

MRC ANNUAL REPORT 2023

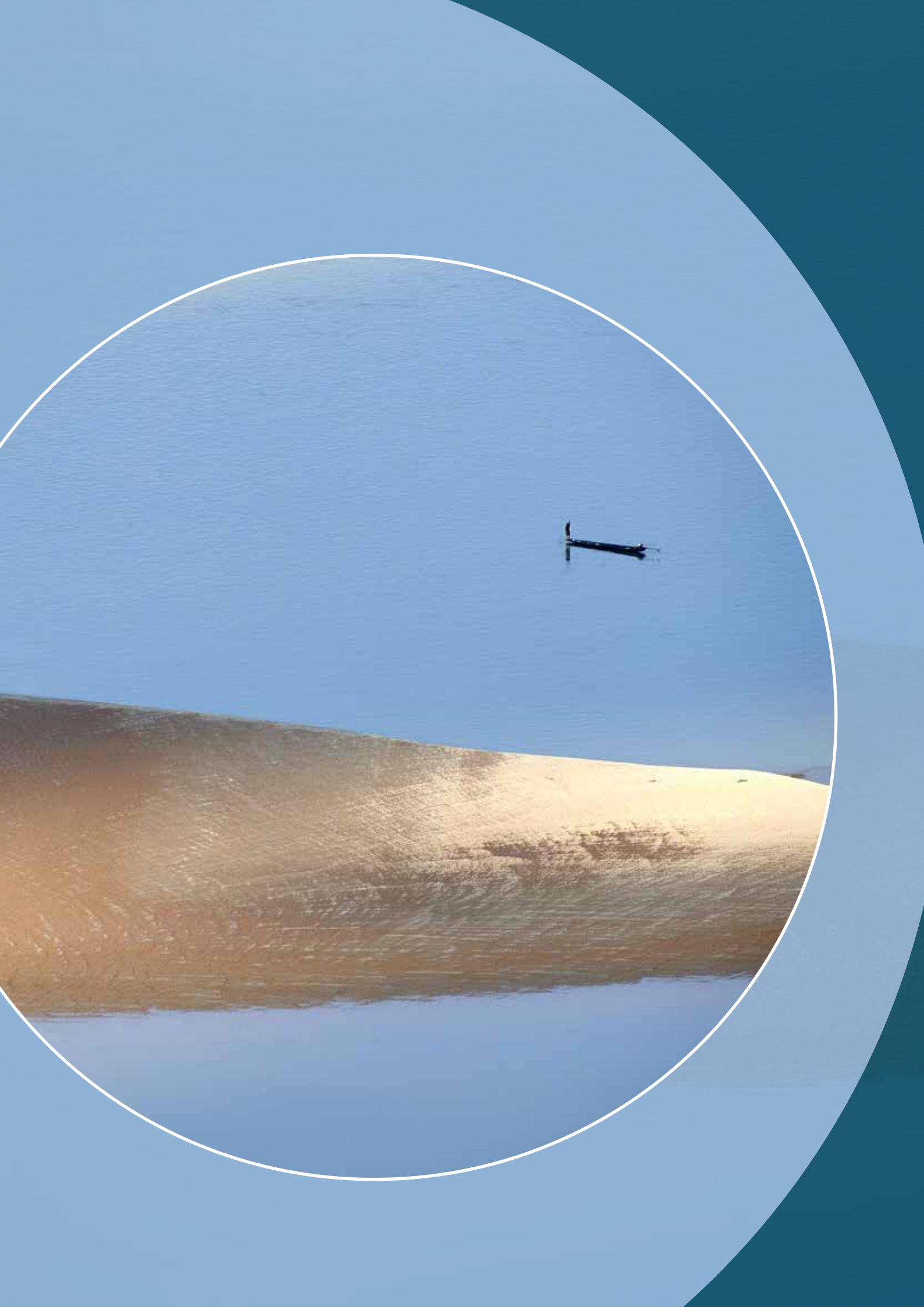
Part I: Key Achievements and Impact Stories





The image features a blue-tinted background showing a group of people in a meeting. In the foreground, a person is writing on a notepad with a green pen. A circular inset on the left side provides a closer view of the hands and the notepad. The text at the bottom of the image is white and italicized.

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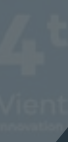
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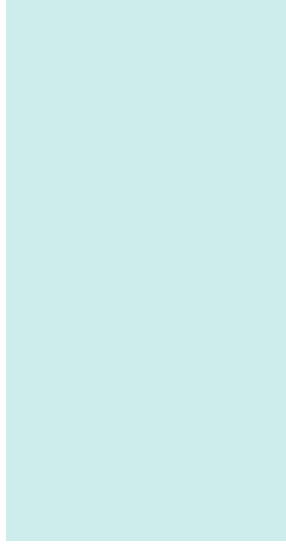
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DURABILITY

The sensors are designed in such a way that they can withstand harsh weather conditions.

The sensor is produced from a new and innovative concept, or further enhances existing sensor technologies.

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MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

EXECUTIVE SUMMARY

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ABBREVIATION

AC	Audit Committee
ACIAR	Australian Centre for International Agricultural Research
AD	Administration Division
ADPC	Asian Disaster Prepared Centre
AIT	Asian Institute of Technology
ARF	Administrative Reserve Fund
ASEAN	Association of Southeast Asian Nations
BDS	Basin Development Strategy
BF	Basket Fund
BFMS	Mekong Basin-Wide Fisheries Management and Development Strategy
CHIRPS	Compressed High Intensity Radar Pulse
CNMC	Cambodia National Mekong Committee
CNR	Compagnie Nationale du Rhône
CRMN	Core River Monitoring Network
CSU	Charles Sturt University
DAGAP	Data Acquisition and Generation Action Plan
DPs	Development Partners
DSF	Decision Support Framework
DSMP	Discharge and Sediment Monitoring Measurement
EF	Earmarked Fund
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FMIS	Financial Management Information System
FPAC	Fraud Prevention and Anti-Corruption
GAP	Gender Action Plan
GEF	Global Environment Facility
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPS	Global Positioning System
HPP	Hydropower Project
HYCOS	Hydrological Cycle Observing System
HYDRAF	Hydrologic Remote Sensing Analysis for Floods
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization

INRAE	Institute for Agriculture, Food, and the Environment
IPCC	Intergovernmental Panel on Climate Change
IT	Information Technology
IUCN	International Union for Conservation of Nature
JAP	Joint Action Plan
JC	Joint Committee
JEM	Joint Environmental Monitoring
KDI	Korea Development Institute
KfW	Kreditanstalt für Wiederaufbau
K-water	Korea Water Resources Corporation
LMB	Lower Mekong River Basin
MLC	Lancang-Mekong Cooperation
LNMC	Lao National Mekong Committee
LPHPP	Luang Prabang Hydropower Project
MASAP	Mekong Climate Change Adaptation Strategy and Action Plan
MC	Member Country
MEM	Ministry of Energy and Mine
MFEW	Mekong Fund Ecosystem Window Trial
MiRC	Mississippi River Commission
MOFA	Ministry of Foreign Affairs
MoU	Memorandum of Understanding
MP	Management Plan
MRB-IF	Mekong River Basin Indicator Framework
MRC	Mekong River Commission
MSDS	Material Safety Data Sheet
NASA	National Aeronautics and Space Administration
NCEP	National Centres for Environmental Prediction
NGO	Non-Government Organization
NIP	National Indicative Plan
NMC	National Mekong Committee
NMME	North America Multi-Model Ensemble
ODA	Official Development Assistance
ODP	Organization Development Plan
PBHPP	Pak Beng Hydropower Project

PC	Prior Consultation
PDG	Preliminary Design Guidance
PDIES	Procedures for Data, Information Exchange and Sharing
PIF	Project Information Forms
PLHPP	Pak Lay Hydropower Project
PMFM	Procedures for the Maintenance of Flows on the Mainstream
PNPCA	Procedures for Notification, Prior Consultation, and Agreement
PRP	Proactive Regional Planning
PWQ	Procedures for Water Quality
PWUM	Procedures for Water Use Monitoring
QA	Quality assurance
QC	Quality control
RAT	Reservoir Assessment Tool
RCP	Regional Cooperation Programme
REA	Regional Environmental Asset
RFDMC	MRC Regional Flood and Drought Management Centre
RFFS	River Flood Forecasting System
RHEAS	Regional Hydrological Extreme Assessment System
RSAT	Rapid Basin-wide Hydropower Sustainability Assessment Tool
RSF	Regional Stakeholder Forum
SDGs	Sustainable Development Goals
SEAFDEC	Southeast Asian Fisheries Development Center
SEI	Stockholm Environment Institute
SHDS	Sustainable Hydropower Development Strategy
SIMVA	Social Impact Monitoring and Vulnerability Assessment
SMAP	Soil Moisture Active Passive
SOBR	State of the Basin Report
TbEIA	Transboundary Environmental Impact Assessment
TD	Technical Support Division
UK	United Kingdom
UNEP	United Nations Environment Programme
UNOSSC	United Nations Office for South-South Cooperation
USAID	United States Agency for International Development
USD	US Dollars
USDOI	U.S. Department of Interior
VIC	Variable Infiltration Capacity



MESSAGE FROM THE CHIEF EXECUTIVE OFFICER



I am pleased to present the Mekong River Commission (MRC) Annual Report for 2023 – a year of remarkable progress and achievements by the MRC for Mekong cooperation. As we celebrate the 28th anniversary of the establishment of the MRC by the 1995 Mekong Agreement, we reaffirm our commitment to promoting the sustainable management and development of the Mekong River Basin.

Despite numerous challenges, let me highlight what achievements made this year special.

First, the 4th MRC Summit in Vientiane, Lao PDR, was a complete success. The leaders reaffirmed the highest political commitment to Mekong cooperation and identified seven (7) priorities to address the Mekong's key challenges. We were also able to celebrate unprecedented international participation at our International Conference. This event showcased a variety

of ground-breaking innovations, including an impressive technology exhibition and youth engagement. This record-breaking participation is evidence that the MRC is a leading transboundary water cooperation platform as recognized by participants from around the world, and shared commitment and dedication to the future of our Mekong basin.

