



Malaysia
Hands On Trust

**Regional Workshop: Pathway Towards Improved
Water Education Curricula
27-28 November 2017
Penang, Malaysia**



**WATER MANAGEMENT CURRICULA AND PATHWAY
TOWARDS IMPROVED WATER EDUCATION
CURRICULA – ASIAN PERSPECTIVE**

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Presentation Outline

1

BACKGROUND

2

OBJECTIVE

3

WATER MANAGEMENT CURRICULA

4

CHALLENGES

5

PROPOSAL 2018



BACKGROUND

Main Programme:

COMPARATIVE STUDIES OF APPLYING ECOHYDROLOGY AND IWRM FOR UPSCALING WATER SECURITY IN ASIA AND AFRICA THROUGH UNESCO CATEGORY 2 WATER CENTRE

SUB-COMPONENT	OUTPUT
Conducting comparative studies for customizing IWRM for better water management at river basin level.	Customizing IWRM at the River Basin Level ➢ 1 Volume
Development of modular curricula for water education in Asia-Pacific and Africa using Ecohydrology principles and IWRM guidelines.	Water Management Curricula using Ecohydrology and Integrated Water Resources Management (IWRM) ➢ 3 Volumes

CRITERIA	YES	NO
- In line with UNESCO's mandate	✓	
- South-south cooperation	✓	
- Focus on LDCs and/or SIDS (ASPAC/Africa)	✓	
- Builds on Malaysia expertise/capacity	✓	
- Responds to priority of beneficiary country	✓	

In Collaboration with : UNESCO Jakarta Office

Supported By: Malaysia Fund-in Trust (MFIT)



OBJECTIVE

- Facilitating continuous networking for knowledge sharing in water education towards water security
- Empowering the regional scientific collaboration particularly in Ecohydrology and IWRM in Asia Pacific and Africa
- Contributing to South-South Cooperation
- Promoting and enhancing Ecohydrology and HELP Approaches, Knowledge and implementation on the ground



WATER MANAGEMENT CURRICULA

~ The Journey



Writing workshop, Puchong, Selangor : August 2014. Leads by: Dr. Muhamad Askari



Workshop on Comparative Studies of Applying Ecohydrology and IWRM for Upscaling Water Security in Asia and Africa which was held on 7th - 9th March 2016 in Kuala Lumpur

Special final reviewer session in AKEPT, 6-9 April 2016



WATER MANAGEMENT CURRICULA

~ Topics



Volume 1

- ⑩ Introduction
- ⑩ Freshwater Ecosystem, River Ecosystem, Lake Ecosystem
- ⑩ Understanding Lake Environmental Management and Expert System Monitoring



Volume 2

- ⑩ Highland Drainage, Debris and Mud Flow, Sediment Erosion and Landslide Control
- ⑩ Erosion and It's Effect
- ⑩ Phytoremediation Technique in River Water Quality Improvement
- ⑩ Stormwater Management Ecohydrology



Volume 3

- ⑩ Introduction to Natural Channel (River) Hydraulics and Behavior
- ⑩ Hydraulic Principles Governing Flow and Regulation of Rivers Flow
- ⑩ Stream Stability, Riverbank Erosion, Failure and Approaches for Riverbank Protection
- ⑩ Flood Control, Flow Routing and Channelization
- ⑩ Morphometric Analysis of River System
- ⑩ Sensitivity of Flood Hydrographs to Different Rainfall Distributions Profile based on a Case Study
- ⑩ Introduction to education for sustainable development

CHALLENGES

~Along the Journey



- Text, equations, theory, definitions, photos, figures, table, and graphs not credited correctly and the references not listed
- Graphics, Photos, Illustration not in high resolutions
- Format content – Exercises / example
- Plagiarism

CHALLENGES~Along the Journey



Review on the contents, layout & design by UNESCO Jakarta Office's Team

Final Review on the contents, layout & design by HTC KL's Team





Gross Pollutant Traps (GPT)



Public Awareness (ROL)



Sediment Management for Lake curricula



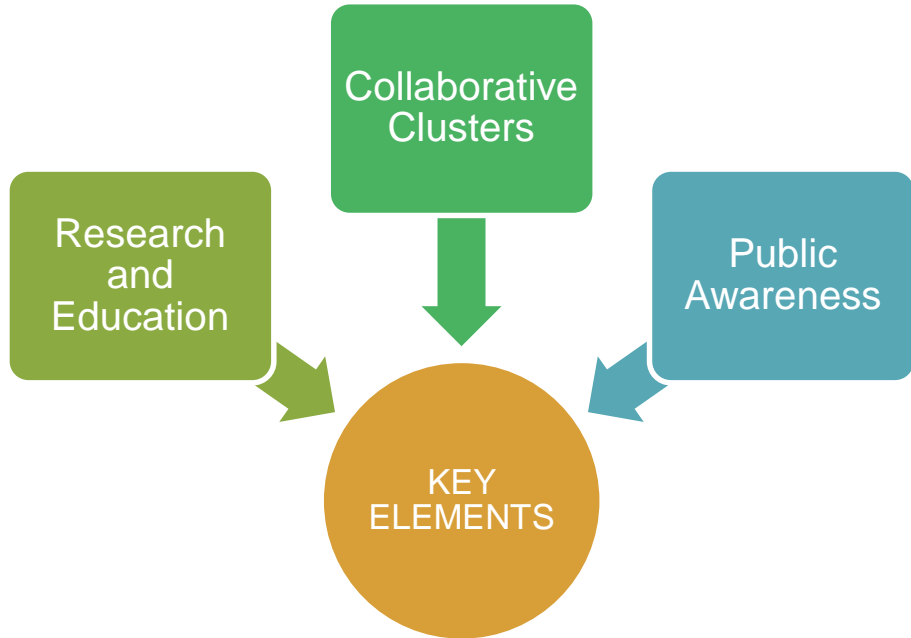
River Rehabilitation & River Restoration

