

NATIONAL REPORT ON IHP RELATED ACTIVITIES FROM INDONESIA FOR 18TH SESSION OF IHP INTERGOVERNMENTAL COUNCIL UNESCO

1. ACTIVITIES UNDERTAKEN IN THE PERIOD JULY 2006 – MAY 2008

1.1 Meetings of the IHP National Committee

The organizational structure of the Indonesian National Committee for IHP consist of a Chairman, a Vice Chairman, two Secretaries, and 14 members from various research institutes, universities and sectoral-departments. These institutes consist of the Indonesian Institute of Sciences (LIPI), University of Indonesia, Bogor Institute of Agriculture, Bureau of Meteorology, Departments of Public Works, Agriculture, and Forestry.

The Indonesian National Committee for IHP is on the threshold of restructuring its activities based on considerations: (i) retuning the program within the new path of IHP Programme phase VII; (ii) obtaining better participation from key stakeholders.

The present composition of the National Committee is:

Chairman : Hery Harjono
Vice Chairman : Arie Setiadi
Secretary I : Gadis Sri Haryani
Secretary II : Nenny Sintawardani

Members:

- | | |
|----------------------------|--------------------------------------|
| 1. P.E. Hehanussa | LIPI |
| 2. M. Rahman Djuwansyah | LIPI |
| 3. Hadikusumah | LIPI |
| 4. Sudaryati Cahyaningsih | LIPI |
| 5. Bogie Soedjatmiko | LIPI |
| 6. Indreswari Guritno | University of Indonesia (UI) |
| 7. Hidayat Pawitan | Bogor Agriculture Institute (IPB) |
| 8. Istiqlal Amien | Department of Agriculture |
| 9. Sulad Sriharto | Department of Public Works |
| 10. Agung Bagiawan | Department of Public Works |
| 11. Willem Putuhena | Department of Public Works |
| 12. I Wayan Susi Dharmawan | Department of Forestry |
| 13. Hery Harjanto | Bureau of Meteorology and Geophysics |
| 14. Jusman Sihombing | Department of National Education |

The committee hold bimonthly coordination meetings and in addition several technical meetings as needed for the planning and implementation of seminars and workshops organized under coordination of the committee. The committee routine meetings is attended by the Chairman of the Indonesian Committee for UNESCO and by Program Specialist of the UNESCO Jakarta Office. Members of the national committee through regular meetings distribute informations gathered during the meeting as well as report to the meeting hydrological and related activities in their organizations.

The mailing address is as follows :

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And/cc to

Bureau of Science and Technology Cooperation and Promotion, the Indonesian Institute of Sciences (LIPI)
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1.1.1 Status of IHP-VI activities

Selected activities related to the IHP-VI programme are implemented by and in various departments, universities, and research institutions, members of the IHP National Committee. During the bi-monthly committee meeting, reports of activities from each group were delivered for the knowledge and use by other members and for related IHP-VI activities.

A series of workshops on Preparation and Formulation of Indonesia's IWRM & WE (Integrated Water Resources Management and Water Efficiency) was held starting February 2005: This is a contribution for IHP VI Theme 2: *Integrated Watershed and Aquifer Dynamics*.

A contribution to IHP VI Theme 5: *Water Education and Training*: under the flag of the Indonesia Water Partnership, consisting of stakeholders related to water have taken place in the annual World Water Day since year 2000. Its main objective is to conduct campaign through training, educating and dialogue, and seminar programs to augment public participation. Annual themes were changed according to the prevailing national needs. Three strategic target groups have been prioritized, namely school children and their teachers, decision makers cum academics, and farmers.

1.1.2 Decisions regarding contribution to/participation in IHP-VII

1.2 Activities at national level in the framework of the IHP

1.2.1 National/local scientific and technical meetings

The Asia Pacific Center for Ecohydrology (APCE) in Cibinong has held various activities since 2001 attended by regional participants in the region. The speed of physical developments in the country did put more attention to local single structures while less to its surroundings as well as to upstream and downstream related problems. This was the result of (an only) sector or departmental approach where coordination with other disciplines and sectors was forgotten. This mistake was lately recognized and better coordination through understanding of the very close relation between hydrological dynamics and ecological function has been understood. The formalization of APCE as a 2nd category UNESCO institute is being prepared under the LIPI organization.

The Research Institute of Water Resources organized national hydrological training program every year. The RIWR is planning to

strengthen it through national activities. In conjunction with WMO who endorsed and supported the Indonesian proposal it will conduct a Regional Hydrology Training Center for Asia Pacific. It will be held in Indonesia in conjunction with the national training program.

