

SEA

Cambodia, Thailand, Vietnam
Myanmar, Lao and Malaysia

Session 1

Issue 1

- For all the countries, intensification of cyclones (especially for Vietnam, Myanmar and Thailand)
- Intensification of variability (For example, extreme flood in this year and severe drought last year).
- Increase of frequency of extreme climate events have been observed in recent years.
- Sea level rise is of major concern to Vietnam and Malaysia.
- Trans-boundary issues add complexity (Red river and Mekong river basin). However TB arrangements also provide important guidance for coordinated operations such as from MRC.

Issue 1.. Cont.

- Special issue: Hydropower
 - Lao critical industry, dam safety is an important issue
 - Cambodia: responsibility of Ministry of Mining and natural resources
 - Myanmar: Integrated system for dam safety that include warning and operation is not in place but is an important issue
- All countries require improvement in monitoring and data assimilation--- WCI support requested
 - Ground observations (equipment), models and forecasting capacity, space data use and access and with varying degrees of importance

Issue 2

- Water resources management is the most critical need of the region with differences in areas to be focused
 - Viet Nam: Water quality related to agriculture water use
 - Thailand, drought and flood management, quality related to agriculture
 - Cambodia, water resources management and related quality issues
 - Lao: Priority in Energy with other areas to be addressed too
 - This is an important issue for Malaysia too, especially the adjusting seasonal availability to needs at regional level is a priority issue.

Issue 3

- Capacity development in use of cc model use, regional data and downscaled products, improve the capacity of the climate change focal office
- Myanmar and Cambodia: currently the forecasts are not integrated tightly with operations. This needs to be addressed and for that purpose it is necessary to improve the forecasting accuracy through model improvement and use of advanced tools
- Vietnam: Support in space borne data access
- Thailand: Support for integrated water management at national level

Issue 4

- SEA countries are at different stages of setting up national frameworks for collaboration among different national agencies in addressing climate change challenges.
- Vietnam and Thailand have established strong frameworks, but Cambodia, Myanmar and Lao are at initial stages.
- Support for establishing efficient national frameworks is one area AWCI can support with a focus on WCI
- For example a platform to exchange experiences of different countries would provide an opportunity for each country to adopt successful/good practices from neighbors to develop national frameworks. A regional conference/workshops would be a good starting point

1. Steps and strategy

- Challenge of deciding of strategy is a topic that would get various of institutions in each country to collaborate on an important objective
- This objective could be a national focused topic or a regional programme that could benefit each country
- **The different proposals were**
- Cambodia:
 - A regional project coordinating data sharing with national water and agriculture programme on
 - Climate forecasts
 - DEM
 - Landuse and landcover,
 - Ground based monitoring systems

1. Steps and strategy

- Vietnam:
 - Regional project on Urban inundation and early warning
- Laos:
 - to get implemented DP basin (Xebangfai) by the help of AWCI expert mission to lead the CCAA; flood/drought, forecasting & early warning systems
 - Downscaling of models for application at DP site
 - Regional project : replication of sustainable scientific results of CCAA
 - National project: improvement the performance of National Water Resource Operating Center

1. Steps and strategy.....

- **Malaysia:** CCAA on water resources and water related infrastructure integrity
- **Thailand:**
 - the programme of capacity building on climate change assessment and adaptation related to water resource issues
 - Focus on local scale: Strategy: some countries and WCI provide new knowledge, technology, information network, warning system in context of water resource management pass through some workshop, training and visiting in successful agencies and sites (department of water and so on)
 - Focus on regional scale: Training workshops on data processing, technique and sharing.
- **Vietnam:** regional project urban inundation management and early warning
- **Myanmar:** regional and national (DP) project for flood management under climate change

Additional resources

- Proposed collaborators are
 - Cambodia:
 - Ministry of water resources and meteorology
 - Tonlesap authority
 - Other line agence
 - Laos: Assistance from Korea government
 - Malaysia: Meterological , Agriculture, Townplaning, environment, public works, irrigation and drainage departments
 - Thailand: NRCT, RID
 - Vietnam: space-based information institutions; remote sensing organization; MRC
 - Myanmar: finical support from ADB or other organization for the above project

Specific request to GEOSS and to international community

- Cambodia:
 - DEM, Landuse, high resolution cc projections
 - Tools for data analysis
- Laos
 - ADB, Korean government
- Malaysia
 - High resolution DEM
- Thailand
 - Satellite data
- Vietnam:
 - Regional space based data, CCAA modeling
- Myanmar:
 - GIS data (landuse, landcover, DEM)
 - Climate projections
 - Rainfall forecasts, flood forecasting tools

Coordination between water cycle integration and capacity development

- Synchronize capacity development with national implementation programme coordinated by the regional programme
- Short term capacity development workshops and medium to long term secondment to regional resource centers (RIMES, Water knowledge hub Malasia, etc.)
- Coordinate with national and regional centers of excellence (ex. WMO centre in Hanoi on WR)
- Organize capacity development workshops in each countries for the agencies involved in the project at national level on the WCI implementation

Implementation

- 0-6 Months:
 - Develop the common regional program that can address national interests
- 6-12 Months:
 - Develop national teams
 - Seek funding for implementations
 - Organize capacity development programmes
- Year 1 – 3
 - Project implementation

