

SUMMARY REPORT

The First ASEAN Hydroinformatics Data Centre (AHC) Meeting

18 March 2019, Bangkok, Thailand

INTRODUCTION

1. ASEAN Hydroinformatics Data Centre (AHC), proposed by Hydro - Informatics Institute (HII), Thailand, has been approved as a new centre under Sub-Committee on Microelectronics and Information Technology (SCMIT) at the 72nd Meeting of the ASEAN Committee on Science and Technology (COST-72) on 24th May 2017, Brunei Darussalam. Furthermore, the Terms of Reference (TOR) of AHC was approved at the COST-74 on 10 – 11 May 2018, Chiang Mai, Thailand.
2. The AHC project will be a platform to support data connectivity from ASEAN's water, weather and disaster related agencies. ASEAN member states can also share their knowledge and technology that could support AHC in data sharing toward its future operation and implementation.
3. The First Meeting of ASEAN Hydroinformatics Data Centre (AHC) was organized on 18 March 2019 at Kappa room, Pullman Bangkok King Power hotel, Bangkok, Thailand. The Meeting was chaired by Dr. Sutat Weesakul, Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology (MOST), Thailand.
4. The Meeting was attended by delegates from the Kingdom of Cambodia, the Republic of Indonesia, the Lao People's Democratic Republic, Malaysia, the Republic of the Union of Myanmar, the Republic of the Philippines, the Republic of Singapore, the Kingdom of Thailand and the Socialist Republic of Viet Nam. Representatives from HII were also in attendance. The list of delegates appears as ANNEX 1.

AGENDA ITEM 1: WELCOME REMARKS

5. Dr. Sutat Weesakul, Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology (MOST), Thailand warmly welcomed the participants in attending the First AHC Member Meeting in Bangkok, Thailand. He expressed his confidence that AHC will be an ASEAN platform to move forward together in sharing, accelerating, and strengthening regional collaboration.

6. The Meeting noted the welcome remarks by Dr. Sutat Weesakul, Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology, Thailand. He expressed sincere appreciation to the Ministry of Science and Technology (MOST) of Thailand for the arrangement and hospitality provided to all the participants and to AMSs during various activities hosted by MOST Thailand to enhance STI collaboration in the region.

AGENDA ITEM 2: INTRODUCTION

7. Dr. Sutat Weesakul, Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology of Thailand, invite all participants to introduced themselves to the Meeting.
8. Dr. Sutat Weesakul, Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology of Thailand, introduced the background and history of the initiation of AHC to the Meeting.
9. Dr. Royboon Rassameethes, Deputy Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology of Thailand, introduced the endorsed Terms of Reference (TOR) of AHC to the Meeting.
10. The Meeting acknowledged the background and TOR of AHC. All members will share non-confidential knowledge/data, technology, and knowledge to the centre. The Meeting noted that the TOR can be amended according to comments from the floor. However, the revised TOR must be approved through SCMIT and ASEAN Committee on Science, Technology, and Innovation (ASEAN COSTI).

AGENDA ITEM 3: ELECTION OF CHAIRMAN AND VICE-CHAIRMAN

11. Dr. Sutat Weesakul, Director, Hydro - Informatics Institute (HII), Ministry of Science and Technology of Thailand, was elected as Chairman of AHC.
12. Dr. Ng Wun Jern, Professor, Environmental Bio-innovations Group (EBiG), School of Civil and Environmental Engineering, Nanyang Technological University, Singapore, was elected as Vice-Chair of AHC.

AGENDA ITEM 4: CONTRIBUTIONS AND NEEDS FROM MEMBER COUNTRIES

13. All Member defined contributions from their own country to the AHC. The Meeting discussed on three main focuses of the AHC, which are; 1) Knowledge Sharing 2) Technology Matching and 3) Capacity Building. The Members will focus on

common technologies that have been implemented in many countries, such as telemetry technology.

14. Each country delivered draft information on the contributed technologies to the AHC and will further discuss within their own country to formally develop their own work plan. The contributions and needs from each country are appeared as ANNEX 2.

AGENDA ITEM 5: MEETING FORMAT

15. The Meeting agreed to meet twice a year via video conference and face-to-face. The Meeting place will be informed by AHC Chairman and Secretariat team.

