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# STRATEGIC NEEDS, RISKS AND RESPONSE

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# Structure – Chapter 3

## **3. STRATEGIC NEEDS, RISKS AND RESPONSES**

- 3.1 Implications of recent regional assessments and studies
- 3.2 Need for enhanced data collection and management
- 3.3 Need for proactive regional planning and joint action
- 3.4 Need for coordinated operational basin management
- 3.5 Strategic risks and challenges

# 3.1 Implications of recent regional assessments and studies

- **Economic dimension:** All water-related sectors **contribute to economic growth**, but hydropower sector contributes most to **benefits, impacts, and risks which need to address**



- **Environment dimension:** Significant changes in flow and decreases in sediment concentrations, **leading to extensive river bank erosion and risks to riverine communities.**

- **Social dimension:** Poverty rate is declining and living condition is improving however, many households **remain vulnerable to shocks, particularly droughts and floods**



- **Climate change:** All countries are engaged in managing climate change and this should be reinforced through basin-wide planning efforts

- **Cooperation:** Addressing future water related needs and risks **requires higher levels of regional cooperation between countries**



# 3.1 Implications of recent regional assessments and studies

The **trade-offs** between the economic and environmental dimensions of water resources development are much larger than needed

- They are the result of independent national planning and reactive regional planning **based on the same set of development projects**
- So far, regional planning has been generally limited to assessing the acceptability of the transboundary impacts of national plans
- Major observed impacts, such as the reductions in sediment flow and wetlands, are generally irreversible:
  - **But there is still a lot to be gained from a more proactive regional planning approach and coordinated basin management operation, using modern data acquisition and modelling technology**

## 3.2 Need for enhanced data collection and management

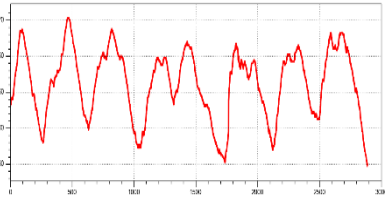
- With increasing development in the basin, and the onset of climate change impacts, **the need for water-related monitoring and modern Decision Support Systems (DSS) is of ever greater importance**
- **Basin-wide cooperative action** is needed to consolidate and upgrade the monitoring and information systems (databases, models, etc.) to a level that is fit-for-purpose for proactive regional planning and operational basin management needs
- Most economic, social, and environmental data are being collected – **Need for consistent and spatially disaggregated social and economic data across the whole basin to better identify and support vulnerable communities**

### Data for pro-active regional planning

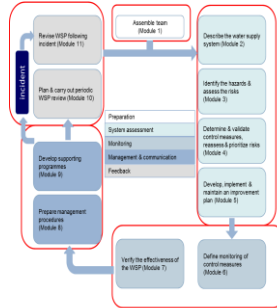
- **Satellite data / Field surveys**
- **Periodic sharing of the required national data**

# Support for planning – use of data

Observation data



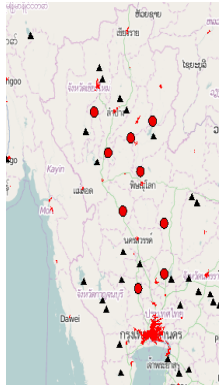
Water Safety planning



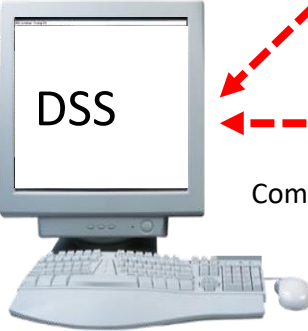
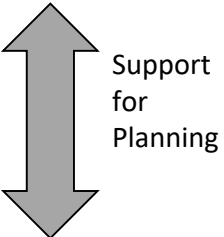
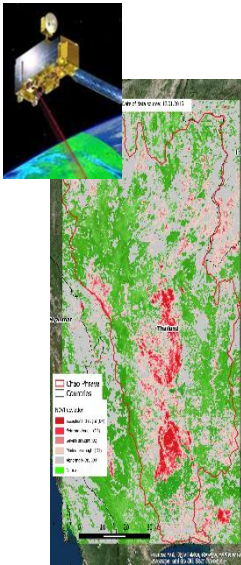
Basin planning



