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

<table>
<thead>
<tr>
<th>SUB-COMPONENT</th>
<th>OUTPUT</th>
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</thead>
<tbody>
<tr>
<td>Conducting comparative studies for customizing IWRM for better water management at river basin level.</td>
<td>Customizing IWRM at the River Basin Level&lt;br&gt;1Volume</td>
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<tr>
<td>Development of modular curricula for water education in Asia-Pacific and Africa using Ecohydrology principles and IWRM guidelines.</td>
<td>Water Management Curricula using Ecohydrology and Integrated Water Resources Management (IWRM)&lt;br&gt;3 Volumes</td>
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</tbody>
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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
Pathway towards Improved Water Education Curricula

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
Pathway towards Improved Water Education Curricula

~ Topics ~

Volume 1
- Introduction
- Freshwater Ecosystem, River Ecosystem, Lake Ecosystem
- Understanding Lake Environmental Management and Expert System Monitoring

Volume 2
- Highland Drainage, Debris and Mud Flow, Sediment Erosion and Landslide Control
- Erosion and It’s Effect
- Phytoremediation Technique in River Water Quality Improvement
- Stormwater Management Ecohydrology

Volume 3
- Introduction to Natural Channel (River) Hydraulics and Behavior
- Hydraulic Principles Governing Flow and Regulation of Rivers Flow
- Stream Stability, Riverbank Erosion, Failure and Approaches for Riverbank Protection
- Flood Control, Flow Routing and Channelization
- Morphometric Analysis of River System
- Sensitivity of Flood Hydrographs to Different Rainfall Distributions Profile based on a Case Study
- 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
Pathway towards Improved Water Education Curricula

PROPOSAL 2018

- 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
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 towards Improved Water Education Curricula

~Asian Perspective: Improvement

- Teaching Method
- Technological change
- Learning Resources
  - Interactive online / Video
  - Facebook / Instagram
- Social media
  - Hands on
  - Less lecturing
ACKNOWLEDGEMENT

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UNESCO JAKARTA OFFICE

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Thank You

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