



State of the Basin Report 2023 - DRAFT

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Objectives of SOBR

To provide an overall picture of the Mekong River Basin in terms of:

- its ecological health and the social and economic circumstances of its people, the changing climate, and
- the degree to which the cooperation between riparian countries envisaged under the 1995 Mekong Agreement is enhancing these conditions.

The SOBR is an integral part of the basin planning cycle, being the first step in a five-yearly process to review and refine the implementation of the Basin Development Strategy

Key documents guiding the SOBR's structure, data collection, and analysis:



Mekong River Commission
For Sustainable Development



MEKONG RIVER BASIN INDICATOR FRAMEWORK

For informing the management of the Mekong River Basin



Mekong River Basin Indicator Framework

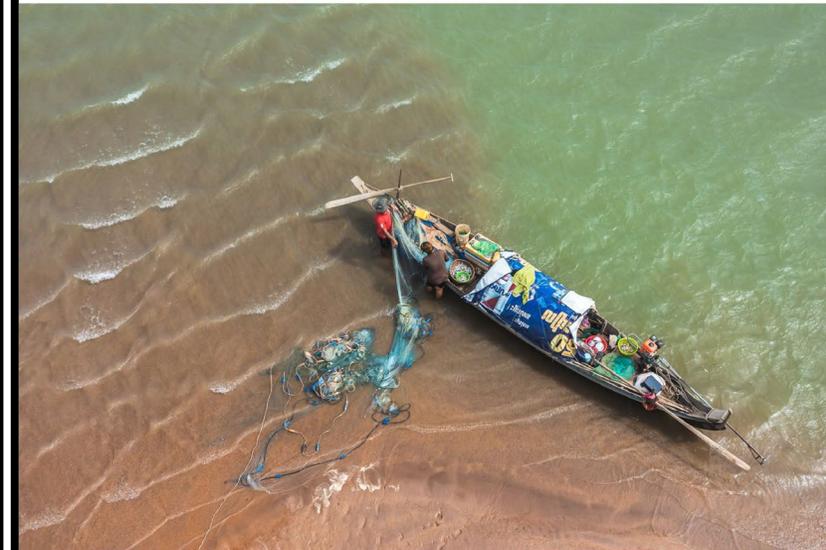
For informing the management of the Mekong River Basin

Technical Guidelines for Implementing the Mekong River Basin Indicator Framework

Approval Draft – 31 October 2019



Mekong River Commission
For Sustainable Development



Data Acquisition and Generation Action Plan

For Implementing the Mekong River Basin Indicator Framework
in Support of the MRC's Core River Basin Management
Functions and Role as a Regional Knowledge Hub

