Using Science to Support Transboundary Decision Making Process

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Thailand 2011 Flood Leads to the Establishment of NHC

Early warning and real time decision making

Integration of technology for data analysis and flood management

Flood sensorweb  Forecast & modeling  Networking & cluster  Flash flood & landslide warning  Reservoir networking  Data warehouse

Annual Rainfall 1981 – 2017

The 2011 and 2017 annual rainfall approximately were 24% above normal
The 2015 annual rainfall was 15% below normal
Additional 21 agencies

▪ From 2012 to Present
▪ Decision Support Information System
▪ Processing and analysis of water management information
▪ Data integration and exchange among water related agencies
▪ De Facto Standard flexible data format for monitoring, analysis and forecast of water situation
▪ Unified water management system for both normal and crisis situation
▪ Houses 400 data items  37 agencies
NHC and other operation centers

Prime Minister Operation Centre (PMOC)

- Primary Data Acquisition and Analytical Reports

Committee on The Integration of National Hydroinformatics and Climate Database
Chairman: Minister, MOST
Secretariat: HII, EGA

National Water Resources Committee
Office of the National Water Resources
Single Integrated Report
- Public Announcement
- Normal and Crisis Operation

Water Resource Management Center
Regional Level Provincial Level
On process

Future Operation Centers

- NHC
- Government Agencies
- Data Warehouse
- Data Exchange and Improvement
- Develop and Utilize Modelling

- Smart Water Operation Center (RID)
- Pollution Control Department Operation Center
- Water related Disasters Data Operation Center (DDPM)
- Electricity Generating Authority of Thailand (EGAT)
- Department Operation Center, Royal Rainmaking Department (DOC)

Data in Irrigation Area
Water Quality Data
Discharge Data
Hydrodynamic model
Rainfall data from Radar
Reservoir data
Improve reservoir inflow forecasting model
Visualize spatial distribution & forecasting of rainfall

Regular check
S&T for Community Water Resource Management

- S&T Adaptation for capacity building at community level
Mechanism and Operation

**Mechanism**

*Learning by Doing*

*Management and Planning*

*Taking Action*

**Operation**

**Data and Information**
- Water diagram and Water table
- Knowledge and local wisdom
- Successful cases
- Knowledge sharing

**Problem analysis and solving**
- Water balance analysis
- Problem solving approach
- Participatory
- Agro Forestry
- New Theory (Integrated Agriculture)

**Development and Follow up**
- Develop and rehabilitate existing water structure including natural water resources
- Construct new infrastructures
- Follow up and evaluation
- Expand CWRM network

*Drive by Community with Guidance from HII*
Mechanism and Operation

Virtue Collaboration: Driven by Trust and Faith

Goals -> Community’s Livelihood and Sustainability Development

Community’s Roles
- Volunteer for community’s benefit
- Understand and utilize information and data for management and planning
- Operate and take action the development plans

Partner and Friend
- Learn
- Do
- Win
- Together
- Together
- Together

HII’s Roles
- Non-profit operation
- 2 ways communication
- Involve and participate with communities
- Provide information, data, tools, etc. for co-critical thinking and planning
Community Network

- **24** Provincial Water Resource Management Center
- **60** Core Communities (1,573 villages)
- **18** Live Museums
Thank You

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