

7th ASEM Sustainable Development Dialogue Danube – Mekong Cooperation Initiative



Presentation at Session 5

Modern water resources management in education – challenges of the 21st century.

Budapest, 11-12th September 2018

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Context



- Asia-Pacific region: the World's production centre with continuing high economic growth rates
- Increase in water withdrawals vs the population growth
- Viet Nam's continued economic growth and transition away from agricultural economy
- Urgent problems in Mekong River Basin Lower Region including Vietnam
- Conflicts over water among stakeholders are increasing at various levels.



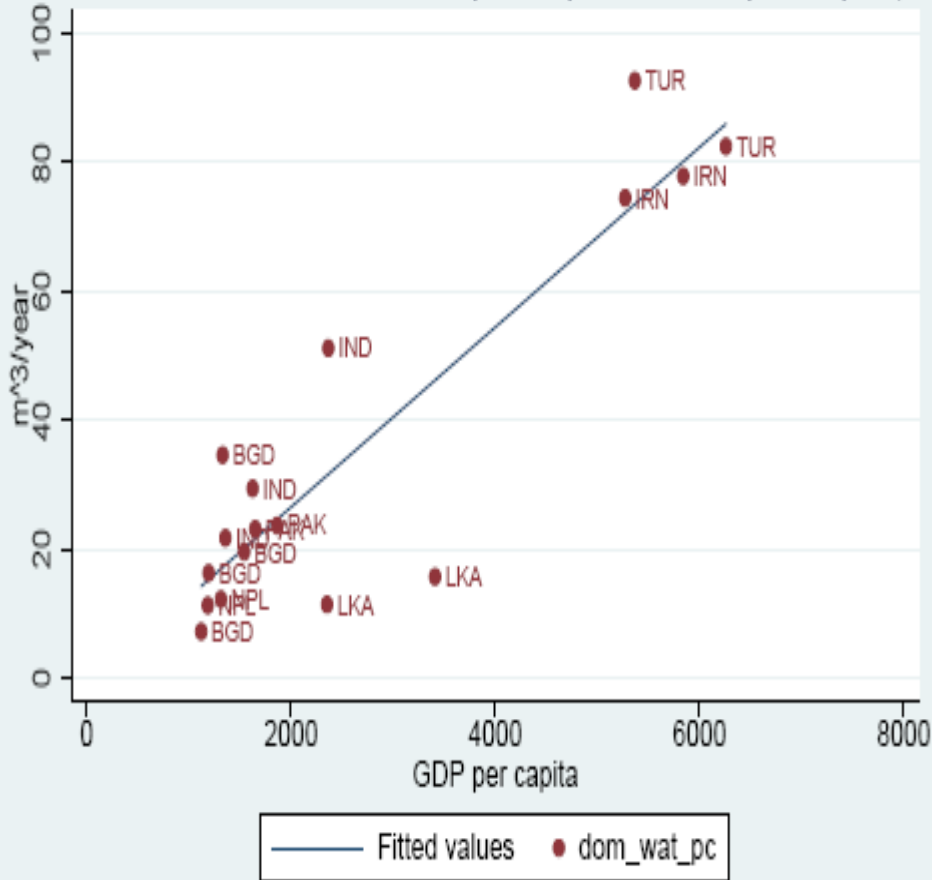
1. Threat of water stress
2. High water utilization
3. Deteriorating water quality
4. Poor water quality combined with low water endowment
5. High flood risk hotspot
6. High cyclone risk hotspot
7. High drought risk hotspot
8. Elevated ecosystems/ climate change risk
9. Poor access to drinking water
10. Poor access to sanitation



