“ Unesco global Ecohydrology Demosite meeting”, 1-4 july 2019 – Putrajaya – Malaysia.

Pascal Breil

UNESCO GLOBAL ECOHYDROLOGY DEMOSITE MEETING

UNESCO INTERNATIONAL ECOHYDROLOGY FORUM

UNESCO ECOHYDROLOGY SCIENTIFIC ADVISORY COMMITTEE MEETING

1 - 4 JULY 2019 | PUTRAJAYA, MALAYSIA

PROGRAMME BOOK

LESTARI
UNIVERSITI KEBANGSAAN MALAYSIA

UNESCO
United Nations Educational, Scientific and Cultural Organization

International Hydrological Programme

ecohydrology programme

UNESCO
United Nations Educational, Scientific and Cultural Organization

UNESCO Jakarta
Regional Science Bureau for Asia and the Pacific

PERBADANAN PUTRAJAYA

INTRODUCTION

The Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia (UKM) in Collaboration with UNESCO-IHP Paris and UNESCO Office Jakarta, supported by the Putrajaya Corporation (PPj) are organising the UNESCO Global Ecohydrology Demosite Meeting (1-2 July 2019), UNESCO International Ecohydrology Forum (3 July 2019) and UNESCO Ecohydrology Scientific Advisory Committee (SAC) Meeting (4 July 2019) in Putrajaya, Malaysia.

Ecohydrology, as a scientific paradigm, is based on the assumption that water – in the hydrological cycle, is the common denominator and regulator of most types of ecological processes, such as nutrient circulation and energy flow, which determine the degree of biodiversity, bioproductivity, availability of ecosystem services for society and the resilience of ecosystems to climate change. Conversely biota also modify the hydrological cycle to a great extent – both types of interaction act as the background to the use of ecosystem processes as innovative management tools to enhance catchment's sustainability potential (expressed as water, Biodiversity) and to harmonize them with technical improvement measures.

Since 2010, UNESCO, in the framework of its International Hydrological Programme (IHP), has promoted the establishment of several demonstration sites (demosites) around the world to apply ecohydrology solutions in watersheds at all scales. The demosites show the integration of the concept of "improved ecosystem potential" with ecohydrology strategies closely related to water (i.e. ecohydrological engineering solutions by complementing standard engineering approaches) to improve integrated water resources management (IWRM) in specific areas. The demosites are long-term monitoring projects that involve different local actors to solve environmental, economic and social problems with the implementation of three EH principles (Hydrology, Ecology and Ecological Engineering). Also, they contribute to the Sustainable Development Goals, in particular SDG 2 (sustainable human development) and the one related to water (SDG 6, targets 6.5 and 6.6), as well as SDGs 13 (Climate Action), 14 (Life below water) and 15 (Life on land).

The network consists today of 23 sites in 18 countries around the globe. There is a need to strengthen and enlarge the network and use its potential to disseminate the ecohydrology concept worldwide in order to transferring knowledge to Member States, students, general public and decision makers.

(Further info at http://ecohydrology-ihp.org/demosites/demosites/list)

OBJECTIVES & OUTPUTS

The overall objectives of the UNESCO Global Ecohydrology Demosites Meeting are:

- To gather all UNESCO Ecohydrology demosites to present the respective progress in proposing solutions to solve problems, current initiatives and research as well as achievements.
- To share best practices on Ecohydrology in each demosite, including their relationship with nature based solutions (NBS), potential cost/benefit analyses and enhancement of ecosystem services
- To highlight contribution of demosites to the 2030 Agenda (SDGs)
- To evaluate and consider potential new demosites
- To strategize the best approach for “Future Ecohydrology”.