1.2.2 Participation in IHP Steering Committees/Working Groups

Annual meetings of the Regional Steering Committee for IHP in the Asia Pacific region are held in rotational base locations. Indonesia has always participated in these yearly meetings.

1.2.3 Research/applied projects supported or sponsored

- SARCS Carbon and Water Cycle Research Project: *Carbon, Nutrient and Water Fluxes of River Basins of the Java Island*, implemented by Bogor Agricultural University (IPB Bogor) and the Agency for the Assessment and Application of Technology (BPPT Jakarta) between May 2006 to October 2007.
- In order to meet the WMO Standard in hydrological measurement, it is proposed to develop calibration laboratory for hydrology equipment (current meter rainfall recorder, climatology, water level recorder) in Medan for west region, Jogja for central region and Makassar for east region of Indonesia.
- Erosion protection study is conducting at the Eretan waters, Indramayu in 2006 – 2007 by Research Center for Oceanography - LIPI. The objective of this study is to understand the dynamics change process of coastline area caused by the existence of the interaction among air, sea and land which causes the coastal erosion. The developing of numerical model will be done in 2007 based on Horikawa (1988) and groin design based on US Army Corps Engineering (1975) which is able to be used for the prediction of erosion protection of coastline changes.
- Operational Hidrometeorological observed:
 - Meteorological and Geophysical Agency (BMG) operated rain gauges for observing rainfall. Totally amount of rain gauges active are 2678 (Source : BMG, 2006). Another instruments also operated by BMG i.e Monotoring Automatic Weather Station (MAWS) at 29 location station. BMG and Jamstec (Japan Minister of Science and Technology) collaborated to monitor convective cloud activities at Jambi and Padang with Automatic Weather Station (AWS).
 - Development of Radar Station on 2006 at 4 location i.e. Makassar, Menado, Surabaya, Padang.
 - Development of Radar Station on 2007 at 3 location i.e Pontianak, Lampung, and Biak. Existing Radar Station till 2006 are 22 location.
 - Mapping to flood forecast potentials at 8 district in Central Java, East Java, and South Sumatera (activity on 2006).
 - Mapping to flood forecast potentials at 11 district (activity on 2007)

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

- JSPS-DGHE Joint Research Project FY 2007-2009 on *Watershed Management for Sustainable Water Resources Development in a Humid Tropical Regions*, implemented in Indonesia side by Bogor Agricultural University, Research Centre for Geotechnology- LIPI, and Research and Development Agency - Department of Agriculture, started April 2007 to March 2010.
- Establishment of National Guidelines of Quality Assurance for Hydrological Management that is done in collaboration among hydrology operator in Indonesia (c.q. Directorate General of Water Resources, Research Center of Water Resources, Agency for Meteorology and Geophysics, Department of Energy and Mineral Resources, Department of Agriculture, Department of Forestry, Indonesian Institute of Science, Agency for Research and Technology Dissemination, etc)

1.2.5 Other initiatives

- Participation in a Workshop on Water Management in Islamic Countries, 23 – 27 February 2007, in Tehran, Iran
- International Joint Workshop on Water and Climate, Department of Public Works, 23 – 24 May, 2007.
- National Workshop of Forestry and Climate Change in Indonesia, Department of Forestry, 27 – 28 August, 2007.
- International Workshop on Impacts of Reforestation of Degraded Land on Landscape Hydrology in the Asian Region, National Institute of Hydrology, Roorke 247 667 INDIA, 6-10 March, 2006
- National Seminar Series on Water Resources conditions to Support Improved Rice Production, in Cooperation between Indonesian Society of Hydrology with Department of Public Works, Department of Agricultures and the Agency of Meteorology and Geophysics, February 2007, August 2007 and November 2007.
- Department of Public Work is studying global climate change to adopt the effect on the public infrastructures
- Indonesia hosted world meeting on global climate change in December 2007.

1.3 Educational and training courses

1.3.1 Contribution to IHP courses

1.3.2 Organization of specific courses

- The Research Institute for Water Resources RIWR held Hydrological Training Course every year two times. This year is held in Bandung, from July 29 – 3 August 2007 with the Topic of Hydrological Operational and in November 2007 with the Topic of Applied Hydrology.
- Directorate of Water Resources Management, Directorate General of Water Resources has conducted meeting in order to establish concept of National Guidelines of Quality Assurance for Hydrological Management in 3 phases on November 2007.
- Directorate of Water Resources Management, Directorate General of Water Resources in cooperation with Research Center of Water

Resources has conducted hydrology training for central hydrology operation staff on 4 – 6 December 2006.