Global and local data

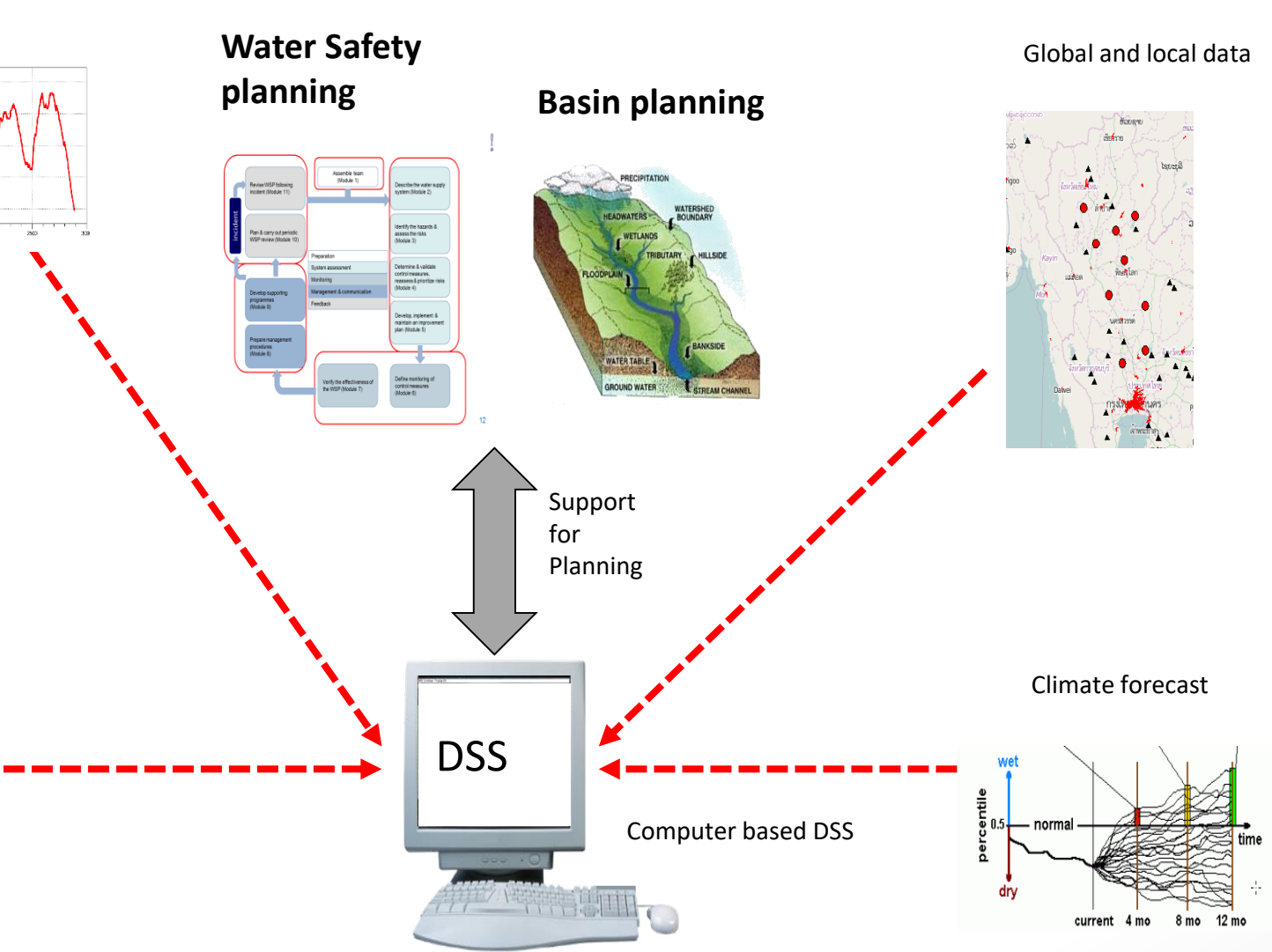
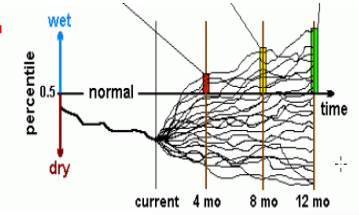


