

# Mekong River Commission: Lower Mekong basin-wide monitoring and reporting system on climate change and adaptation

## Context

### ► Programmatic context

The **Climate Change and Adaptation Initiative (CCAI)** is a regional initiative of the Mekong River Commission (MRC), an intergovernmental body established in 1995 between the governments of Cambodia, Lao PDR, Thailand and Vietnam<sup>1</sup>. CCAI was established in 2009 and the Member Countries agreed on a Program Implementation Plan (PIP) in 2012 through a consultation process. The CCAI is a long-term initiative and will be implemented until 2025. It aims at guiding and harmonizing climate change adaptation planning and implementation through improved strategies and plans at various levels in priority locations throughout the Lower Mekong Basin (LMB). This will be done among other things by developing and implementing a basin-wide system for monitoring and reporting on the status of climate change and adaptation in the Lower Mekong region.<sup>2</sup>

<sup>1</sup> The mission of the MRC is: 'To promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's wellbeing by implementing strategic programmes and activities and providing scientific information and policy advice.'

<sup>2</sup> CCAI focuses on: (i) climate change impact and vulnerability assessment, adaptation planning and implementation in priority locations within the LMB; (ii) building knowledge and capacity at different levels (institutional, technical and managerial capacity); (iii) regional adaptation strategy supporting national frameworks; (iv) regional partnership and collaboration for sustainability of adaptation actions.

### About the Mekong River Commission (MRC)

The MRC is an inter-governmental agency that works directly with the governments of Cambodia, Lao PDR, Thailand and Vietnam on their common specific interests — joint management of shared water resources and sustainable development of the Mekong River.

As a regional facilitating and advisory body governed by water and environment ministers of the four countries, the MRC aims to ensure that the Mekong water is developed in the most efficient manner that mutually benefits all Member Countries and minimises harmful effects on people and the environment in the Lower Mekong Basin.

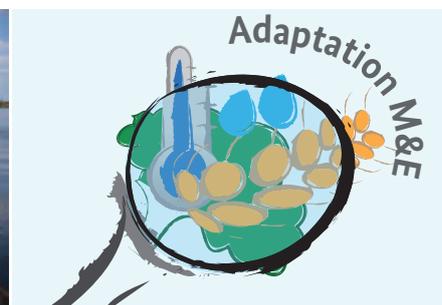
Serving its member states with technical know-how and basin-wide perspectives, the MRC plays a key role in regional decision-making and the execution of policies in a way that promotes sustainable development and poverty alleviation.

Source: [www.mrcmekong.org](http://www.mrcmekong.org)

### ► Purpose of the M&E system

The stated purpose of the monitoring and reporting system is to monitor climatic change and its impacts, vulnerability to climate change, as well as climate adaptation actions and performance at regional, national and sub-basin levels in the LMB. Specifically, the stated objectives of the system include to:

- improve understanding on climate change,
- detect trend and magnitude of change,
- monitor **actual impacts** of climate change,
- monitor progress and performance on **adaptation planning and implementation**, and
- improve prediction and early warning on flood and drought.



The potential target users of the system include decision-makers and planners on climate change issues at regional, national, and local levels; technical staff and researchers and other organisations who implement climate change adaptation activities in the LMB.

### ▶ Level of application and aggregation

The system operates at the **river-basin level**.

### ▶ Status as of October 2013

The process is at the **early design stage**. MRC countries agreed on a concept note and an implementation plan for the design, development and operation of the system. Initial steps towards the development of the system are underway and comprise the indicator selection (including data needs and calculation methods), the calculation of some indicators and the methodology development for assessing vulnerability in selected priority themes.

## Process

### ▶ Institutional arrangements

The **CCAI** is under the **MRC Environment Division (ENV)**, which is a cross-sectional division of the MRC that generates data, information and knowledge to support decision-making. Beside climate change monitoring and reporting, one of the responsibilities of ENV is to establish systems for monitoring the Basin's environmental health. At regional level, the development of the climate change and adaptation monitoring and reporting system is coordinated by the CCAI in close collaboration with other MRC Programmes and the Member Countries.