Second, we witnessed unprecedented engagement and cooperation between the Lower and Upper Mekong, between the MRC and the Mekong Lancang Cooperation, fostering a growing sense of shared understanding and technical synergy. We witnessed a high level of engagement from China at the MRC Summit, meetings, and forums. We successfully completed our Joint Study Phase 1, with all six countries endorsing the recommendations in a historic joint meeting between our Joint Committees (JC) and the Joint Working Group (JWG) in Beijing. This strengthens trust and paves the way for better collaboration.

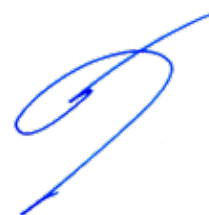
Third, we have made progress in implementing Joint Action Plans (JAPs) for the mainstream hydropower projects, resulting in significant action being taken and information being exchanged, especially for the Luang Prabang project. Despite the challenges and complexities, we also maintained dialogue and committed to working together based on agreed roadmaps for further assessments and provision of information on the Sanakham and Phou Ngoy projects. This year, we applied the TbEIA to the Sekong A project for the first time. We also created transparency and a platform for independent assessment, dialogue and, future joint monitoring in this very critical tributary of the Mekong.

Fourth, we achieved significant milestones in terms of funding. We secured commitments to address pressing issues such as environmental degradation, sustainable fisheries, ecosystems, and the livelihoods of Mekong communities. These include the Ecosystem Window of the Mekong Fund Ecosystem Window Trial (MFEW), to which Germany pledges its financial support of EUR 15 million, as well

as the approval of a USD 12-million fisheries project by the Global Environment Facility (GEF) Council. The majority of these funds will go directly to the countries and their people, a step we are very proud of.

Ultimately, the MRC's capacity and financial health remain strong. The total expenditure in 2023 was USD 15,518,664, which is 91% of the actual disbursement rate for completing 116 tasks of the annual work plan (approximately 86%). With the unwavering support of our four Member Countries and Development Partners, we are confident of our implementation capacity and financial stability in the coming years, especially given the potential support from new partners expected in 2024 and 2025.

There are many more areas of progress and achievements, so I warmly invite you to explore the pages of this report as we reflect on the milestones achieved and renew our commitment to the Mekong region.



ANOULAK KITTIKHOUN

Chief Executive Officer
Mekong River Commission Secretariat

EXECUTIVE SUMMARY



The Annual Report 2023 provides a window into the most significant achievements made by the Mekong River Commission (MRC) in 2023, shedding light on its main pathway to continue this momentum and progress into 2024.



The year 2023 marked the third year of the implementation of the Strategic Plan (SP) 2021-2025, a key contributor to the Basin Development Strategy (BDS) 2021-2030. This year was particularly significant due to the substantial progress made in the aftermath of the global COVID-19 pandemic.



This progress was reflected in the active implementation of the BDS's strategic priority areas by the MRC. These areas include environment, social, economic, climate change, and cooperation. The aim is to achieve 11 BDS Outcomes and 28 outputs by 2030, with a total of 95 activities identified for implementation.



The Annual Report 2023, Part I, provides an overview of key achievements and success stories under each strategic dimension, painting a picture of progress, where the challenges lie, and what requires focused attention to address these in 2024.

KEY ACHIEVEMENTS

ENVIRONMENTAL DIMENSION

SOCIAL DIMENSION

ECONOMIC DIMENSION

CLIMATE CHANGE DIMENSION

COOPERATION DIMENSION

FINANCIAL HIGHLIGHTS

ENVIRONMENTAL DIMENSION



The first strategic priority is the environmental dimension, which aims to maintain the basin's ecological functions.

The three outcomes to achieve this priority include i) adequate water flow and water quality for a healthy environment and productive communities; ii) managing sediment transport to mitigate bank erosion and maintain wetland flood-plains productivity; and iii) ensuring ecosystem services from wetlands and watersheds.

Through its commitment to maintaining these ecological functions, the MRC completed the final draft State of the Basin Report (SoBR) 2023 and the application of the Transboundary Environmental Impact Assessment (TbEIA) in the Mekong after 18 years of consultations, through the Sekong A Project in Lao PDR.

The SoBR 2023 was successful as it is the second time a whole-basin assessment

has been developed. The four Member Countries (MCs) and the Dialogue Partners (DPs), China and Myanmar, proactively shared information to form a holistic picture of the basin's state and understand its condition and where collective action needs to focus.

Five concerning trends were observed, including changing flows - with an increase in flows in the dry season and a decrease in flows in the wet season; reduced flows of nourishing sediment; rising salinity that spoils rice crops and impacts on environmental assets and fish species; mounting plastic pollution; and a decline in the condition of environmental assets including wetlands and fish species. Conversely, areas showing improvement, including water quality (for most parameters under the PWQ), economic growth, regional living standards, and cooperation, yield tangible results.

These concerns will be addressed as a priority through the remaining SP 2021-2025 and the next Strategic Plan 2026-2030.

The MRC Member Countries have embarked on a significant step towards fostering transparency and sustainability in infrastructure development with the voluntary application of the TbEIA guidelines in tributaries, starting with the Sekong A Hydropower Project in Lao PDR. Situated on a key tributary within Lao PDR, this project does not require the typical consultation process required for mainstream projects. Nevertheless, Lao PDR demonstrated a spirit of cooperation by considering the concerns of Cambodia, Viet Nam, and other stakeholders, leading to the decision to apply the TbEIA. This decision signifies a significant milestone, as it is the first-ever instance of such guidelines being voluntarily applied in the Mekong region. Yielding from this application and testing is a TbEIA Report for the Sekong A Project that complements its already existing national EIA report. Of significance and among other recommended transboundary mitigation measures, the TbEIA report recommends the enhancement of the fish passage to mitigate the project's impact on fisheries and fish migration.

Progress continues on the Joint Action Plans (JAPs), facilitating the exchange of issues to improve the design, construction, operation, and monitoring of hydropower projects on the Mekong. Notably, advancements have been made with the implementation of the

JAP for the Luang Prabang Hydropower Project (LPHPP), marking a significant stride towards collaborative and sustainable development in the Lower Mekong Basin (LMB). It serves as a mechanism to adapt proposed uses in a manner that is reasonable and equitable. Through prior consultation processes for mainstream dams, such as Pak Beng, Pak Lay, and Luang Prabang, Member Countries have agreed upon measures to optimise project benefits and minimise potential transboundary harm, ensuring a balanced approach to infrastructure development that respects the rights and concerns of all stakeholders. Consultation with developers resulted in improvements made on hydropower design, as reported by the LPHPP, including additional capacity with emergency spillway, optimisation of channel geometry for the improvement of navigation, and optimisation measures for connection with upstream fish migration system to provide additional breeding areas.



SOCIAL DIMENSION




The second strategic priority is the social dimension, which prioritises the enabling of inclusive access to and use of the basin's water and related resources.

The two outcomes to achieve this priority are: i) strengthening water, food, and energy security for the Basin society's well-being, and ii) increasing employment and reducing poverty among the most vulnerable people, who are often dependent upon river and wetland resources.

To facilitate this inclusiveness, access and equity, the MRC took steps in 2023 to secure investments that will directly benefit local riverine communities within the Lower Mekong Basin. Two examples include: i) the Mekong Ecosystem Fund Trial, which targets the improvement of livelihoods and biodiversity for critical wetlands, watershed and environmental hotspots, and ii) the Global Environment Facility \$12 million Enhancing Transboundary Fisheries Management Project which works with our partners on a transformative project – aiming to improve value chains, reconnect swim ways, and offer viable livelihood alternatives to reduce dependencies on wild fisheries, among others.

ECONOMIC DIMENSION





The third strategic priority is the economic dimension, which concerns optimising the sustainable development of water and related sectors by increasing regional benefits and decreasing regional costs.

The two outcomes to achieve this are i) increased economic growth of all Basin countries with more proactive regional planning and ii) enhanced inclusive growth and sustainability in irrigated agriculture, hydropower, navigation, environment, and fisheries sector.


To optimise sustainable development, the MRC delivered on a number of initiatives by supporting the countries in applying two new Fishway Guidelines for the thousands of irrigation schemes, removing some of the barriers, or building

new fish passages. Eight fishways have been constructed in the MCs following the guidelines, with two more planned.

In addition, fishways were monitored throughout irrigation facilities to understand how effective the infrastructure has been, with the national fishway teams supported by international research institutions. Early indications show that the presence of fish species has increased following the installation of the fishways. The monitoring results are being shared with other MCs to share lessons, and other countries, such as Indonesia, are looking to learn from the work of the MRC. This activity links to enhancing inclusive growth and sustainability in irrigated agriculture whilst ensuring the fish species are able to migrate, and the fisheries sector can also benefit.

CLIMATE CHANGE DIMENSION





The fourth strategic priority is climate change, strengthening resilience against climate risks, extreme floods, and devastating droughts.

The two outcomes to achieve this are i) better informing and preparing Basin communities against changing river conditions and ii) improving disaster management and adaptation to water resource development and climate risks.

To better prepare for such risks and boost resilience, the MRC, as the regional knowledge hub, has enhanced the communication and use of services such as river monitoring data and flood, flash flood and drought forecasting information. The MRC also explored big data and Artificial Intelligence in line with the digital age. The capability has now

been developed from the current one-week forecast to undertake medium to long-term Flood and Drought forecasts – one month, three months, and six months. This information will be critical for our countries to better plan for prevention and response.

Further, in July 2023, the MRC launched a TV Channel on Mekong Flood and Drought Forecasting to improve public awareness and understanding of Mekong River conditions in the LMB. The TV channel provides regular updates on current water levels and flows and forecasts flood and drought risks for people living along the Mekong River, broadcasting in English with subtitles in Mekong languages. It runs every Monday during the rainy season on the MRC Secretariat's social media channels of Facebook and YouTube, reaching close to half a million people.

COOPERATION DIMENSION



The fifth strategic priority is cooperation, which strengthens cooperation among all countries and stakeholders.

The two outcomes to achieve this are i) strengthening the MRC for more effective implementation of the 1995 Mekong agreement and ii) increasing joint efforts and partnerships for greater integration throughout the river basin.

Much was achieved in 2023 under this dimension. Lao PDR and Thailand made an agreement to harmonise navigation and pollution rules on a shared transboundary stretch of the Mekong. A historic achievement was made in completing the first phase of the Joint Study on the Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin with the MLC and China. After many sessions - technical, modelling, exchange of visits, informal talks - we had reached

a common understanding of the situation and, more importantly, the recommendations on adapting to the changing flow regime.