Pathway

~Asian Perspective

WATER EDUCATION:

- Continuing Professional Development(CPD) – Demand Driven
- “Knowledge management” ; converting information into effective knowledge and skills : ToT

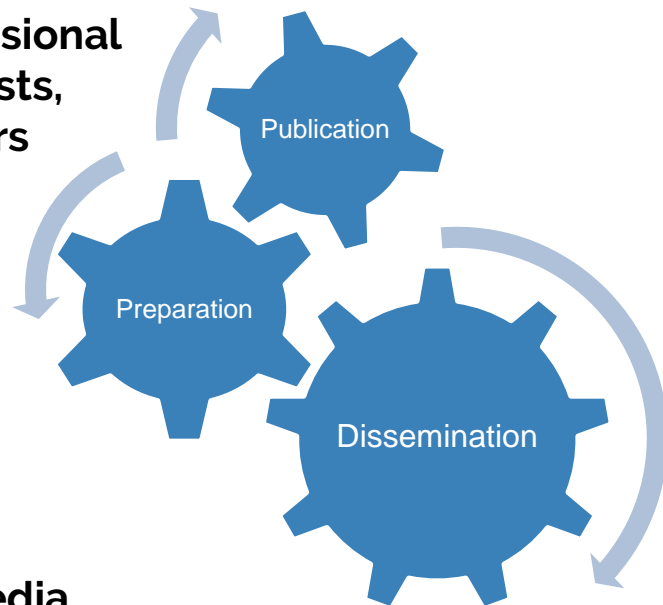


Pathway

~Asian Perspective

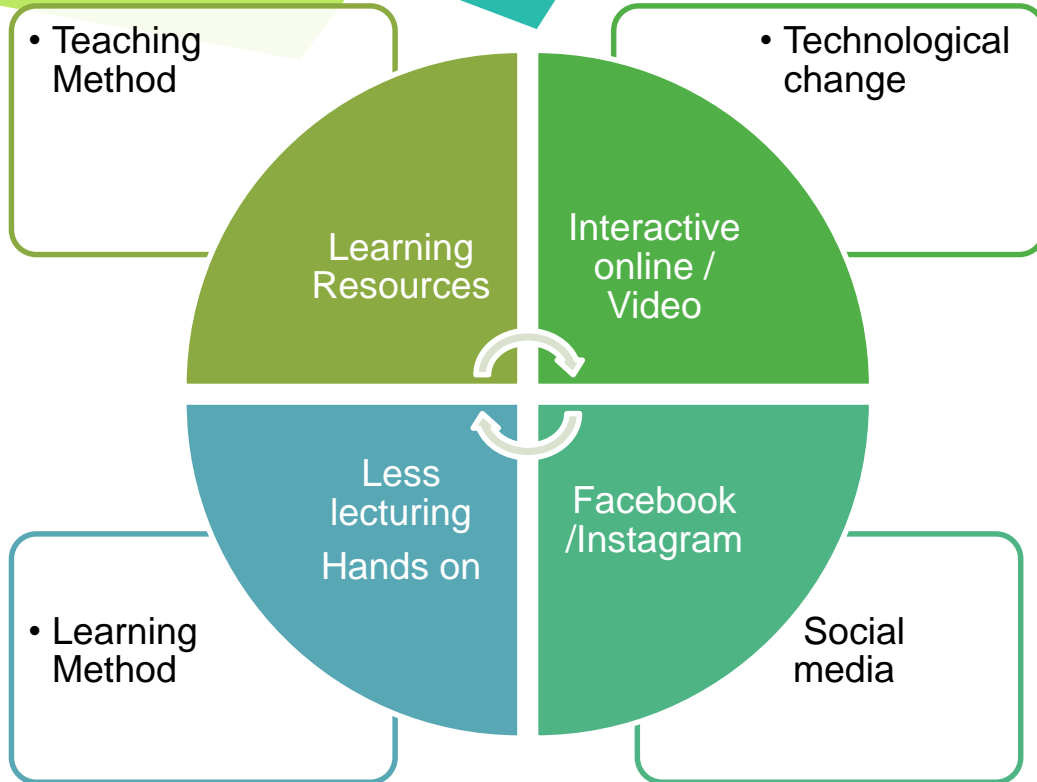
STRATEGY:

- Tertiary education and professional development of water scientists, managers and decision makers
- Training water technicians
- Water education in schools
- Community and stakeholder education
- Water education for mass-media professionals



Pathway

~Asian Perspective :Improvement



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UNESCO JAKARTA OFFICE

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Thank You

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