National Capacity on Water Resources Management

Prepared by : Hun Sothy

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Outline

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1. Hydrological Stations Network
1. Introduction: Hydrological Stations Network

- Hydrological data provides the basis for planning, development and operation of water resources project.
- Comprehensive water resources management requires a series of hydrological data.
- Hydrological phenomena should be observed and measured in accordance with standard practices.
- Data must also be recorded to enable an accurate assessment of water resources.

- Hydrological stations/ Automatic Hydrological Station should be installed:
  - Up to now 89 AHS (MOWRAM, M-HYCOS, ADB, JICA and UNDP).
Hydro-meteorological Equipment

- Bubble Sensor
- Shaft Encoder
- Radar
- Dousens Data logger
- Tipping Bucket
- Modem
- Power supply
Type of M-HYCOS Station
Bubble, Shaft Econder and Radar

Stung Treng
Kratie
Chaktomuk
Prek Kdam
Kompong Luong
Kg. Thom
In 1993: 5 stations
In 1995: 11 stations
In 2004: 21 Up to now in 2019: Stations
2. Current status after decentralization
2. Current status after decentralization

• 15 Stations of Manual Data provide to MRC for river monitoring in dry season and flood forecasting are still good and on time.

• 8 of 12 Telemetry station are working well. Other 4 were not functioning well because of lacking some spare parts.

• Water quality monitoring and analysis were done well, but equipment for laboratory need to improve to get accurate data and standards.
3. Challenges on capacity building

- Some Equipment life is too short and not functioning well
- Equipment are very expensive and high technology for O&M
- Equipment can not repair in local country
- Staffs capacities are limited in National and Sub National and need strengthen for O&M
- Budget are limited for O&M
- Need spare part
- Data analyses
- Need training the modelling tools, and tools analysis to young official staffs at National and Sub national,
- Equipment for discharge measurement and water quality works need to be improved
- Full decentralize for all activities will face the problem
4. Way forward in next 10 years

- Database Centre will be establish (ADB)
- Expansion of telemetry hydro network stations
- Technical official have ability to O&M
- Technical official have capacity to use modelling tools and data analyses
- Available Budget for O&M and spare parts
- Requirement of IT specialist for Server and Database Management
- Cooperation with LAs, MRCS and Riparian Countries for data and information exchange and sharing for flood forecasting

Suggestion:
- Need developing partner to help on hardware and software (Capacity building, hydro-network installation)
- Increase budget for O&M and spare parts need
Thank you very much for your attention