Expected outputs:

- Best practices from each demosite compiled and shared with reference to NBS, cost/benefit analyses and enhancement of ecosystem services;
- Knowledge improved and awareness raised on Ecohydrology;
- Set of recommendation for “Future Ecohydrology”, including communication, dissemination actions, etc.
- Agreed upon recommendation of EH SAC to present the global network of Ecohydrology demonstration sites to the next IHP Council with the aim of confirming the network under the auspices of UNESCO and thus recognize UNESCO Division of Water Sciences’ and more specifically the SC/HYD/EQE section’s efforts to reinforce this programmatic part of IHP-VIII and facilitate its expansion, as deemed appropriate by the Member State.

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Day 1, Monday 1 July 2019		
UNESCO GLOBAL ECOHYDROLOGY DEMOSITE MEETING (*By Invitation Only)* **Venue: The Everly Putrajaya Hotel**		
8.30 am	Registration	
9.00 am	Welcome Remarks	***Prof. Dato' Dr. Mazlin Bin Mokhtar*** *Director* *Institute for Environment and Development (LESTARI)* *Universiti Kebangsaan Malaysia (UKM)*
9.15 am	Opening Remarks	***Mr. Hans Dencker Thulstrup*** *Senior Programme Specialist* *Water and Environmental Sciences* *UNESCO Regional Science Bureau for Asia and the Pacific, Jakarta* ***Mr. Giuseppe Arduino*** *Chief Ecohydrology, Water Quality and Water Education Section, Division of Water Sciences, UNESCO IHP, Paris*
9.30 am	Introduction of *the Scientific Advisory Committee (*SAC) & All Demosites Member By ***Mr. Giuseppe Arduino*****,** UNESCO IHP Paris	
10.30 am	Tea Break & Photo Session	
11.00 am	Session 1	**Ecohydrology Demosite in Asia Pacific (20' each)** Moderator: *Mr. Hans Dencker, Thulstrup*, UNESCO Office *Jakarta* • Demosite 1: **Putrajaya Lake & Wetlands, Malaysia** By *Dr. Rahmah Elfithri*, Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia (UKM) • Demosite 2: **Saguling Reservoir, Indonesia** *By Dr. Ignasius Sutapa,* Asia-Pacific Centre for Ecohydrology (APCE), Cibinong, Indonesia • Demosite 3: **Davao City, Philippines** By *Dr. Ruth Gamboa,* University of the Philippines Mindanao (UP Mindanao), Philippines • Discussion

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12.30 pm	Lunch	
2.00 pm	Session 2	**Ecohydrology Demosite in Europe (20' each)** Moderator: *Prof. Marcelo Gaviño Novillo*, Departamento de Hidráulica, Universidad Nacional de La Plata and Universidad de Buenos Aires, Argentina • Demosite 4: **Guadiana Estuary, Portugal** By *Prof. Dr. Luis Chicharo,* Professor and Coordinator of the Chair in Ecohydrology, University of Algarve (UAlg) and Director of International Centre for Coastal Ecohydrology (ICCE), Portugal • Demosite 5: **Sulejow Reservoir-Pilica River, Poland** By *Prof. Dr. Maciej Zalewski*, Professor and Director European Regional Centre for Ecohydrology (ERCE), Poland • Demosite 6: **Lodz-Sokolowka River, Poland** By *Prof. Dr. Maciej Zalewski*, Professor and Director European Regional Centre for Ecohydrology (ERCE), Poland • Demosite 7: **Lodz-Ner River, Poland** By Mr. Paweł Jarosiewicz, Secretary for the Polish National Committee for UNESCO/IHP, Lodz, Poland • Discussion
3.30 pm	Tea Break	
	Session 2 (Cont'd)	**Ecohydrology Demosite in Europe (20' each)** Moderator: Prof. Dr. Maciej Zalewski, Professor and Director European Regional Centre for Ecohydrology (ERCE), Poland • Demosite 8: **Urban Periphery of Lyon, France** By *Dr. Pascal Breil,* National Research Institute of Science and Technology for Environment and Agriculture (IRSTEA), Centre de Lyon-Villeurbanne, France