Remote sensing data



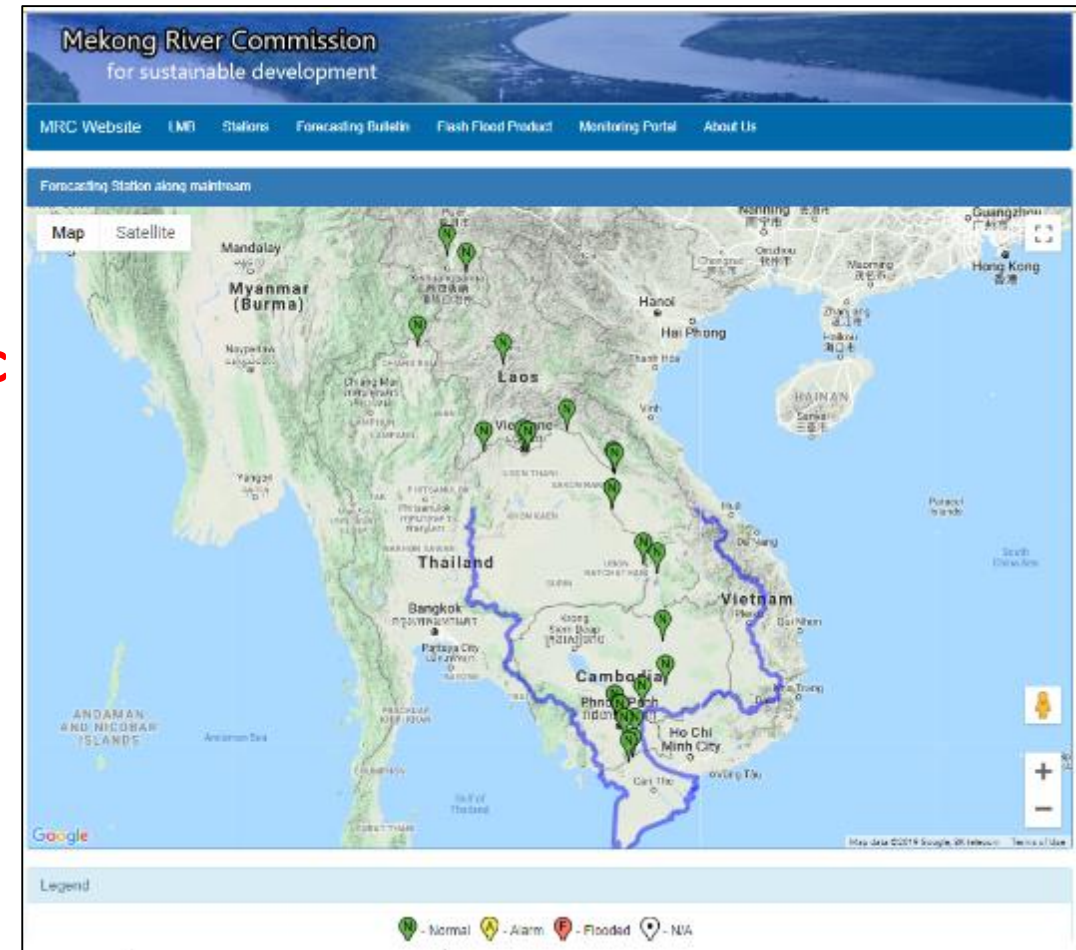
Computer based DSS

Climate forecast



## 3.2 Need for enhanced data collection and management

- The **Mekong Basin Indicator Framework (MBIF)** will be rolled out in the entire basin
- The **MBIF**, with **strategic indicators, assessment indicators, and supporting monitoring parameters** → Offers **a systematic and consistent approach to data collection and analysis for regional and national planning**
- **The basin countries manage the network and collect the data** according to agreed protocols and methodologies and share those with regional water actors



# Towards one Mekong-Lancang management system

- The process of cooperation on regional planning, coordination of operational basin management, and supporting monitoring and information systems will inevitably lead to:
  - Further data and information sharing between the Upper and Lower Mekong Basin → Increased regional benefits from the Mekong, and reduced regional costs
  - Improved implementation of procedures, protocols, MoU's etc. for basin development and management
  - Reduced levels of flood and drought risks and enhanced emergency management
- Ultimately, with increasing regional economic integration, there will be one Mekong-Lancang management system