The 4th MRC Summit resulted in the Vientiane Declaration affirming the Mekong leader's commitment at the highest level to innovation and cooperation for a water-secure and sustainable Mekong, and the MRC International Conference called for action to make a meaningful difference, with students leading the way in innovation through the MRC's first-ever River Monitoring Technology Competition for the Mekong.


The 13th Regional Stakeholder Forum was successfully held to offer participants updates and consultations on water-resource developments along the Mekong River, southeast Asia's largest river, which affects tens of millions

of lives. The forum focused on the current state of the basin, mainstream development projects, and proactive regional planning initiatives under the theme "Data Sharing for Transparency and Trust".

In 2023, the MRC continued its efforts to maintain relationships by building trust with existing partners and reaching out to new partners and continued the implementation of the 5-year Gender Action Plan (GAP) - which is a significant component of the broader MRC Strategic Plan 2021–2025, that aims to mitigate gender and vulnerability challenges into planned activities under its five strategic priorities - to the MRC Handbook on Mainstreaming Gender published in January 2023 *through the development of national gender action plans to mainstream and expedite its implementation.*

FINANCIAL HIGHLIGHTS





The opening fund balance was recorded at USD 16,445,945 at the beginning of 2023. From January to December 2023, the MRC received an overall income of USD 10,750,262, which was 99% of the projected income (USD 10,904,028) in 2023. This consisted of USD 9,168,677 for the Basket Fund (BF), USD 1,301,063 for the Earmarked Fund (EF), and USD 280,522 for the Administrative Reserve Fund (ARF). The total income of BF included USD 4,857,496 from the MCs, USD 3,903,163 from DPs, and USD 408,018 from Management and Administration Fee (MAF) and other sources of income

The total expenditure from January to December 2023 was USD 15,518,666, accounting for 91% of the actual disbursement rate of the total budget of USD 17,131,536. The expenditure in 2023 mainly included USD 11,113,843 of the BF and USD 4,404,823 of the

EF. The MRC fund balance for BF and EF by the end of December 2023 was USD 6,210,977.

In comparison to the expenditures of 2022, the overall MRC expenditures in 2023 saw a surge of 29%, marking a more substantial increase than the previous year. The increase was primarily due to the realisation of the increased frequency of national and regional meetings and workshops, the 4th MRC Summit and associated events, the procurement of IT equipment for and construction of new hydrometeorological stations under the Core River Monitoring Network (CRMN), and the acquisition of new Discharge and Sediment Monitoring Measurement (DSMP) equipment. Over the years, the MRC Secretariat has consistently upheld its internal control mechanisms and adhered to its regulations and financing agreements with DPs.

An aerial photograph of a large body of water, likely a reservoir or lake, with a small island in the center. The water is a deep green color, and the sky is a hazy, light brownish-orange. A small boat is visible on the water near the island. The overall scene is serene and natural.

INTRODUCTION

The MRC Annual Report 2023 (AR 2023) is the third Annual Report within the five-year planning cycle for the MRC Strategic Plan 2021–2025. The AR 2023 highlights the many key achievements and reports on the progress of activities set out in the MRC SP 2021–2025 and the tasks in the Multi-Year Work Plan 2023–2024 (MWP 2023–2024). This report primarily focuses on the results and impact associated with the implementation in 2023. It presents the achievements and progress made, highlighting the changes and benefits that have emerged from the implementation. The aim is to provide an insightful understanding of the impact and value generated.

The AR 2023 is divided into two parts:

Part I: Reports on the MRC's impact and discusses the challenges the organisation faced in that year, the actions it took, and the consequences it created through its work. This part also includes a brief summary of the financial report.

- **Result and impact reporting:** This reporting method aims to showcase the stories that contain results and impacts (evidence of change) in each of the five strategic priorities, as measured by their respective indicators. Progress and accountability for all indicators are reported in Part II.
- **Financial summary:** This section provides a summary of the MRC's financial performance in terms of overall financial status, income, and actual expenditures compared with the forecasted budget articulated in the Annual Work Plan 2023 and with the financial performance of 2022.

Part II: Prepared as a separate report, this part provides detailed reporting on the MWP 2023–2024 implementation progress in terms of activities and tasks and detailed financial reporting.

- **Progress reporting:** The detail is presented in different annexes in which the progress of delivering each task under each activity is reported in terms of the completion status of its activities (as planned in the MWP for the year), the percentage of progress of the Key Deliverables (against the five-year MRC SP), and the implementation status whether it is “on track” or “delayed”. In addition, reporting on the status of the Output indicator is available, which reflects the rating and status at the end of the reporting year. Risk management and justifications are also reported.
- **Financial reporting:** This provides comprehensive financial reporting, which delves into detailed funding status, incomes, and expenditures for the year by each type of fund.

The MRC and its Strategic Plan

Established by the Mekong Agreement in 1995 among the governments of Cambodia, Lao PDR, Thailand and Viet Nam, the MRC is mandated to “promote and coordinate sustainable management and development of water and related resources of the countries’ mutual benefit and the people’s well-being”. Under the MRC framework, the four core members cooperate in all fields of sustainable development, utilisation, management, and conservation of the water and related resources of the Lower Mekong River Basin, including, but not limited to, irrigation, hydropower, navigation, flood control, fisheries, and the like, in a manner that optimises the multiple-use and mutual benefits of all riparian countries and that minimises harmful impacts.

For 2021–2025, the MRC SP contributes to five Strategic Priorities, 11 Outcomes, and 28 Outputs of the Basin Development Strategy 2021–2030 (BDS 2021–2030). It does this by implementing 95 key activities over five years. The National Indicative Plans 2021–2025 – one for each country – address the BDS 2021–2030 priorities at the national level through joint projects, national projects of basin significance, national activities, and decentralised activities.



Overall, the MRC strives to contribute to the following strategic priorities and outcomes of the BDS:

Strategic Priority	Outcome
<p>Environment (Priority 1) Maintain the ecological functions of the Mekong River Basin</p>	<p>BDS Outcome 1.1: Adequate water flow and quality for a healthy environment and productive communities</p> <p>BDS Outcome 1.2: Sediment transport managed to mitigate bank erosion and maintain wetland floodplain productivity</p> <p>BDS Outcome 1.3: Ecosystem services from wetlands and watersheds ensured</p>
<p>Social (Priority 2) Enable inclusive access and utilisation of the basin's water and related resources</p>	<p>BDS Outcome 2.1: Strengthened water, food, and energy security for basin community well-being</p> <p>BDS Outcome 2.2: Increased employment and reduced poverty among vulnerable people dependent on river and wetland resources</p>
<p>Economic (Priority 3) Enhance optimal and sustainable development a) of water and related sectors b) by increasing regional benefits and decreasing regional costs</p>	<p>BDS Outcome 3.1: Increased economic growth of all basin countries from more proactive regional planning</p> <p>BDS Outcome 3.2: Enhanced inclusive growth and sustainability in irrigated agriculture, hydropower, navigation, environment, and fisheries sector</p>
<p>Climate Change (Priority 4) Strengthen resilience against climate risks, extreme floods, and droughts</p>	<p>BDS Outcome 4.1: Better informed and prepared basin communities against changing river conditions</p> <p>BDS Outcome 4.2: Better disaster management and adaptation to water resources development and climate risks</p>
<p>Cooperation (Priority 5) Strengthen cooperation among all countries and stakeholders</p>	<p>BDS Outcome 5.1: Strengthened Mekong River Commission for more effective implementation of the Mekong Agreement</p> <p>BDS Outcome 5.2: Increased joint efforts and partnerships for more integrated management of the entire river basin</p>

See Annexe 1 in AR Part II for a list of the MRC SP's activities and deliverables that contribute to the BDS's different outputs.

INTRODUCTION

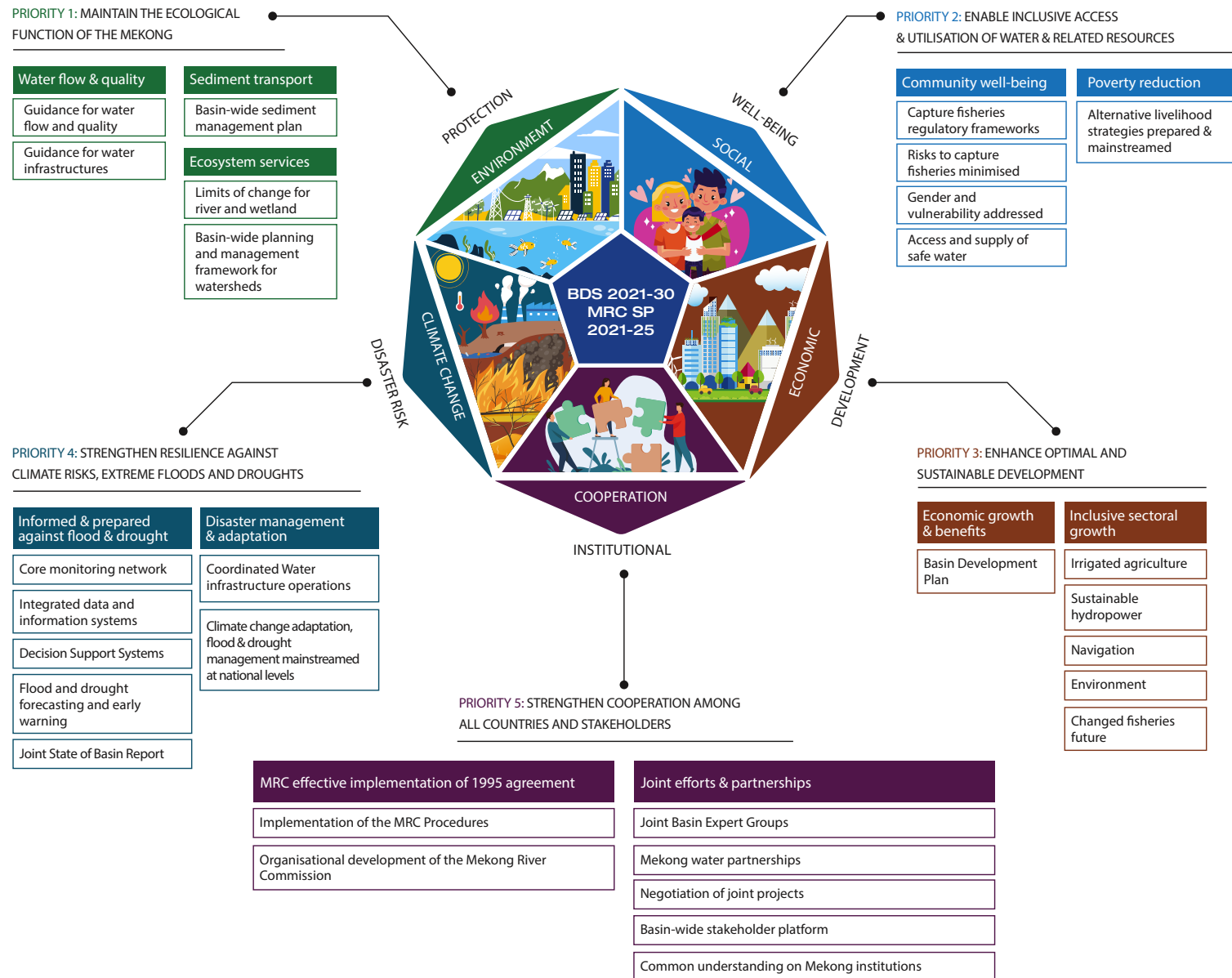


Figure 1. Basin Development Strategy 2021–2030 and MRC Strategic Plan 2021–2025.