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	Session 2 (Cont'd)	• Demosite 9: **Trasimeno Lake-Tiber River Basin, Italy** By *Stefano Fazi,* Istituto di Ricerca sulle Acque-Water Research Institute (IRSA), Consiglio Nazionale delle Ricerche (CNR) – National Research Council of Italy (CNR), Roma, Italy • Demosite 10: **Kielstau Basin, Germany** By *Dr. Georg Hörmann*, Dep. of Hydrology and Water Resources Research Institute of Natural Resources Conservation, Kiel University, Kiel, Germany • Discussion
4.30 pm	Discussion/Reflection	
5.00 pm	End of Day 1	
7.00 pm	Welcome Dinner @Putrajaya Seafood Restaurant	

Day 2, Tuesday 2 July 2019		
UNESCO GLOBAL ECOHYDROLOGY DEMOSITE MEETING *(By Invitation Only)* **Venue: The Everly Putrajaya Hotel**		
8.30 am	Registration	
9.00 am	Session 3	**Ecohydrology Demosite in Africa (20' each)** Moderator: Dr. Jayakumar Ramasamy, Programme Specialist & Chief, Natural Sciences UNESCO Nairobi Office, Kenya • Demosite 11: **Assela-Burkitu Reservoir**, Ethiopia By *Mr. Yohannes Zerihun Negussie***,** Coordinator Ecohydrology Coordination Office, Ministry of Water, Irrigation and Electricity, Addis Ababa, Ethiopia • Demosite 12: **Gumera Basin,** Ethiopia By *Mr. Yohannes Zerihun Negussie***,** Coordinator Ecohydrology Coordination Office, Ministry of Water, Irrigation and Electricity, Addis Ababa, Ethiopia

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		• Demosite 13: **Lake Naivasha, Kenya** By *Dr. Nicola Pacini*, University of Calabria, Calabria, Italy • Discussion
10.30 am	Tea Break	
11.00 am	Session 4	**Ecohydrology Demosite in Latin America (20' each)** Moderator: *Prof. Dr. Luis Chicharo,* Professor and Coordinator of the Chair in Ecohydrology, University of Algarve (UAlg) and Director of International Centre for Coastal Ecohydrology (ICCE), Portugal • Demosite 14: **Lacar Lake-Trabunco Quitrahue Basin, Argentina** By *Prof. Marcelo Gaviño Novillo*, Coordinator Focal Point for Latin America and the Caribbean, Departamento de Hidráulica, Universidad Nacional de La Plata and Universidad de Buenos Aires, Argentina • Demosite 15: **Los Paltas-Catacocha, Ecuador** By *Mr Marco Albarracín,* Technical Manager**,** INGERALEZA**,** Quito, Ecuador • Discussion
12.30 pm	Lunch	
2.00 pm	Session 5	**New Ecohydrology Demosite Proposal (20' each)** Moderator: *Mr. Giuseppe Arduino***,** UNESCO IHP Paris • Proposed Demosite 1: **Fengxi New City (the Sponge City), Shaanxi Province, China** By *Prof. Dr. Jiake Li,* Institute of Water Resources and Hydroelectric Engineering, Xi'an University of Technology, Shaanxi Province, People's Republic of China