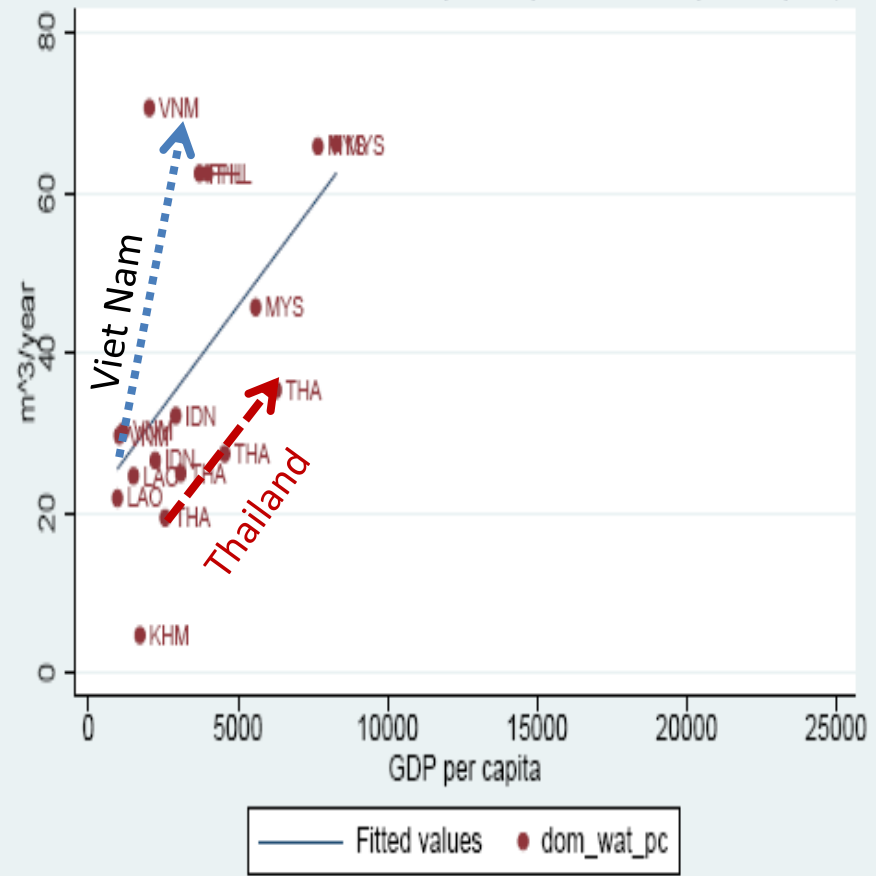
Hotspots

Changes in Domestic Water Supply in South Asia & South-East Asia

Domestic water withdrawal per capita & GDP per capita, 1



Domestic water withdrawal per capita & GDP per capita, 2



Institutional Structure of WRM in Viet Nam



- **Vertical:**
 - Government and Ministries
 - Provinces and Cities;
 - Districts;
 - And Communes.
- **Horizontal:**
 - Distributed responsibilities: 9 ministries



Functions and Task of Institutions Relating to WRM

Ministry	Functions and tasks of water resources management
Ministry of Natural Resource and Environment (MONRE)	State management of water resources, meteorology and hydrology, synthesis and unification of sea and island management
Ministry of Agriculture and Rural Development (MARD)	State management of agriculture, salt production, aquaculture, irrigation, rural development, dyke management, flood control
Ministry of Industry and Trade (MOIT)	Development of hydropower, construction and operation of hydropower dams/plants
Ministry of Science and Technology (MOST)	Development and provision of guidance on the application of water related criteria
Ministry of Construction (MOC)	Implementation of water supply and drainage plan in urban areas, industry zones and residential areas.
Ministry of Transport (MOT)	Management and development of navigation, waterway structure and harbors.
Ministry of Health (MOH)	Management of criteria relating to clean water, sanitation and food safety
Ministry of Finance (MOF)	Provision of guidance on water related fees and taxes.
Ministry of Planning and Investment (MPI)	Synthesis of investment projects on water resources and submission of plans, cost estimate of water resources projects and water related damage mitigation projects

Basic Regulation
Constitution 1992
(amended 2001)

Legislation on Water Sector in Vietnam

Law on Water Resources 1998
Decree No.179/1999/ND-CP on stipulating the implementation of the Law on Water Resources

Ownership

State Management

Exploitation & Utilisation

Protection

Violation & Sanction

International Relations

Mandate
Land
Water resources
Mineral resources
Geology
Environment
Meteorology
Hydrology
Cartography
Sea & Inlands

NWRC
Decision 67/2000/QD-TTg
Decision 99/2001/QD-TTg

Government
Law 32/2001/QH10

National Center for Rural Water Supply and Environmental Sanitation
Decision 45/2008/QD-BNN

Mandate
Agriculture
Forestry
Salt-making
Fisheries
Irrigation
Disaster
Rural development

MONRE
Decree 25/2008/ND-CP

Related Ministries
Decree 178/2007ND-CP

MARD
Decree 01/2008/ND-CP

Appraisal Councils
Decision 13/2006/QD-BTNMT

Strategic Environment Assessment	Environmental Impact Assessment
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DWRM
Decision 1035/2008/QD-BTNMT

Inspectorate of MONRE
Decree 65/2006/ND-CP

Departments of Environment
(Ministry of Industry, Health, Construction, Transport)
Decree 81/2007/ND-CP

Dep. of Irrigation Management
Decision 25/2008/QD-BNN

Dep. of Fisheries Resources Management
Decision 23/2008/QD-BNN

Dep. of Science, Technology, Environment
Decision 10/2008/QD-BNN

Dep. of Dykes, Flood and Storm Management
Decision 26/2008/QD-BNN

River Basin Office
Decree 120/2008/ND-CP

Major River Basin Commissions
Decree 120/2008/ND-CP

Center for Water Resources Planning and Investigation (CWRPI)
Decision 1027/QD-BTNMT (2008)

National Level
Local Level

People's Committees (Provincial-level)
Decree 13/2008/ND-CP

DARD
(Joint Circular 61/2008/TTL T-BNN-BNV)

Related Departments

DONRE
(Joint Circular 03/2008/TTLT-BTNMT-BNV)

Inspectorates of DONRE
Joint Circular 03/2008/TTLT-BTNMT-BNV

Dep. of Mineral, Water Resources & Hydrometeorology
Joint Circular 03/2008/TTLT-

Agency for Environmental Protection
Decree 81/2007/ND-CP

Inter-provincial River Basin Commissions
Decree 120/2008/ND-CP

People's Committees (District-level)
Decree 14/2008/ND-CP

Offices of DARD
(Joint Circular 61/2008/TTL T-BNN-BNV)