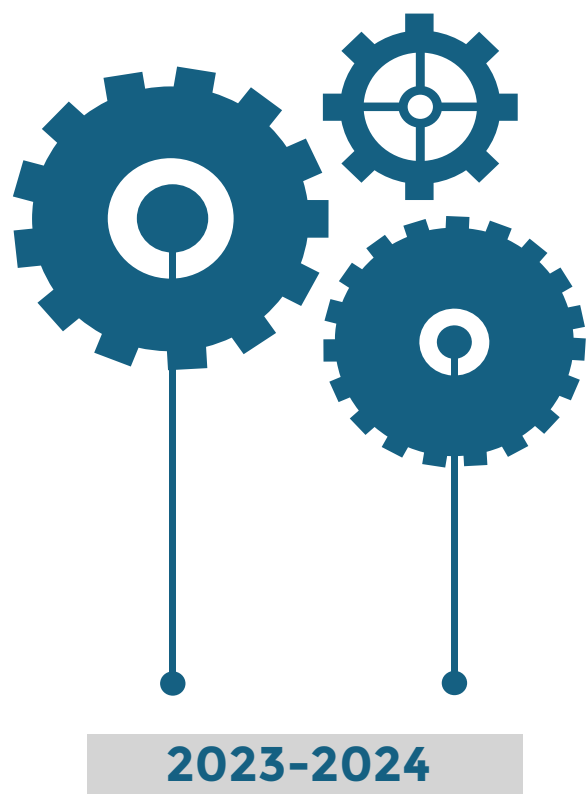
Multi-Year Work Plan 2023-2024 Implementation

In 2023, the Mekong River Commission (MRC) received a total income of USD 10,750,262. The Multi-Year Work Plan (MWP) for 2023 had a revised budget of USD 17,131,536, with actual expenses amounting to USD 15,518,666. This signifies a disbursement rate of 91%, which is a commendable achievement. This exceptional performance in 2023 was made possible through the concerted efforts of the MRC Secretariat and Member Countries (MCs).

The year 2023 was considered “a breakthrough year”, as shown through the impact stories in this report.

The MRC is interested in measuring and reporting not only on the progress of outputs but also on the degree of change or impact each activity has brought about for the organisation and the basin. The Pathway of Change illustrates this process in Figures 2 and 3. An activity may lead to a short-term change and to building awareness, which is considered “a good result”. However, the ultimate goal is where a long-term, sustainable impact occurs through adopting MRC measures in developing and implementing regional and national policies, plans, strategies, legislation, and cooperation mechanisms.

To achieve long-term change, the MRC can be more certain that the Commission achieves its mandate for the sustainable management and development of water and related resources of the LMB for the countries’ mutual benefit and the people’s well-being.





CHANGE IN

- ▶ Learning
- ▶ Awareness
- ▶ Knowledge
- ▶ Attitude/Opinion

INCREASED KNOWLEDGE/CAPACITY

Short Term
(<1 year)

CHANGE IN

- ▶ Action
- ▶ Behavior
- ▶ Practice
- ▶ Decision Making

INDIVIDUAL ACTIONS

Medium Term
(2–3 years)

CHANGE IN

- ▶ Plan
- ▶ Strategies
- ▶ Policies

SUSTAINED INSTITUTIONAL ACTIONS

Long Term
(5–10 years)

Figure 2. Different Types of Change



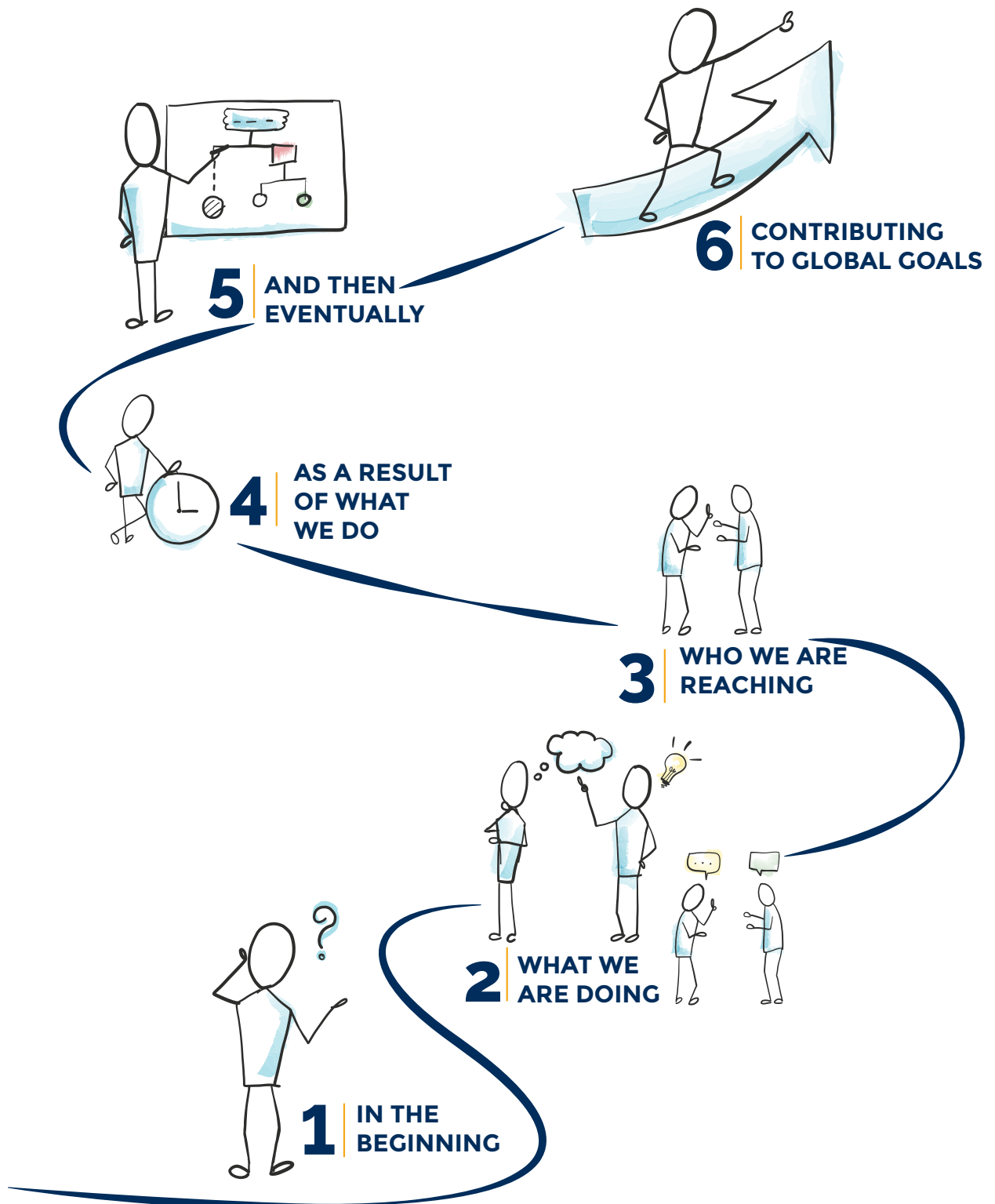


Figure 3. Pathway of Change

To address basin-wide needs, challenges, and opportunities at the regional scale, the MRC’s work is geared toward contributing to the United Nations’ **Sustainable Development Goals (SDGs)**. The MRC’s activities are linked to 10 of the 17 SDGs. These

include Goal 1 (No Poverty); Goal 2 (Zero Hunger); Goal 5 (Gender Equality); Goal 6 (Clean Water and Sanitation); Goal 7 (Affordable and Clean Energy); Goal 8 (Decent Work and Economic Growth); Goal 9 (Industry, Innovation, and Infrastructure); Goal 13 (Climate Action); Goal 15 (Life on Land); and Goal 17 (Partnerships for the Goals).

Figure 4 below illustrates how the BDS outcomes and outputs are linked with the SDGs and other relevant targets.

Under SDG 6: Clean Water and Sanitation, target 6.5 commits to 2030, implementing integrated water resources management (IWRM) at all levels, including through transboundary cooperation as appropriate. IWRM is a process that promotes the coordinated development and management of water, land, and related resources. Its goal is to maximise economic and social welfare in an equitable manner while safeguarding the sustainability of vital ecosystems. The MRC, through the 1995 Mekong Agreement, the five procedures and the BDS 2021-2030, facilitates IWRM at the regional level.

According to the recently updated data on Sustainable Development Goal (SDG) indicator 6.5.1, which assesses the degree of IWRM implementation (0-100), 180 countries were evaluated and reported on the IWRM Action Hub website (2023). For the four Member Countries, Cambodia (62), Lao (68), Thailand (70), and Viet Nam (56), their IWRM implementation falls within the medium-high range. That means the Member Countries generally have adequate capacity to implement IWRM elements under long-term programs. All member countries were above the overall global average of 57 for IWRM implementation, except for Viet Nam, which was very close with a score of 56. To achieve the 6.5.1 indicator by 2030, the global goal is for “very high” implementation.

