National Committee.