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2.00 pm	Session 5	• Proposed Demosite 2: **Khuvsgul Lake, Mongolia** By *Prof. Dr. Luis Chicharo,* Professor and Coordinator of the Chair in Ecohydrology, University of Algarve (UAlg) and Director of International Centre for Coastal Ecohydrology (ICCE), Portugal • Proposed Demosite 3: **Mindu Dam Morogoro, Tanzania** By *Dr. Makarius Lalika,* Sokoine University of Agriculture (SUA), Solomon Mahlangu College of Science and Education, Department of Geography and Environmental Studies, Morogoro Tanzania • Proposed Demosite 4: **Santa Cruz-Galapagos, Ecuador** By *Mr Marco Albarracín,* Technical Manager**,** INGERALEZA**,** Quito, Ecuador • Proposed Demosite 5: **Teusacá River Basin, Colombia** By *Mr. Jose Alberto Gaona Currea,* Ecologist and International Land and Water Management MSc*,* Bogota*,* Republic of Colombia • Proposed Demosite 6: **Timor Leste** By *Mr. Hans Dencker Thulstrup*, UNESCO Office *Jakarta* • Discussion
4.00 pm	Tea Break	
4.30 pm	Presentation of the field trip about Putrajaya Constructed Wetland and Man-made Lake, a UNESCO Ecohydrology Demosite, Malaysia By *Mr. Ahmad Zubir Sapian*, Director, Environment, Lake and Wetland Division, Putrajaya Corporation (PPj)	
4.45 pm	Discussion, Planning & Way Forward	
5.00 pm	Conclusion & Closing Session	

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Day 3, Wednesday 3 July 2019		
UNESCO INTERNATIONAL ECOHYDROLOGY FORUM **Venue: Putrajaya Corporation**		
8.30 am	Registration	
9.00 am	Welcome Remarks	***Prof. Ir. Dr. Mohd Hamdi Abd Shukor*** *Vice Chancellor* *Universiti Kebangsaan Malaysia (UKM)*
		Datuk Dr. Aminuddin Hassim *President* *Putrajaya Corporation (PPj)*
		Mr. Hans Dencker Thulstrup *Senior Programme Specialist* *Water and Environmental Sciences* *UNESCO Regional Science Bureau for Asia and the Pacific, Jakarta*
		Mr. Giuseppe Arduino *Chief Ecohydrology, Water Quality and Water Education Section* *Division of Water Sciences, UNESCO IHP, Paris*
9.30 am	Opening Remarks	***YB. Dr. Xavier Jayakumar*** *Minister of Water, Land and Natural Resources (KATS) Malaysia*
9.45 am	**MoU Signing Ceremony** between Universiti Kebangsaan Malaysia (UKM) and UNESCO Chair on Ecohydrology @University of Algarve (UAlg), Portugal	
	Ecohydrology of Ecuador Book Launching	
10.00 am	Tea Break & Photo Session	
10.30 am	**Special Ecohydrology Lecture "Ecohydrology for Sustainability"** By ***Prof. Dr. Maciej Zalewski,*** *European Regional Centre for Ecohydrology (ERCE) Under the auspices of UNESCO, Lodz, Poland*	

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11.00 am	Ecohydrology Video Showcasing
11.15 am	Forum Discussion with all participants Moderator : LESTARI/UNESCO *Panelist 1: Representative from Ecohydrology Demosite in Asia Pacific (ASPAC) Region.* *Panelist 2: Representative from Ecohydrology Demosite in European Region.* *Panelist 3: Representative from Ecohydrology Demosite in African Region.* *Panelist 4: Representative from Ecohydrology Demosite in Latin American (LAC) Region.*
12.15 pm	Conclusion and Closing by UNESCO & LESTARI
12.30 pm	Lunch