All four countries were rated as medium-high for each dimension of IWRM: i) Enabling Environment: policies, plans and laws to support IWRM; ii) Institutions and Participation: capacity, participation and coordination at levels; iii) Management Instruments: instruments to monitor and manage water resources and ecosystems, and iv) Financing: Budgets and revenue raising for IWRM and infrastructure – with evidence of transboundary activities contributing to each of these four dimensions. There were two exceptions for Viet Nam, where it was rated in the medium-low range for Management Instruments and Financing dimensions, with a score of 50 for each, only one point below the medium-high range. In this case, the COVID-19 pandemic may likely have impacted the result, especially financing. All countries have shown a general trend of improved IWRM ratings from 2020 to 2023.

The MRC Dialogue Partners had varied results, with China in the high range and Myanmar in the medium-low range (elements of IWRM are generally institutionalised, and implementation is underway).

	Overall	Enabling Environment	Institutions and Participation	Management Instruments	Financing
MRC Member Countries					
Cambodia	62	66	68	63	52
Lao PDR	68	69	68	72	63
Thailand	70	79	73	62	65
Viet Nam	56	69	56	50	50
MRC Dialogue Partners					
China	81	84	79	82	78
Myanmar	38	46	38	41	28



OUR BASIN VISION

An Economically Prosperous, Socially Just, Environmentally Sound and Climate Resilient Mekong River Basin

THE STRATEGIC PRIORITIES FOR THE MEKONG BASIN & CONTRIBUTIONS TO THE SUSTAINABLE DEVELOPMENT GOALS

ENVIRONMENT



1 Maintain the ecological function of the Mekong River Basin

SOCIAL



2 Enable inclusive access and utilization of the basin's water and related resources

ECONOMICS



3 Enhance optimal and sustainable development of water and related sectors

CLIMATE CHANGE



4 Strengthen resilience against climate risks, extreme floods, and droughts

COOPERATION



5 Strengthen cooperation among all basin countries and stakeholders

THE OUTCOMES THE BASIN AIMS TO ACHIEVE BY 2030

6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

15.1 Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.9 Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

1.1b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all **6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

17.18 By 2020, enhance capacity-building to developing countries to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

2.4 By 2030, ensure sustainable food production

systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.2 Integrate climate change measures into national policies, strategies and planning

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the SDGs, including through North-South, South-South and triangular cooperation

17.14 Enhance policy coherence for sustainable development

HOW WE PLAN TO REACH THE OUTCOMES

Basin-wide sediment management plan

Water flow managed with agreed guidelines

Limits of acceptable change for wetland

Access & supply of safe water to vulnerable people

Capture fisheries regulatory frameworks

Gender and vulnerability aspects are identified and addressed by policy make

Proactive regional planning approach

Joint infrastructure projects

Investment in key economic sectors

Coordinated dams operation for flood & drought

Integrated basin-wide forecasting and early warning

Cooperation with MLC

Figure 4. Basin Development Plan's Results Chain

The achievements of Multi-Year Work Plan 2023 are reported in the following impact stories under each dimension:

Table 1. Impact Stories for 2023

Environmental Dimension

- Holistic Picture of the Mekong's Current State of the Basin Informs Collective Action
- In the Spirit of Cooperation, the MRC Applies the Newly Agreed TbEIA Guidelines in the Sekong River
- Joint Action Plans Provide a Pathway to Exchange Issues, Enabling Improvement in the Design, Construction, Operation, and Monitoring of Hydropower Projects on the Mekong

Social Dimension

- Design of Mekong Fund Ecosystem Window Trial Aims to Uplift Riparian Communities
- Global Environment Facility Approves a \$12-million Project "Enhancing Transboundary Fisheries Management in the Lower Mekong Basin"

Economic Dimension

- MRC Fish-friendly Irrigation and Fishway Monitoring in the Lower Mekong Basin Reaches Local Communities and Shows Early Signs of Improvement


Climate Change Dimension

- MRC Continues to Reduce Adverse Impacts on Vulnerable Communities from Flood, Flash Flood and Drought Through More Accurate Forecasting

Cooperation Dimension

- Lao PDR and Thailand Reach Agreement to Harmonise Navigation and Pollution Rules on a Shared Mekong Stretch
- Mekong-Lancang Countries Agreed on Recommendations of the Joint Study and Reach a Pact to Share More Data on Dam Operations
- A Modernised Document Management System within the MRC Enables Improved Useability and Access at All Levels
- 4th MRC Summit Results in the Vientiane Declaration Affirming the Mekong Leaders' Commitment to a Water-Secure and Sustainable Mekong
- Youth Engagement in Innovation Through the MRC's First-ever River Monitoring Technology Competition for the Mekong
- Cooperation and Partnerships in the Mekong Strengthened Through Innovative, Honest Brokering Capacity, Modern Technology and State-Of-The-Art Knowledge
- Focused Work Continues on Mainstreaming Equity for Gender and Vulnerable Groups Within the Mekong Basin
- Efforts Ramped up to Engage with Stakeholders on Critical Mekong Issues at the 13th Stakeholder Forum

In the following sections, these impact stories will be presented against each of the five BDS strategic dimensions, with reference to the State of the Basin Report 2023.



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ENVIRONMENTAL DIMENSION

BDS Strategic Priority 1

Maintain the Ecological Functions of the Mekong River Basin



Introduction

The Environment Dimension focuses on Strategic Priority 1 to maintain the ecological functions of the Mekong River Basin. To meet this, the most critical issues to be addressed relate to changes in water flow conditions, the reduction in sediment transport, the loss of remaining wetlands, and the management of wetlands and watersheds. The status related to this priority, as identified in the final draft of the State of Basin Report 2023 (SOBR 2023), is shown in **Table 2** below.

Table 2. Environmental Status as Shown in the State of Basin Report 2023

BDS Outcomes	Strategic Indicators	Condition	Trend	Status and Key Issues	BDS Progress
1.1 Adequate water flow and quality for a healthy environment and productive communities	Water flow conditions	●	↘	Dry season flows unstable or severe in some areas for extended periods in the early dry season Reduced Tonle Sap reverse flows	↓
1.2 Sediment transport managed to mitigate bank erosion and maintain wetland and floodplain productivity	Water quality and sediment conditions	●	↘	Declining water quality of unknown cause for several parameters Continued reduction in sediment transport at multiple stations along the river	→
1.3 Ecosystem services from wetlands and watersheds ensured	Status of environmental assets	●	↘	Significant loss of natural wetlands Risks to wild fish populations with declining total catch in recent years	→
● No immediate concerns	● Some significant concerns to address	● Considerable concern, urgent action needed	○ Insufficient data to form a view, requires action to address knowledge gaps		



MRC Contribution to BDS Outcome and Output

The BDS under the Environment Dimension denotes one strategic priority, three outcomes, and five outputs to be achieved by 2030. First, a healthy riverine environment that comprises flows is required to be within agreed ecological bounds. Second, there is a need to ensure that rivers and wetlands are connected at frequencies and for durations to support ecosystem services, including fish migration. Third, there is a need to enable riverbank agriculture and other livelihood activities to support people in vulnerable situations. Finally, the Mekong water quality needs to remain good.

Under Output 1.1.1 (guidance for water flow and quality management), the MRC is implementing several activities through its Procedures (*Procedures for the Maintenance of Flows on the Mainstream or PMFM; Procedures for Water Quality or PWQ; Procedures for Water Use Monitoring or PWUM*); and an action plan on dangerous goods. Under Output 1.1.2 (mitigating the impact of water infrastructure), the MRC is working on many activities through approved technical guidelines, including the Preliminary Design Guidance or PDG, Joint Action Plans or JAPs, and the *Guidelines for Transboundary Environmental Impact Assessment or TbEIA Guidelines*.

Under Output 1.2.1 (sediment management planning), the MRC is currently studying sediment management options through the strategic study of Proactive Regional Planning (PRP) on sediment transport. Under Outputs 1.3.1 and 1.3.2 (wetland and watershed management), the MRC is to conduct a study on the limit of environmental change (under Proactive Regional Planning), work on activities that strengthen environmental asset management plans, and prepare a basin-wide watershed management framework. A more detailed report on these activities is in Part 2.

The following success stories capture the key achievements and impact and illustrate the evidence of change and progress made in 2023. These key success stories include finalising the SoBR 2023 and the Lower Mekong Basin Atlas, the Voluntary Application of the TbEIA Guidelines, and the implementation of Joint Action Plans (JAPs).





A wide river flows through a lush green landscape. In the background, a village with several houses is visible, along with a tall, thin tower. The sky is a clear, pale blue. The river is calm, reflecting the surrounding greenery. A small boat is visible in the distance, and a larger boat is partially visible in the foreground on the left.

Holistic Picture of the Mekong's Current State of the Basin Informs Collective Action

Progress and Evidence of Change

The Mekong State of the Basin Report (final draft)) 2023 provides a holistic picture of the state of the Mekong River Basin and a clear pathway forward for future collective action. It lays the groundwork for informed decision-making and serves as a valuable guide for collective action to ensure the sustainable management and protection of the Mekong River.

This SoBR 2023 tells us about the Mekong River Basin's:

- Ecological health
- Social and economic circumstances of its people
- The changing climate, and
- The degree to which cooperation between the basin countries enhances these conditions as envisaged under the 1995 Mekong Agreement.

Through the SOBR 2023, it is the 2nd time a whole basin assessment has been developed, with the four Member Countries and the Dialogue Partners, China, and Myanmar, sharing information to form a holistic picture of what the state of the basin looks like to understand its condition and where collective action needs to focus. Such an approach contributes to meeting the BDS 2021-2030 vision for more integrated management of the entire Mekong River Basin by providing a holistic picture of current conditions and trends as input to planning and decision-making by all basin countries.

The Vientiane Declaration confirmed the SoBR's importance through the countries' commitment to shift collective action towards the proactive identification of regional investment solutions and adaptive responses to basin challenges.

*The Chinese Minister of Water Resources, Guoying Li, at the 26th consecutive MRC Dialogue, confirmed China's desire to achieve "shared benefits" of Mekong development through **"actively promoting the building of the information-sharing platform."***

SoBR 2023 highlights five alarming trends in the Mekong River Basin, including changing flows—with an increase in flows in the dry season and a decrease in flows in the wet season—reduced flows of nourishing sediment, rising salinity that spoils rice crops and impacts environmental assets and fish species, mounting plastic pollution, and a decline in the condition of environmental assets, including wetlands and fish species.