ANNEX 1: List of Delegates


Country	Position	Delegates
Cambodia	Lead Member	Mr. MOK Khemera, Department of e-Government of General Department of ICT, Ministry of Posts and Telecommunications
	Key Opinion Leader	Mr. HOEUNG Kimsay, National Committee on Science and Technology, Ministry of Industry and Handicraft
Indonesia	Lead Member	Dr. Adam Pamudji Raharjo, Education and Research staff, Research Group Coordinator on Hydroinformatics, Faculty of Civil Engineering, University of Gadjah Mada, Indonesia
	Key Opinion Leader	Dr. Andung Bayu Sekaranom, Faculty of Geography, University of Gadjah Mada, Indonesia
	Partner	Dr. Hidayat, Natual Hazard Division, Indonesian Institute of Sciences (LIPI)
	Partner	Hartanto Sanjaya, Center of Technology for Regional Resources Development, Agency for the Assessment and Application of Technology
	Partner	Dr. Ketut Wikantika, Center for Remote Sensing, Bandung Institute of Technology (ITB)
Lao PDR	Lead Member	Mr. Saysongkham PHANOUVONG, Institute of Technology Computer and Electronic
	Key Opinion Leader	Mr. Maity SIRIRATH, Technology Computer and Electronics Institute
	Key Opinion Leader	Mr. Bounhieng SOUVANNAHANE, Department of Meteorology and Hydrology
Malaysia	Lead Member	Prof. Dr. Edy Tonnizam Mohamad, Centre of Tropical Geoengineering, University Teknologi Malaysia
	Key Opinion Leader	Assoc. Prof. Dr. Ahmad Athif Bin Mohd Faudzi, Center for Artificial Intelligence & Robotics, Universiti Teknologi Malaysia
	Key Opinion Leader	Dr Azlin binti Ahmad, Universiti Teknologi MARA
Myanmar	Lead Member	Mr. Kyaw Soe for Mr. Win Hliang, Directorate of Water Resources and Improvement of River Systems (DWIR), Ministry of Transport and Communications (MOTC)
	Key Opinion Leader	Mr. Sein Lwin for Mr. Aung Myo Khaing, Directorate of Water Resources and Improvement of River Systems (DWIR), Ministry of Transport and Communications (MOTC)
	Key Opinion Leader	Win Win Zin, Yangon Technological University, Ministry of Education
Philippines	Key Opinion Leader	Dr. Joel S. Marciano Jr., DOST-ASTI on data and computing infrastructure
Singapore	Lead Member	Prof. Ng Wun Jern, Nanyang Technology University

Country	Position	Delegates
Thailand	Lead Member	Dr. Sutat Weesakul, Hydro - Informatics Institute (HII)
	Key Opinion Leader	Dr. Somkiat Apipattanavis, Expert on Planning and Project, Office of National Water Resources
Vietnam	Key Opinion Leader	Dr. Nguyen Quang Hung, Faculty of Hydrology, Meteorology, and Oceanography, Vietnam National University

Other Participants

- 1) Representatives from Hydro - Informatics Institute (HII), Ministry of Science and Technology, Thailand
- 2) Representatives from National Electronics and Computer Technology Center (NECTEC), Ministry of Science and Technology, Thailand
- 3) Representative from Friends in Need (of "PA") Volunteers Foundation, Thai Red Cross

ANNEX 2: Contribution and Needs from Member Countries

 Contributions from Member Countries									
	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
Knowledge Sharing	-governance	Disaster mngt Community-based sustainable telemetry system	Software for lower Mekong (from MRC) → water level & rainfall	open database (open government data) freely access for public/ researcher. Also allowed to use the data for other purposes, esp research. http://www.data.gov.my/	- Experience s on disaster encounter	-DRRM -Data use policy/ Data mngt and integration practices	Non-Technical: structure of flood control program, governance	-CWRM -Dev of water/weather/ disaster risk data system -Info from ThaiWater.net	Share knowledge from MRC & Vietnam
Technology Matching	- Define common software to manage hydroinformation for AMS - Define sharing system platform for AHC - Define technology development standard	- Modeling - Simple telemetry system - Asia-Pacific Center for Ecohydrology (UNESCO CAT-2 ())	Manual/Auto Telemetry (HYMET software)	MDEC (Malaysia Digital Economy Corporation) initiated ADAX (ASEAN Data Analytics Exchanged), focus on developing talents in order to support ir4.0 – the national agenda. - have many data scientist that can do analytics	-Hydromet station	- Sensor network (inc connectivity)	Mathematical model & visualization (urban situation) Sensors on/off shore Desalination Water reclamation	- Transfer suitable technology (e.g. simple & easy Telemetry station) - QGIS (low-cost software) via good practices site	Telemetry from Semi & Automatic (+regulation)
Capacity Building	- Co-creation using standard technology - Joint development resource such as manpower	- Sediment-related disaster management (Primary/Secondary Volcanic disaster) - Training			-Modeling capacity (hydraulic, flood mngt)	- GIS - Remote sensing - Data science & analytic (machine learning & AI)	IHL Technical - Nanyang Nontechnical – ministry	- Prioritize CB needed - Training + Budget support (need the right organization/person)	Univ research Need Gov Agency to join



Needs from Member Countries

	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
Knowledge Sharing		Success of Thailand (data base or connectivity protocol)		Flood & Drought Mngt Rain/Haze/ Groundwater		-DRRM -Data use policy/ Data mngt and integration practices	Weather data Geological data Historical data Storm surge Urban agriculture	Disaster flood/dro ught	
Technology Matching		-Create - Common data format For AHC	-Weather modeling/ water mngt -Low-cost Hardware	Software – modelling (water & underground water), prediction, water desalination/ treatment		-Sensor network (inc connectivity) -			
Capacity Building			-Data & Modeling software -Weather modeling software -Water management Modeling system -Data integration (law & regulations)	Sharing facility in terms of modeling/ software/ prediction/ WRM	Capacity building for HIC (AIRBM)	GIS -Remote sensing -Data science & analytic (machine learning & AI)			