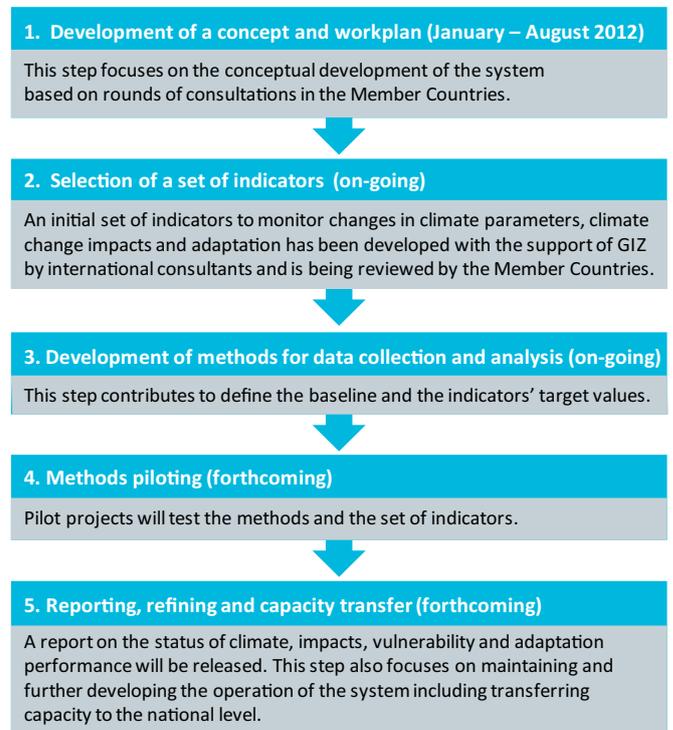
At national level, activities related to the establishment and to the operation of the system are coordinated by the **National Mekong Committees (NMCs)**. The implementation of the system in the long run will be the responsibility of the MRC countries in line with the MRC decentralisation process. It is expected that this responsibility will be gradually transferred from the CCAI programme to the countries. The exact institutional set up may vary from one country to another and will be decided as part of the development of a decentralisation plan.

The CCAI Program Document (2011-2015) mentions the establishment of a Mekong Panel on Climate Change (MPCC) as an independent expert body made up of climate change specialists from national, regional and international levels. This expert body has not been created (as of October 2013).

### ▶ Establishment process

The establishment of the basin-wide monitoring system includes the following key steps:

**Figure 1** Key steps of the establishment process of the system



### ▶ Implementation process

No information available yet.

## Content

### ▶ Approach

The proposed approach for the basin-wide monitoring and reporting of climate change adaptation in the LMB is **indicator-based**. Baselines will be mainly established by calculating indicators of climate, climate change impacts and adaptation performance over the baseline period (i.e. 1981 – 2010 tentatively). Data collection will be on-going using different time intervals to monitor the changes in indicator values over time.

### ▶ Indicators

In a **draft indicator framework** it is proposed to focus on three types of indicators: **climate, climate change impact and adaptation indicators**. Further details on the indicators are not yet available. The final list of indicators will be consulted and agreed with MRC Member Countries. First calculation of the indicators based on available data will be conducted.

### ► Data and information requirements

The indicators will be calculated from observed data, based on existing observation systems and sources at national, regional and global levels.

Most existing monitoring systems relevant to climate change in the basin focus on meteorological parameters and river flow. Other relevant physical parameters (e.g. soil moisture, groundwater, water quality, and land use) and socio-economic data are hardly monitored. To fill this gap, the development of the monitoring and reporting system of climate change adaptation is developed in parallel with a **CCAI database**, which will be part of the existing MRC data portal and aims to store existing and new data relevant for climate adaptation.

### ► Output and reporting

Monitoring data will be analysed and used in various governance and technical reports of the MRC on both regular and by-request basis. In addition, according to the CCAI Program Document (2011-2015), one of the main proposed tasks of the - yet to be established - Mekong Panel on Climate Change (MPCC), would be to develop a report on the **Status of climate change and adaptation in the Mekong River Basin** using among others the information from the basin-wide monitoring system.

### ► Resources needed

The exact resources needed for the establishment and implementation of the system have to be further clarified. Tentatively, the CCAI's Program Document (MRC, 2011) had budgeted USD

740,000 (4.65% of CCAI's total budget) for the development and implementation of the monitoring and reporting system over the period 2011-2015. Expertise at regional (CCAI and other programmes) and national levels (Line Agencies, Climate Change Focal Agencies) will be involved at different points of time and to different extents over the whole establishment and implementation period of the system.

## Lessons to date

The process of developing the basin-wide monitoring and reporting system is still at a very early stage. MRC Member Countries recognise that the development of the system is a priority activity to support adaptation at both national and regional levels. The system is urgently needed to provide sufficient data and information for analysis and reporting on the status of climate change, its impacts and adaptation performance of the region. The results in turn will guide effective adaptation strategies and actions.

So far, the initial development of the system has been time consuming. The process requires the intensive participation and validation of all Member Countries. In addition, limited (or no) experience is available on the development of M&E systems for adaptation at a river-basin level and measuring adaptation performance is perceived as one of the key challenges.





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### ► References

Mekong River Commission Website. Climate Change Adaptation Initiative. Available at : <http://www.mrcmekong.org/about-the-mrc/programmes/climate-change-and-adaptation-initiative/>

Mekong River Commission (2013). CCAI Monitoring and Reporting System on Climate Change and Adaptation in the Lower Mekong Basin. A Synopsis. September 2013.

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