1.3.3 Participation in IHP courses

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

1.5 Publications

1.6 Participation in international scientific meetings

1.6.1 Meetings hosted by the country

- Department of Public Work organized an event on International Joint Workshop on Water and Climate on 23 – 24 May 2007 that is held in Jakarta
- Government of Indonesia hosted the UNFCCC, United Nation Forum on Climate Change in Bali, December 2007

1.6.2 Participation in meetings abroad

- Prof. Jan Sopaheluwakan, and Dr. Gadis Sri Haryani represented Indonesia in the RSC Meeting 16 – 20 October 2006, in Bangkok, Thailand
- Mr. Eddy A. Djadjadiredja, Agung B. Ibrahim, Rahmat S.L, Samuel Johnson participated UNESCO IHP 14th RSC Meeting for Southeast Asia & The Pacific, Bangkok, Thailand, 15 – 20 October 2006 in conjunction with the 3rd Asia Pacific Association of Hydrology and Water Resources Conference.
- Prof. Peter Hehanussa attend a workshop on Water Management in Islamic Countries, 23 – 26 February 2007, in Tehran, Iran.
- Prof. Hehanussa attended the meeting of Directors of UNESCO's Water Related Centers, in IHE Delft The Netherlands, 11 – 16 June 2007
- Prof. Hehanussa attended a meeting of the Directors of UNESCO's Water Related Center, 22 – 26 September 2007, Bangkok Thailand.
- Dr. Hery Harjono, Mr. Eddy A. Djadjadiredja, Agung B. Ibrahim, Rahmat S.L, Prof. Hidayat Pawitan participated UNESCO IHP 15th RSC Meeting for Southeast Asia & The Pacific (SEAP), Manila, Philippines, 19 – 23 November 2007 in conjunction with a "International Conference on Hydrology and Water Resources Management for Hazard Reduction and Sustainable Development (HRSD 2007)".

1.7 Other activities at regional level

1.7.1 Institutional relations/cooperation

1.7.2 Completed and ongoing scientific projects

- The Asia Pacific Center for Ecohydrology (APCE) have ongoing activities in the Saguling Reservoir in the Upper Citarum River, West Jawa. This is an activity to understand and regulate the eutrophication process that has taken place in the region.
- APCE is also starting to take part in the SWATC Asia Programme under coordination and coordination with Europe SWATC Programme. This is a programme under the coordination of IHE-Delft, an activity that is trying to understand, plan and foresee the cities of the future related to water scarcity to be faced in the next decades.

2. FUTURE ACTIVITIES

2.1 Activities planned until December 2009

- Preparing Report on IFD Analyses by using Indonesian methods. The report has been sent to Prof. G. Tabios.
- Preparing River catalogue Vol VI and sent it to UNESCO Jakarta. The name of the river K. Ciujung-Kragilan dan K. Ciliman-Leuwikopo.
- Legislation for Indonesia National Standard for National Guidelines of Quality Assurance for Hydrological Management
- Preparing Guidelines of Quality Inspection for Hydrology Management
- Preparing Guidelines of hydrology data validation
- Preparing Guidelines of Water Balance Condition.
- Participation in IHP-RSC Meeting, Asian Pacific FRIEND and Catalogue of Rivers
- Participation in Training course in 2008 and 2009 at Nagoya University
- Participation in program at the International Center for Water-related hazards and risk management (ICHARM)

2.2 Activities foreseen for 2010-2011

- Participation in IHP-RSC meeting Asian Pacific FRIEND and Catalogue of Rivers
- Participation in IHP-Training course at Nagoya University

2.3 Activities envisaged in the long term

- Indonesian National committee for IHP will promote activities to public coordinate participations at national level to augment people's awareness through, educations and trainings on hazards caused by global warming, as well as hazards caused by geological and volcanological events, in which Indonesia is one of the most prone areas. These include sea level rise, flood and drought hazard, volcanic debris control, earthquakes, tsunamis, water and food security, and access to save water. Area of priorities is mega cities, and coastal areas. Considering that Indonesia is an archipelago (more than 17.508 islands), inhabited by more than 220 million people, this is a large task. The objective is to promote people's preparedness, by the communities as well as governments institutions, in facing the oncoming hazards.
- Asia Pacific Center for ecohydrology (APCE) has been set up in Cibinong Science Center in close cooperation with Research Center for Limnology, Indonesian Institute of Sciences. It has prepared a demo-site which is located at the upper Citarum Basin. The reservoirs collect water that drains the

Bandung Basin where urban and industrial wastes are still a major problem. Eutrophication of the reservoir is being studied to promote alternatives to reduce the pollutants. Water cycle related to erosion and sedimentation is also being studied in a small Cililin Basin. Results of studies will be shared as study cases with other Asia – Pacific scientists interested in ecohydrology implementation.

- Participation in IHP-RSC activities and IHP Intergovernmental Council meetings.