Offices of DONRE
(Joint Circular 03/2008/TTLT-BTNMT-BNV)

Mandate
(Joint Circular 03/2008/TTLT-BTNMT-BNV)

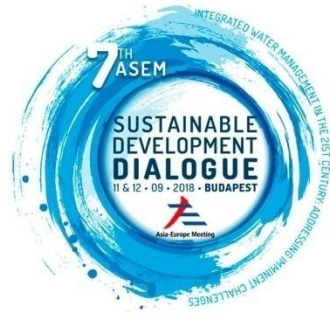
Environment	Water Resources	Mineral Resources	Land	Sea & Island
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Environmental Specialized Organizations (communal-level)

Authority for land & construction issues
Joint Circular 03/2008/TTLT-BTNMT-BNV

Mandate: Land & Environment issues; as well as Mediation of environmental disputes (Joint Circular 03/2008/TTLT-BTNMT-BNV)

At Government agencies



Quantity

Central level

- Department of Water Resources Management: 142 staffs.
- Vietnam MRC Standing Office: 32
- NWRC Office: assisting body: 01

Local levels:

- 63 Provinces
- 698 districts under provinces
- Communes under districts



(cont.)



Quality:

- Central and local levels: Lack of IWRM, cross sectoral knowledge
- Local level: (lack of) basic WRM knowledge and training
- New challenges: WFE nexus, cross boundary...



HR for WRM: Supply side



Quantity

- 15 University level training institutions out of 272 offer training in WR related fields
- 03 Universities specialized.
- 3/15
- Outdated quota system, limited capacity, low enrollment

Quality


- Current fields of trainings: traditional
- Little response to new challenges



Looking ahead

- National level HR strategies for WRM
- Consolidate, rearrange and develop water resource training facilities nationwide,
- Improve curriculum and training materials and training facilities and techniques,





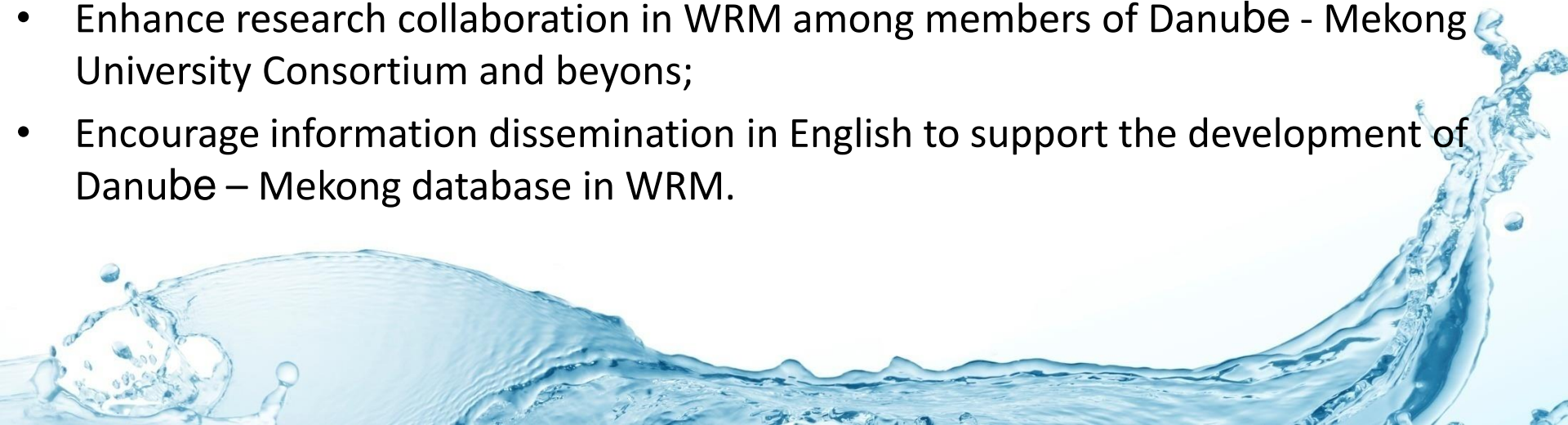
Some challenges

- Lack of data to to build human resources policy and program strategy.
- Lack of coordination at central levels
- Finance and investment
- Obstacles in implementing cross-disciplinary programs in Integrated Water Resources Management (IWRM) at academic institutions

With a view of ASEM Cooperation



- Promote international cooperation in training, capacity strengthening in the field of water resources.
- Set up working mechanism of a Danube - Mekong University Consortium so as to explore the models, key areas of cooperation, and to align and harmonize theme of common interests through regular workshops and round-table meetings organized in a rotating among members;
- Improve university capacity with focus on WRM in member universities;
- Develop internationalization of higher education between Europe and Asia; student mobility, credit transfer in WRM programs;
- Enhance research collaboration in WRM among members of Danube - Mekong University Consortium and beyonds;
- Encourage information dissemination in English to support the development of Danube – Mekong database in WRM.



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Thank you
listening!