Structure

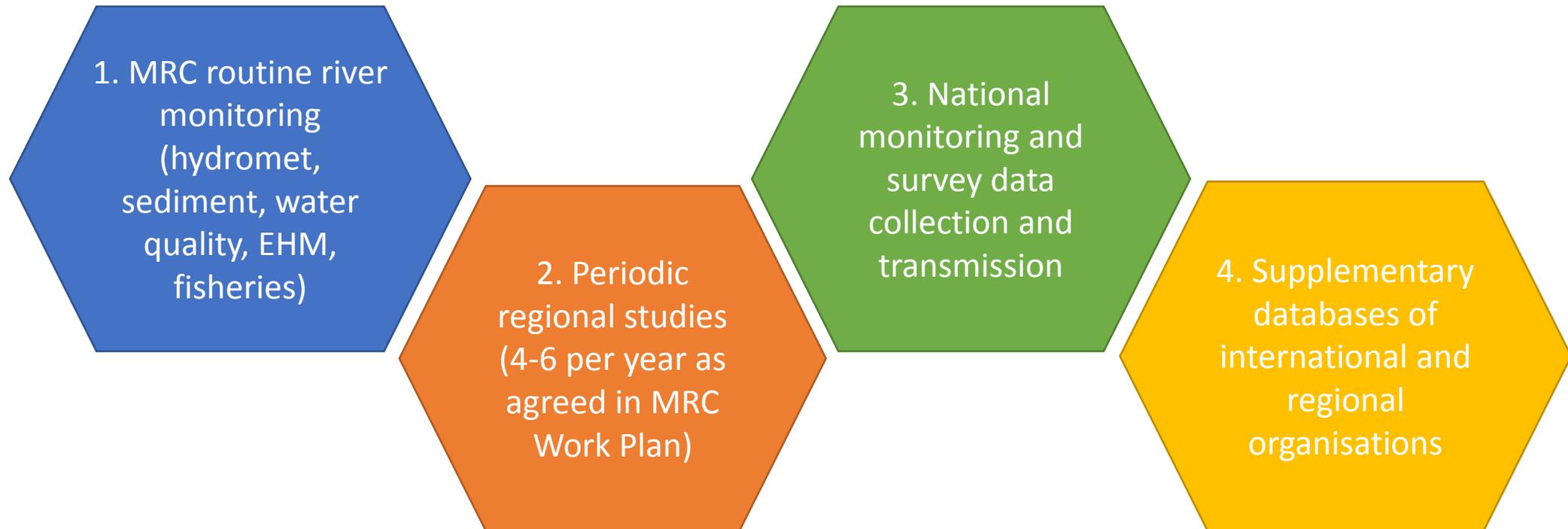
Dimension	Strategic indicators
Environmental	<ul style="list-style-type: none">Water flow conditionsWater quality and sediment conditionsStatus of environmental assetsOverall environment condition
Social	<ul style="list-style-type: none">Living conditions and well-beingLivelihoods and employment in water-related sectorsOverall social condition
Economic	<ul style="list-style-type: none">Contribution to basin economyEconomic performance of water-related sectors
Climate change	<ul style="list-style-type: none">Greenhouse gas emissionsClimate change trends and extremesAdaptation to climate change
Cooperation	<ul style="list-style-type: none">Self-finance of the MRCBenefits derived from cooperationEquity of benefits derived from the Mekong River system

Based on the **MRB Indicator Framework** which is structured around **5 dimensions**, within which **15 strategic indicators** have been agreed upon by the Member Countries to provide policy level decision-makers with a concise set of information relating to the development and management conditions within the basin.

Underpinning these strategic indicators, are **53 assessment indicators**, each of which is addressed in the SOBR 2023 by reference to **120 monitoring parameters**.

Data Sources

As reflected in the MRC Data Acquisition and Generation Action Plan (DAGAP) there are four key sources of data that inform the State of the Basin Report