On a positive note, certain areas that demonstrate improvement, including water quality for most parameters under the PWQ, (noting that some parameters are in decline and some there is not enough data available), economic growth, regional living standards, and cooperation, yield tangible results. Having said this, the SoBR 2023 provides critical insights for informed decision-making and collective action, aiming to safeguard the Mekong River Basin’s ecological integrity and the well-being of its people.

So, how do we address the informed issues? Addressing these issues is a collective responsibility of all basin actors involved in Mekong water-related issues. The MRC is critical in providing leadership, facilitating dialogue, and coordinating efforts between its Member Countries, its Dialogue Partners, and other stakeholders. We can only achieve the outcomes of the BDS for Mekong water-related issues by working together.

“The report is an important means for the MRC Member Countries, the Secretariat, and stakeholders to understand the challenges facing the Mekong River Basin and to track the impacts of different management and protection measures”, stated the Development Partners at the 30th Council Meeting in 2023. DPs highlighted “the importance of including data on gender and vulnerability aspects and engaging stakeholders, including civil society, in the development of the report. The areas covered in the SoBR – environmental, social, economic, climate change, cooperation – are the concern of all Mekong stakeholders, from governments to communities and civil society to the private sector.”

The 2023 SoBR is beneficial as it provides detailed information and analysis through the:

- assessment of current conditions and trends within the basin as expressed through the 15 strategic-level indicators within the five dimensions of the BDS;
- identification of key issues: the report identifies critical challenges that hinder the achievement of sustainable, optimal, and equitable development of the basin's resources;
- identification of recommendations to be considered by all basin actors to address areas of concern and to help guide plans for management and development of the basin;
- contribution to the knowledge base, including through the use of the Lower Mekong Basin Atlas, on sustainable management of the Mekong River Basin by providing datasets that can be used and replicated to guide future policy-oriented research and inform a wide range of stakeholders;
- creating a foundation upon which all basin actors can assess their individual and collective contribution to progress towards achieving the SDGs relevant to MRC's mission.

The recently updated Lower Mekong Basin Atlas, an interactive geospatial mapping platform, was also used in the SoBR 2023 to show the status of certain spatial parameters. The Lower Mekong Basin Atlas provides a modernised tool for basin planning, providing interactive maps of different parameters within the lower Mekong Basin, accessible online by the Member Countries.

The SoBR is structured around the Mekong River Basin Indicator Framework (MRB-IF), consisting of 15 strategic indicators and 53 assessment indicators across five dimensions:

Strategic Indicators



The strategic indicators inform high-level decision-makers and basin stakeholders on key issues related to the Mekong River Basin's development, utilisation, conservation, and management. They are evaluated based on several underpinning assessment indicators that illustrate the current conditions and trends in matters relevant to water resources management and development throughout the basin.

The draft SoBR 2023 was also shared at the 13th Regional Stakeholder Forum “Data Sharing for Transparency” held on 5 October 2023 in Luang Prabang, Lao PDR. This enabled open discussion and feedback on the report and its findings.

Data to inform the 2023 SoBR included routine MRC river monitoring activities, periodic regional studies, and surveys (e.g. the Joint Study), national monitoring and survey data collection (e.g. socio-economic data and transmission), and additional relevant data from international and regional organisations, official reports and publications. The Data Acquisition and Generation Action Plan (DAGAP), a priority activity under the BDS, assisted in ensuring gaps in data were addressed, enabling a clear plan to be developed in preparing the SoBR 2023, which was informed by up-to-date data and studies.

The SoBR forms an integral part of the basin planning cycle. It is the first step in guiding basin stakeholders in reviewing and refining their implementation, which will inform the next five-year Strategic Plan and ensure the successful implementation of the 10-year Basin Development Strategy (BDS). In 2025 and 2026, work will commence on collecting data and information to support the development of the next SoBR, which will be finalised in 2028.



In the Spirit of Cooperation, the MRC Applies the Newly Agreed TbEIA Guidelines in the Sekong River



Progress and Evidence of Change

As a first step in implementing the newly agreed MRC TbEIA Guidelines, Member Countries and Development Partners welcome Lao PDR's willingness to voluntarily apply them to a hydropower development project in the Sekong River basin, a major tributary of the Mekong.

The piloting of the TbEIA guidelines between the four Member Countries is being applied to the Sekong Downstream (Site A) Hydropower Project. Under the guidelines, Lao PDR is recognised as the country of origin, Cambodia and Viet Nam are recognised as potentially affected countries, and Thailand serves as an observing country. The Project, located on the Sekong River, is approximately 45 Km downstream of the City of Attapeu, with a potential installed capacity of 86 MW and an average annual energy output of 342.64 GWh.

The application has received a lot of interest and enthusiasm from the Member Countries on how to implement the guidelines and incorporate them into the Sekong Downstream (Site A) HPP, with all eager to see the outcome. The pilot, officially named the 'voluntary application and testing of the MRC TbEIA Guidelines on the Sekong Downstream (Site A) Hydropower Project', aims to test the applicability of the implementation process of the TbEIA through eight steps and to document any lessons learnt and challenges from the application. Recommendations will be provided to promote a wider future application of the TbEIA Guidelines. Yielding from this is a TbEIA Report for the Sekong A Project that complements its already existing national Environmental Impact Assessment (EIA) report. The TbEIA report includes key recommendations for implementation at project, national, and regional levels.

Of significance and among other recommended transboundary mitigation measures, the TbEIA report recommends the enhancement of the fish passage to mitigate the project's impact on fisheries and fish migration. The MRC Secretariat is working with Lao PDR to support the implementation of mitigation measures recommended in the TbEIA Report, including the enhancement of fish passage at the project level and joint environmental monitoring at the regional level in accordance with the MRC Joint Environmental Monitoring Guidelines and under the framework of the Core River Monitoring Network (CRMN). At the same time, a TbEIA Report will be produced to complement the already approved project's national EIA Report. This report will propose measures for adoption by the Project Proponent for environmental safeguarding.

“We highly appreciate the testing of the TbEIA guidelines for the Sekong A hydropower project by Lao PDR. This brings transparency and more objective assessment of the project and its potential impacts and recommended measures”, stated Dr Truong Hong Tien, Deputy Director General of the Viet Nam National Mekong Committee Secretariat and Alternate Member of the MRC Joint Committee for Viet Nam.

A TbEIA is an essential and sensitive mechanism that touches upon national processes, which helps explain why it took years to finalise the guidelines. While each country has its own environmental impact assessment processes to determine a project’s environmental impacts, the MRC TbEIA Guidelines are a breakthrough at the regional level that aims to work in the region’s interests as a tool of trust building, consultation and cooperation at the transboundary level.

Dr Anoulak Kittikhoun, Chief Executive Officer of the MRC Secretariat, emphasised that “The TbEIA Guidelines represent the latest collaborative approaches to managing the shared water resources of the Mekong River. These guidelines will ensure that all Member Countries are on the same page when it comes to assessing the environmental impact of hydropower and infrastructure projects and designing them in a way that minimises any adverse effects. This is a major step forward in the sustainable management of the whole Mekong River – mainstream and tributaries.”

In recognition of the cooperation stipulated within the 1995 Mekong Agreement to promote the sustainable development, utilisation, conservation, and management of the Mekong River Basin water and related resources, the MRC Council Resolution of 1998 and the Joint Committee’s decision of 2003, the TbEIA Guidelines were finally accepted by the MRC Joint Committee for voluntary application, on 30 September 2022, in Vientiane Capital, Lao PDR.

The Guidelines are designed to be flexible, with opportunities for further elaboration based on the gradually accumulated experience of Member Countries with TbEIA applications. They are designed as a supporting mechanism for the national EIA

legislation, processes, and systems in each Member Country. Recognising already agreed-upon MRC mechanisms, the accepted TbEIA Guidelines build on and supplement the MRC Procedures.

In addition, the evolving policies, and practices on public participation of the MRC are also recognised, and the Member Countries are encouraged to apply them to EIA processes addressed by the Guidelines. Principles and certain provisions of the Guidelines (e.g. related to post-project environmental monitoring) are also applicable in the context of already existing development projects. The Member Countries are invited to apply relevant elements of the TbEIA Guidelines in their management of all relevant projects with potential transboundary impacts.

The general objective of the TbEIA Guidelines is to support the application of the Objectives and Principles of Cooperation stated in the 1995 Mekong Agreement, namely Article 3: Protection of the Environment and Ecological Balance, Article 5: Reasonable and Equitable Utilization, Article 6: Maintenance of Flows on the Mainstream, Article 7: Prevention and Cessation of Harmful Effects, and Article 8: State Responsibility for Damages.

After the final report is endorsed, Lao PDR will submit key results and recommendations to the Project Proponent. The MRC Secretariat is looking into ways to support Member Countries in implementing regional-level recommendations, including starting an environmental monitoring program for the Sekong Downstream (Site A) Hydropower Project. Additionally, the MRC Secretariat is gathering lessons learned and challenges from the pilot to create a briefing report with recommendations for wider application of the MRC TbEIA Guidelines in the Lower Mekong River Basin.





Joint Action Plans Provide a Pathway to Exchange Issues Enabling Improved in Design, Construction, Operation, and Monitoring of Hydropower Projects on the Mekong



Progress and Evidence of Change

The Joint Action Plan (JAP) for the Luang Prabang Hydropower Project (LBPHPP) is the first to be implemented in the Lower Mekong Basin. With Pak Beng and Pak Lay HPPs to follow once commercial agreements are in place. These Joint Action Plans have been developed to maintain environmental balance and provide an example of the importance of regional cooperation through the platform provided by the Mekong River Commission for Member Countries to work together to ensure significant adverse impacts from hydropower projects are avoided, minimised, and mitigated.

The Prior Consultation processes and the Joint Action Plan for the Luang Prabang Hydropower Project (LPHPP) resulted in substantial enhancements to the design of mitigation measures for important regional issues such as fisheries and sedimentation. As reported by LPHPP, consultation with developers resulted in improvements made on hydropower design, including additional capacity with emergency spillway, optimisation of channel geometry for the improvement of navigation, and optimisation measures for connection with the upstream migration system to provide additional breeding areas. As such, the JAPs are not only beneficial for the Member Countries but have also enabled the MRC and the hydropower developing companies and associated companies to develop good relationships - providing a useful process for the developer to understand the transboundary and community issues of their projects.