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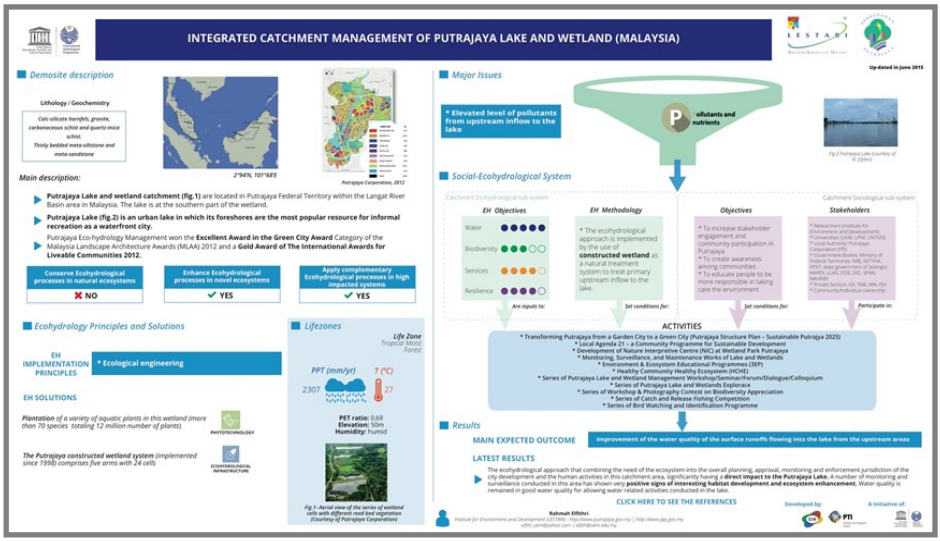
SITE VISIT TO PUTRAJAYA UNESCO ECOHYDROLOGY DEMOSITE Venue: Putrajaya Lake & Wetlands	
2.00 pm	Site Visit to Putrajaya Wetlands • Visit to Wetland Park Putrajaya (Upper wetland & Central Wetland) • Visit to Nature Interpretative Centre (NIC) Putrajaya
3.30 pm	Tea Break
4.00 pm	Site Visit to Putrajaya Lake • Putrajaya Lake Cruise
5.30 pm	End of Demosite Meeting & Site Visit



(Further info at http://ecohydrology-ihp.org/demosites/view/124)

PROGRAMME

Day 4, Thursday 4 July 2019		
UNESCO ECOHYDROLOGY SCIENTIFIC ADVISORY COMMITTEE MEETING *(Scientific Advisory Committee Member Only)* **Venue: The Everly Putrajaya Hotel**		
8.30 am	Registration	
9.00 am	Session 1	Opening & Introduction ***Giuseppe Arduino*** *Chief Ecohydrology, Water Quality and Water Education Section, Division of Water Sciences* *UNESCO IHP, Paris* ***Prof. Dr. Maciej Zalewski*** *Professor and Director European Regional Centre for Ecohydrology (ERCE),* *Polish Academy of Sciences, Poland (Chair EH SAC)* ***Prof. Dr. Luis Chicharo*** *Professor and Coordinator of the Chair in Ecohydrology, University of Algarve (UAlg) and Director of International Centre for Coastal Ecohydrology (ICCE),* *Portugal (Vice-chair EH SAC*).
10.30 am	Tea Break & Photo Session	
11.00 am	Session 2	EH SAC Meeting
12.30 am	Lunch	
2.00 pm	Session 3	EH SAC Meeting
3.30 pm	Tea Break	
4.00 pm	Discussion, Planning & Way Forward	
5.00 pm	Conclusion & Closing Session	

ORGANISING COMMITTEE

Advisor

Giuseppe Arduino, Chief Ecohydrology, Water Quality and Water Education Section, Division of Water Sciences International Hydrological Programme (IHP), UNESCO, Paris, France

Hans Dencker Thulstrup, Senior Programme Specialist, Water and Environmental Sciences, UNESCO Regional Science Bureau for Asia and the Pacific, Jakarta, Indonesia

Ecohydrology SAC Member

Coordinator

Dr. Rahmah Elfithri, Senior Lecturer/Research Fellow, Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia (UKM)

Secretariats

Mr. Nik Mohd Noor Faizul Md Saad, Senior Research Officer, LESTARI, UKM
Ms. Wandaraputri Razali, Senior Science Officer LESTARI, UKM
Ms. Nurlina Ramzan, Research Assistant, LESTARI, UKM
Mr. Norazmi Abdul Kadir, Assistant Science Officer, LESTARI, UKM
Mr. Mohd Redzuan Zulkifly, Operational Assistant, LESTARI, UKM