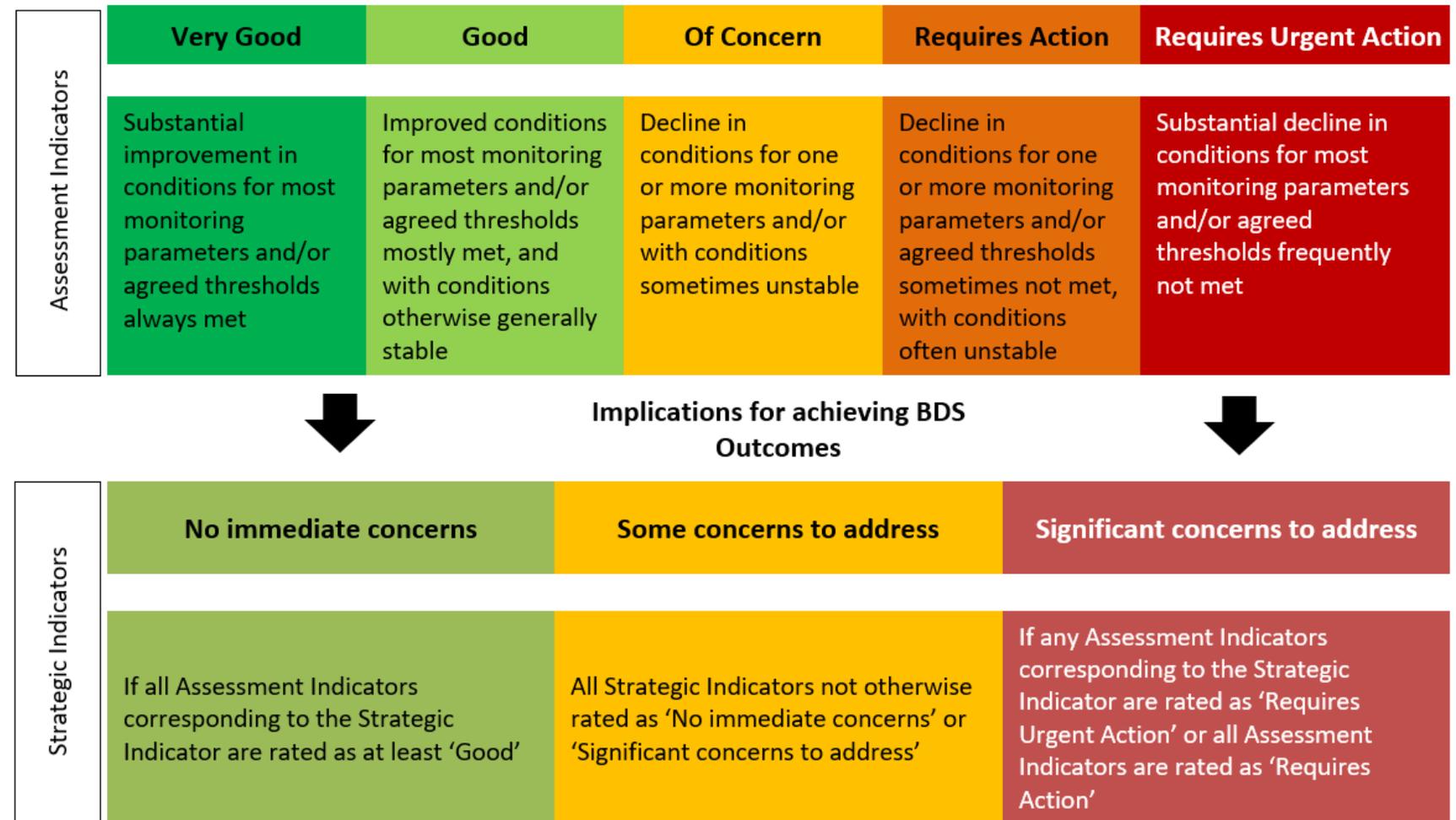
Methodologies used in Data Analysis

Various methodologies of data analysis have been applied as appropriate to each indicator and monitoring parameter

- Trend analysis:
 - Changes from one period to another considering a reference period and a more recent period
 - Changes over the full period of data availability
 - Tests of statistical significance of trends with 95% confidence
- Analysis at the basin scale is undertaken wherever possible, although sometimes comparisons are made to national data where necessary because of data availability
- Data from basin provinces supplied by the countries was always considered first, with national data only used if significant problems of consistency between countries or too many data gaps, were identified
- Assessment thresholds are considered where they have been previously agreed between basin countries – e.g., for PMFM, PWQ etc.

Methodology Used to Assess Strategic and Assessment Indicators

- Consolidation of rating scales identified in the MRB-IF Technical Guidelines (for Assessment Indicators) and in the BDS 2021-2030 (for the Strategic Indicators)
- Ratings for Assessment Indicators are used to inform the ratings for the Strategic Indicators



Evaluation of progress towards the BDS Outcomes

Approach: evaluate the extent to which BDS Outcomes are becoming *more or less challenging to meet*, based on recent trends in data since 2018 SOBR for relevant strategic indicators

Indicator of progress towards BDS Outcomes	Descriptive evaluation guidance
↑	On track. Gap to the 2030 Outcome is decreasing based on recent conditions and trends over the last few years. The effort required to close the gap to the Outcome is becoming less challenging
↗	Moderate improvement. Gap is closing but likely insufficient progress to attain BDS Outcome. Challenges remain to achieve the Outcome
→	No or only slight improvement. Progress is well short of requirements to achieve BDS Outcome and significant challenges remain
↓	Gap to the 2030 Outcome is increasing based on recent conditions and trends over the last few years. The effort required to close the gap to the Outcome is becoming more challenging
...	Insufficient information on progress. There is no reliable indication that the effort required to close the gap to the Outcome is becoming <u>more or less challenging</u> , including due to lack of updated data appropriately reflecting the Outcome

Unrealistic to expect changes on the ground to already be evident:

- Implementation of BDS is only just getting underway (e.g., Proactive Regional Planning)
- Will be a time-lag until outcomes become visible
- Data is often only available prior to the BDS being agreed (i.e., before 2020/21)

Improvements over SOBR 2018



- Upper Mekong River Basin countries integrated into the assessment for each indicator, where possible, consistent with the BDS 2021-2030, rather than in separate chapters
- Much more comprehensive and complete picture of basin conditions
- Social and economic indicators are more reflective of basin conditions (rather than national conditions) as they primarily use provincial data from basin countries, wherever possible
- Additional trend analysis conducted to consider the statistical significance of changes (i.e., whether the observed changes in conditions are likely to be real or not)
- Stronger alignment and links with the Basin Development Strategy
- More transparent assessment scale for rating each indicator including consistent alignment between Assessment and Strategic Indicators
- Evaluation of progress towards the BDS Outcomes for each dimension, as a guide to further refinement of the strategic plans of MRC, Member Countries and basin stakeholders during the second part of the planning period to 2030

Key Findings of the Basin Status

1. Environment
2. Social
3. Economic
4. Climate Change
5. Cooperation

These findings are **currently under review** by experts from the MRC Secretariat and Member Countries.

1. Environment Conditions and Trends

- Dry-season flows have increased but flood-season flows have decreased. The changed flow regime is evident along the length of the river with impact greatest at upper parts and overall volumetric impact greatest downstream.
- Lower flood season flows reduced Tonle Sap reverse flows and also mean lower outflows to the delta – contributing to potential in increasing hypersaline area.
- Water Quality generally meets the requirements. Concern trend on temperature increase and need further investigation.
- Sediment transport has already substantially declined since the last two decades at Chiang Saen and over the last decade in other stations – potential contribution to riverbank instability and coastal erosion
- Wetlands have declined significantly in the past and pressure on fish population still. Catch-Per-Unit-Effort in some locations has been declined. Although average fish abundance from catch data either increase or stable in most area, substantial decline in fish abundance in Khone Falls area (boarder region between Lao PDR and Cambodia) and Viet Nam Mekong Delta.

2. Social Conditions and Trends

- Water, food and energy security of basin communities have strengthened significantly over the past two decades. Some large differences in accessing basic services between countries.
- Employment in water related sectors is falling but remains relatively high.
 - reflecting the broader economic transition.
 - contributing to significant reduction in poverty.

3. Economic Conditions and Trends

- Total GDP of the Mekong River basin in 2019/2020 (excluding Myanmar): 242.7 Billion USD, 78% or 188.2 Billion USD from Lower Mekong River Basin.
- Rice and fisheries sectors contribute large share of national production: Rice productions contribute 54% of total national production of 4 LMB countries, Fisheries contribute 43% in Cambodia, and 39% in Vietnam.
- Economic performance across water-related sectors is generally strong, with partial estimate of total annual economic value of 63 Billion USD. Hydropower, rice production, and tourism have substantial growth over recent decades, especially Cambodia and Lao PDR. Rapid rise in Aquaculture and navigation in Mekong Delta.

4. Climate Change Conditions and Trends

- Relatively very small contribution of GHG from Mekong River Basin to the global emissions, less than 1% of total.
- Strong evidence of climate change within the Basin through increases in temperature and sea-level rise:
 - Daily temp. increased over 1.4 degrees Celsius over the past 50 years
- Reduction in number of heavy (>100 mm) and very heavy (>150 mm) rainfall days each year in the LMB
- Not enough information to evaluate the extent of community adaptation.

5. Cooperation Conditions and Trends

- On track to self-finance of the MRC according to commitments from MCs. Challenges in term of public finances of all countries were negatively impacted by the covid-19 pandemic.
- Much of cooperation activity occurs through working together on projects of basin-wide significance. But challenge remain in implementing JAP.
- In term of equity of benefits, each country has a different endowment of resources and capabilities to exploit for social and economic gain with different priorities for development.
- The economic benefits generated per capita are roughly similar for Cambodia, Lao PDR and Viet Nam between USD 1,207 and USD 1,588 per person, but are significantly lower for Thailand.

Status and Key Issues of 5 Dimensions: To be further explored and discussed, together with recommendations in next session



Thank you.