Due to the detailed technical review and consultation processes to understand the technical aspects of projects, their likely impacts, and the necessary mitigation measures to ameliorate these impacts, the Member Countries have taken some time to develop and reach an agreement. However, in 2023, significant progress could be observed, particularly for the Luang Prabang HPP.

At the MRC Regional Stakeholder Forum on 5 October 2023, which included Member Countries, Civil Society Organisations (CSOs) and Development Partners, the Lao government and developer presented the status and changes in the design and implementation of the JAP for the LPHPP. Information was also provided on the Xayaburi HPP operation and recent fisheries and sediment monitoring results. The forum allowed for information to be shared and stakeholders to ask questions directly to the developer.

On 6 October 2023, a working session between the MRC Secretariat and Developers of PBHPP and PLHPP on JAP implementation was conducted with the participation

of the Lao National Mekong Committee Secretariat (LNMCS) and Lao Ministry of Energy and Mine (MEM). More information and exchange would emerge in 2024.

The JAPs were developed through a consultative process at the conclusion of the Prior Consultation process of the LPHPP, PLHPP and PBHPP to implement the agreed Statement. As part of JAP implementation for LPHPP, a basic design report and other relevant information were provided, including the Xayaburi HPP operation and recent results of fisheries and sediment monitoring, which were used by the LPHPP for its basic design.

*At the site visit to the LPHPP, a Thai delegation member – whose country shares hundreds of kilometres of the Mekong with Lao PDR – expressed appreciation to the Luang Prabang developer for openly discussing the progress and plans. Dr Tuantong Jutagate, Associate Professor of Ubon Ratchathani University, said the developer addressed **“our concerns and what we worry about.”***

*Yet, just as public communication can ease concerns, he said less transparency may also fuel suspicions. **“We want them to know that data sharing is a very important step to make the project more understandable between the developer and the people,”** said Dr Jutagate. **“Information is power. If they can share more data about the management of flow and fish, then we can find something in the middle to negotiate and solve any problems.”***

The implementation of the JAP is beneficial as it enables a mechanism for Member Countries and stakeholders to exchange issues and aligns with the ongoing design, construction schedule and operationalisation of the proposed project.

Over the course of the implementation of the BDS, the PNPCA has been strengthened with the development and agreement among the member countries on Joint Action Plans (JAPs) and Joint Statements (JS) based on the technical reviews of the extent to which the project designs reflect the guidance in the Preliminary Design Guidance (PDG). MRC Secretariat has developed matrices to track the implementation of the

JAPs for LPHPP, PBHPP and PLHPP. The progress reports on the implementation of the JAPs indicate that constructive cooperation is taking place among the parties (project developers, Lao Ministry of Energy and Mines, LNMC, MRC Secretariat) addressing the transboundary impact measures of the respective Joint Statements.

To implement the agreed MRC Joint Committee Statements for the Pak Beng, Pak Lay, and Luang Prabang Hydropower projects' (PBHPP, PLHPP, LPHPP) Prior Consultation (PC) processes, the MRC Secretariat was tasked to support the preparation of Joint Action Plan (JAP) that outlines a post-PC process.


The JAP for Pak Beng was agreed at the Special Session of the Joint Committee (JC) to conclude the PC process of the Pak Lay proposed project on 4 April 2019. The JAPs for Pak Lay and Luang Prabang were agreed upon at their Special Sessions of the JC on 4 April 2019 and 30 June 2020, respectively.





The JAP provides a post-PC process mechanism for ongoing exchange of data and information. It will be implemented in a phased manner. It is agreed that 4 phases will be carried out:

- **Phase 1: Initiation** - This will start immediately after approval of the JAP by the JC and will focus on mobilising the resources required for the implementation and the modality to implement it.
- **Phase 2: Project Design** - This phase will involve working with relevant Line/Implementation Agencies in the GoL to explore measures that may further improve the proposed project's design and operations and address the concerns raised during the PC process.
- **Phase 3: Construction** - This will start once the project is constructed and will aim to appraise the progress made, monitor impacts during construction, and provide input into any design changes.
- **Phase 4: Operations** - The JC will agree on a set of monitoring and reporting parameters for the project's operational phase. These will form part of the PWUM and be regularly reported to the JC.

The MRC Secretariat will further work with the Lao National Mekong Committee, MEM, and Luang Prabang, Pak Beng, and Pak Lay developers to receive timely updates on the status of the project developments, including design changes, conducting technical evaluation as needed, ongoing monitoring, as well as the arrangement for regional meetings and site visit for the Member Countries on JAP implementation for Pak Lay, and Pak Beng HPPs in 2024.

Output Indicator Status

Status	Output Indicator
 Partially Achieved	1.1.1 Evidence of management actions being taken in response to notifications of relevant water flow and quality conditions. <hr/> Target Management actions taken as needed
Report on Progress	<ul style="list-style-type: none"> ■ The monitoring system has been operating and notified the user when the water level is abnormal. The Monitoring website was updated for the user. Management actions are taken as needed. ■ Annual operation and maintenance for 71 Lower Mekong Basin hydromet stations. ■ The Discharge and Sediment Monitoring Project (DSMP) implemented. ■ Equipment to support the implementation of hydromet stations and DSMP procured. ■ Joint Discharge Measurement at Xiengkong between Lao PDR - Myanmar drafted and consulted with those countries. ■ Under the process of construction of 11 new hydromet stations under CRMN redesign. ■ The flow framework under PMFM is being conducted. ■ The PWUM concept has been designed and is being incorporated into the Water Status Dashboard Management actions taken as needed for water quality parameters currently not monitored by MCs, including heavy metals and pesticide parameters, through capacity building. ■ Riverine Plastic Monitoring Program has been piloted in 2022, the monitoring methodology and protocols were agreed in 2023, and capacity building is being conducted in 2024. Planned monitoring in 2025/2026 to support SoBR 2028. ■ Technical Guidelines on the Implementation of the Procedures for Water Quality (TGWQ) was approved by the Joint Committee, with Chapters 1, 2, and 3 being partially implemented. For Chapter 4: Water Quality Emergency Response and Management, the implementation plan has been finalised and approved by MCs for implementation starting in 2022. The detailed methodology has been piloted, and the capacity-building programme has been organised in 2023. Since the adoption of the TGWQ and PWQ, Member Countries have integrated the requirements of both TGWQ and PWQ into national monitoring systems with both Thailand and Viet Nam committed to monthly monitoring water quality at 8 and 10 stations, respectively. In addition, automated high-frequency water quality monitoring stations have been installed downstream of the Don Sahong Hydropower Project.

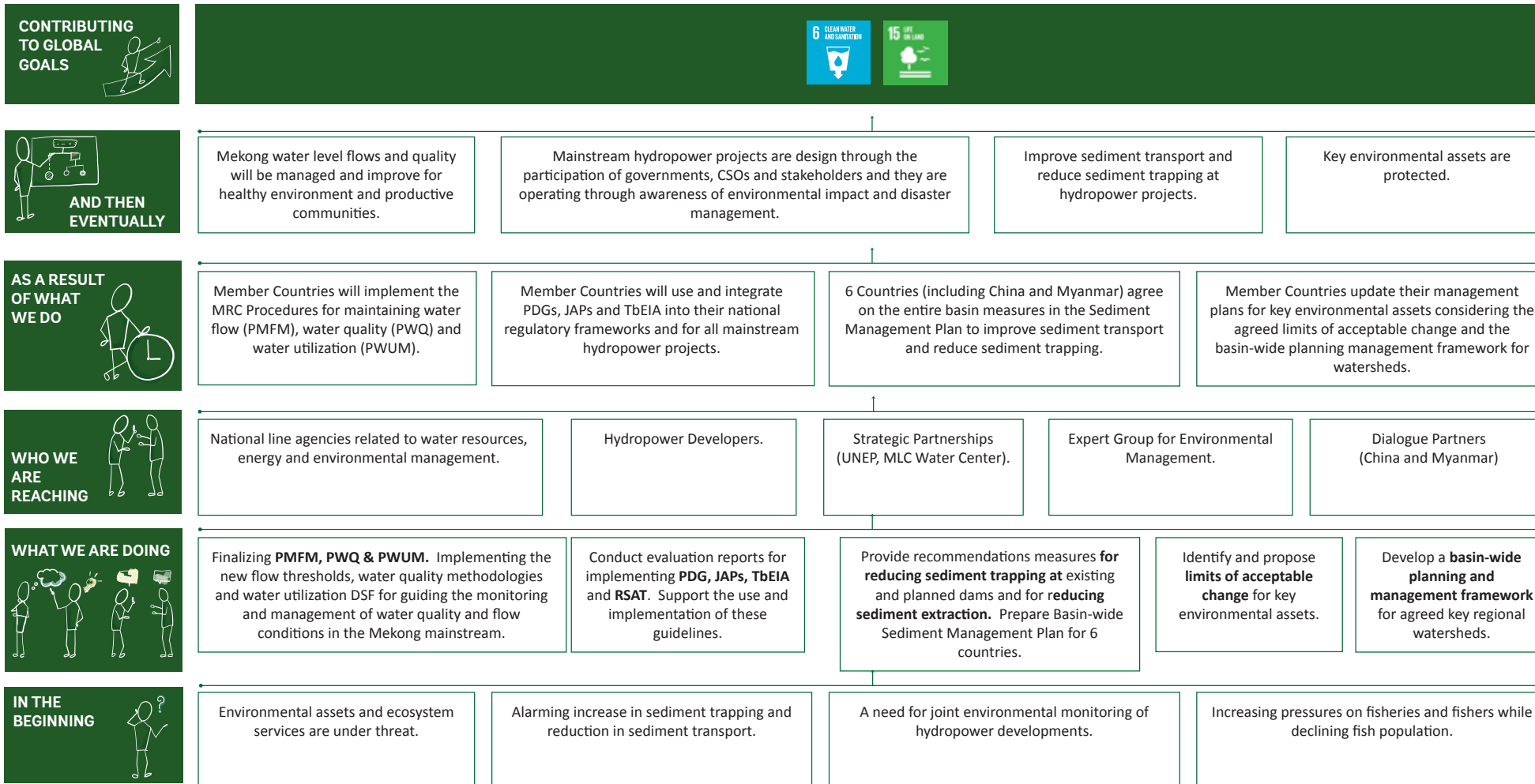
	Status	Output Indicator
Report on Progress	 Partially Achieved	1.1.2 Evidence the PDG and TbEIA have been incorporated into national regulatory systems and have informed the development of new hydropower and other relevant projects.
		Target All new hydropower or other relevant projects implemented consistent with the PDG
	<ul style="list-style-type: none"> ■ The updated PDG was approved by the MRC JC in September 2022. Regional dissemination was conducted. National dissemination and training was conducted in some MCs in 2023 and will be further conducted in 2024. ■ The new PDP incorporated not only what the Member Countries learnt from their own experience with hydropower, but also from examples and best practices around the world. It also included the most current knowledge regarding design criteria, science, and technology. ■ The final MRC TbEIA Guidelines and the PDG 2021 were successfully agreed upon at the 54th JC Meeting in September 2022. ■ The MRC TbEIA is being voluntarily applied and tested on the Sekong Downstream (Site A) Hydropower Power Project under the support of Lao PDR. The main aims are to test the process of the TbEIA through an impact assessment study on the identified and agreed study scopes between the Country of Origin (Lao PDR) and Potentially Affected Countries (Cambodia and Viet Nam) and document any lessons learnt for the future wider application of the guidelines in the Lower Mekong River Basin (LMB). Since the initiation by Lao PDR, a number of consultation workshops have been carried out at both national and regional levels on the identification of study scopes and results of the TbEIA study. This voluntary application and testing are expected to conclude following a regional workshop in mid-2024 in Bangkok, Thailand, where the final draft TbEIA report is to be tabled for discussion among the Member Countries, with Thailand to participate and provide reflection as an observed Member Country. Following the completion of the voluntary application and testing process, the MRC Secretariat will initiate the preparation of the briefing report on the lessons learnt, which will be further discussed and shared with the Member Countries and stakeholders. 	
	 Partially Achieved	
Report on Progress	 Partially Achieved	1.2.1 Approval status of the basin-wide sediment management plan
		Target Basin-wide sediment management plan approved by basin countries for implementation
	<ul style="list-style-type: none"> ■ This plan is based on strategic study 3 under PRP: Identification of basin-wide sediment-related issues and mitigation measures. The study, led by PD, was based on its results. 	
	 Partially Achieved	1.3.1 Evidence that 1) the identified limits of acceptable change are used in regional and national development planning processes, and 2) national management plans for relevant wetlands are updated based on the identified limits.
Target At least 2 national wetland management plans have identified and incorporated limits. Processes for proactive regional planning and at least one national plan are informed by the identified limits.		
<ul style="list-style-type: none"> ■ This indicator is being implemented under the MRC Secretariat Core Team on PRP. Four MCs have finalised and agreed upon a comprehensive concept note and ToR for a consultancy firm for further implementation in 2022-2024. ■ In 2022, gap-finding and the preparation of project plans were implemented as part of the development of new or updated management plans (MPs) that include wetland sites in each MC. ■ The site-specific wetland management plans are being developed in 2023/2024. 		