## 3.3 Need for **proactive regional planning and joint actions**

So far, **regional assessments and studies (BDP, Delta Study, Council Study, and studies for sectoral strategies) have not led to substantial changes in nationally planned water resources development**

- One reason is that these studies consider removing, postponing or modifying environmentally damaging projects, but don't propose new projects for economic development and environmental protection
- Therefore, **these studies are perceived by some as constraining development rather than enabling it to occur in a more sustainable manner**

This concern will be **addressed by a more proactive regional planning approach** that goes beyond the development projects that the countries are currently planning

## 3.3 Need for **proactive regional planning and joint actions**

A more proactive regional planning approach **does not only consider postponing or modifying environmentally damaging projects but also proposes new projects** for economic development and environmental protection to:

- **Increase synergies and reducing trade-offs** at the basin level that increase each country's benefits
- **Minimize transboundary harm**
- **Provide comprehensive response to climate change and related water security**

**New project proposals** will include:

- **National projects of basin-wide significance**
- **Joint projects**

### 3.3 Need for **proactive regional planning and joint actions**

**National projects of basin-wide significance** will create benefits within the country as well as development opportunities elsewhere in the basin, **such as:** Watershed projects, Preservation of wetlands, Creation of inter-seasonal water storage, Projects based on new technology, Relocation of unattractive projects, etc.

**Joint projects (involving two or more countries)** address issues and opportunities that one country alone could not do as effectively, such as Preservation of parts of transboundary floodplains, Development of multi-purpose hydropower projects, Development of transnational parks, Navigation etc.

## 3.3 Need for proactive regional planning and joint actions

Such a proactive regional planning approach needs to be implemented by all six basin countries through their appropriate regional cooperation arrangements:

- At the technical level, **MRCs and the LMWRCC** would support and facilitate a **multi-sectoral technical working group** which oversees and steers:
  - The required identification of joint and national significant projects
  - The assessment of the adapted national plans (methodology is similar to BDP, CS)
  - The engagement of broader stakeholders
  - The preparation of high level policy papers
- **Other regional cooperation arrangements** will be engaged in various sectors such as navigation and energy (GMS Regional Power Trade Coordination Committee) and political/diplomatic support (ASEAN, LMI, MJ, MK)



## 3.4 Need for **coordinated operational basin management**

Some transboundary operational basin management services are already in place in the Mekong Basin:

- River Monitoring / Flood forecasting
- Implementation of the Procedures for Maintenance of Flows on the Mainstream (PMFM)

As the Mekong Basin becomes more developed and regulated by dams, there is **increasing need for coordination of other operational basin management** that may have **transboundary aspects**:

- River flow management
- Sediment management
- Prevention of disasters and management of emergencies
- Coordination of design and management of hydropower cascades



## 3.4 Need for **coordinated operational basin management**



The **enhancement of transboundary coordination of these basin management operations would be undertaken jointly by the MRC and the LMC** under the MoU between the MRCS and the LMWRCC that being signed by December 2019:

- Both organizations consider **the management of flood and droughts and information sharing** as their core activities
- They will build on ongoing activities between the MRC and China on **data and information sharing, technical exchanges, and joint research on unusual and extreme flow conditions**

**Other regional organizations will need to contribute**, such as ADB/GMS on hydropower related aspects and ASEAN with respect to emergency management

## 3.4 Need for **coordinated operational basin management**

Within the MRC, the operational basin management activities could be housed in the **Regional Flood and Drought Management Center (RFDMC)** which is established for **real time operations and communications**

- The extension of the Center can be considered as an integral part of the recommended **upgrading of the RFDMC for more accurate and timelier flood and drought forecasting services**



## 3.5 Strategic risks and challenges

- The **higher level of cooperation that is required may not be achieved** in the near term because of **insufficient trust and confidence among all parties**

The **main identified challenges** are related to the implementation process:

- **Further institutional alignment** at the basin level to sustainably manage the basin's water resources
- **Establishment of joint basin expert groups** to oversee proactive regional planning and the consolidation/upgrading of the basin's monitoring and information systems
- **Capacity building** to address the uneven distribution of capacity between countries and greater use of country-to-country knowledge sharing and capacity building





# Thank you