Status	Output Indicator
<p>● Partially Achieved</p>	<p>1.3.2 Evidence that relevant national policies, laws, and plans are aligned with the regional planning and management framework for watersheds.</p> <p>Target At least 1 national line/implementing agency in each country has aligned its regulatory and management systems with the agreed watershed management framework.</p>
<p>Report on Progress</p>	<ul style="list-style-type: none"> ■ Each MC officially nominated one (01) REA site for further developing a new or updated MP. The four nominated REAs are (1) Tonle Sap Multiple Use Area in Cambodia, (2) Bueng Kiat Ngong in Lao PDR, (3) Lower Songkram River in Thailand, and (4) U Minh Tuong National Park in Viet Nam. ■ The four MCs organised internal scoping and national workshops to present and discuss the IUCN’s Green List Standard, which would be implemented as part of the MP development. The MCs recognised the importance of this international standard and are eager to register their nominated REA site for further funding. ■ The Gap Analysis and Project Plan preparation for each REA site were implemented, including field visits to each site. The reports for each REA site were completed and used to prepare the MP for each REA in 2023.




Pathway to Change for Environmental Dimesion

Maintain the ecological function of the Mekong River Basin



Contribution to SDGs for Environmental Dimension

SDGs	Targets
	<p>6.5 Integrated water resources management implemented at all levels, including through transboundary cooperation as appropriate.</p>
	<p>6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes.</p>
	<p>15.1 Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.</p>
	<p>15.9 Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.</p>

The Environmental Dimension strives to “maintain the ecological functions of the Mekong River Basin.” Within this sphere, the MRC approved and published two crucial guidelines in 2022: *Preliminary Design Guidance for Proposed Mainstream Dams* (PDG) and Guidelines for Transboundary Environmental Impact Assessment (or TbEIA). In 2023, the MRC took steps to build capacity to implement the PDG and voluntarily apply the TbEIA Guideline to the Sekong A HPP, which could potentially cause transboundary impacts on Cambodia and Viet Nam. Beyond how they aim to promote sustainable development, these guidelines aim to avoid, mitigate, and minimise the transboundary impact of development on both the environment and the people – especially the fishing and farming communities who rely on the river for clean water, food, and livelihoods.

Under the *Technical Guidelines on the Implementation of the Procedures for Water Quality* (TGWQ) and Procedures for Water Quality (PWQ), the Member Countries are implementing and incorporating the guidelines into operational monitoring, notification, and national decision-making. An emergency water quality response has been finalised, with national focal points being identified, and a capacity-building program has been developed and is being implemented. To address emerging issues, a detailed monitoring of the riverine plastic debris program (for macro, and microplastic in fish) was piloted in 2022, and the monitoring methodology and protocols were agreed upon in 2023. In addition, work has started with the strategic study of the Proactive Regional Planning on sediment transport.

MRC MCs also continued developing or updating management plans for the four nominated Regional Environmental Asset (REA): Tonle Sap Multiple Use Area in Cambodia, Bueng Kiat Ngong in Lao PDR, Lower Songkram River in Thailand, and U Minh Tuong National Park in Viet Nam. The MCs also considered registering their nominated REA sites for IUCN's Green List Standard for further long-term funding and management. All in all, this evidence shows that the MRC is on its way and contributes to *SDG 6: Clean Water and Sanitation*, including 6.5 IWRM and 6.6 Protecting and Restoring Ecosystems and *SDG 15: Life on Land*, including 15.1 Ensuring Conservation restoration and sustainable use of ecosystems and 15.9 Integrating ecosystem and biodiversity values.









SOCIAL DIMENSION







BDS Strategic Priority 2





Enable Inclusive Access and
Utilisation of the Basin's Water and
Related Resources

Introduction

The MRC Member Countries have all made meaningful progress in social development and gender equality over the last decades. However, gaps and inequities still remain and require concerted efforts to address. Under this priority area, work is geared towards reducing vulnerability and inequity or gender differences in access to water and related resources while increasing water resource development opportunities.

Table 3. Social Status as Shown in the State of Basin Report 2023

BDS Outcomes	Strategic Indicators	Condition	Trend	Status and Key Issues	BDS Progress
2.1 Strengthened water, food and energy security for basin community wellbeing	Living conditions and wellbeing			Inequality of access including potential chronic food insecurity in some vulnerable groups	
2.2 Increased employment and reduced poverty among vulnerable people dependent on river and wetland resources	Livelihoods and employment in water-related sectors			Managing a transition from employment in water-related sectors to more productive economic activities	

 No immediate concerns	 Some significant concerns to address	 Considerable concern, urgent action needed	 Insufficient data to form a view, requires action to address knowledge gaps
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MRC Contribution to BDS Outcome and Output

The BDS has two outcomes and four outputs under this strategic priority to be achieved by 2030. The aim is that by 2030, households will have sufficient access to food, water, and energy to meet their basic needs and to improve their climate resilience. By this time, both regional and national planning will have been informed by implementable strategies to advance equity so that fish communities and people dependent on fish for their food security and livelihoods will have sufficient fish to catch, eat and sell to support their nutritional requirements and overall well-being. Effective management and development of the basin's water and related resources, including fisheries, will help advance the overall condition over time. Inequities, including in relation to gender, are addressed with targeted interventions focused on people in vulnerable situations.

To achieve these outcomes, the MRC plans its contribution as follows. Under output

2.1.2, activities are planned to ensure that the regulatory frameworks of the capture fisheries will be improved through implementing and/or improving plans, policies, laws, and institutional arrangements at the national governance level to support food security. Under output 2.1.3, the risks of capturing fisheries productivity and diversity will be minimised through effective fish passage and operation in water infrastructure projects to support food security. Under output 2.1.4, gender and vulnerability aspects of basin water, food, and energy security will be addressed through enhanced data collection and use at the sub-national level in order to better inform and support the development of effective measures. The activities are meant to achieve the three output indicators assigned to the MRC. A detailed report on these activities is included in Part 2.

The following success stories capture the key achievements and impact and illustrate the evidence of change and progress made in 2023 regarding the Ecosystem Window of the Mekong Fund Trial (MFEW) and Fish Management and Funding.





A black cormorant is perched on a thick, light-colored tree branch on the left side of the image. The background is a dense canopy of green leaves, with a blurred view of a river or lake in the distance. A white text box with a blue border is positioned in the center-right of the image, containing the title. The overall scene is a natural, riparian environment.

**Design of the Mekong Fund Ecosystem Window
Trial Aims to Uplift Riparian Communities**

Progress and Evidence of Change

The MRC is exploring how to create a source of financial support directly for the communities through the Mekong Fund. One of its primary purposes would be to mitigate the impacts of water development and aid basin residents adversely affected by infrastructure development or disasters, such as intensifying floods and droughts. The Mekong Fund Ecosystem Window Trial, which aims to target the improvement of livelihoods and biodiversity for critical wetlands, watersheds, and environmental hotspots, will provide the opportunity to test how the Mekong Fund could function and also provides an opportunity for the MRC to influence gender equity and vulnerability through inclusive, grass-root projects.

From 2030 onward, all routine core river basin management functions of the MRC would be financed by the Member Countries, leaving opportunities for financial support from the MRC's international partners for the non-core function activities.

Following a few years of work looking into the Mekong Fund, in September 2023, the MRC JC approved in principle the funding model and trial run for the Mekong Fund, which will be launched in 2025. The MRC JC endorsed the fund's core design, funding mechanism, governance structure, and likely beneficiaries.

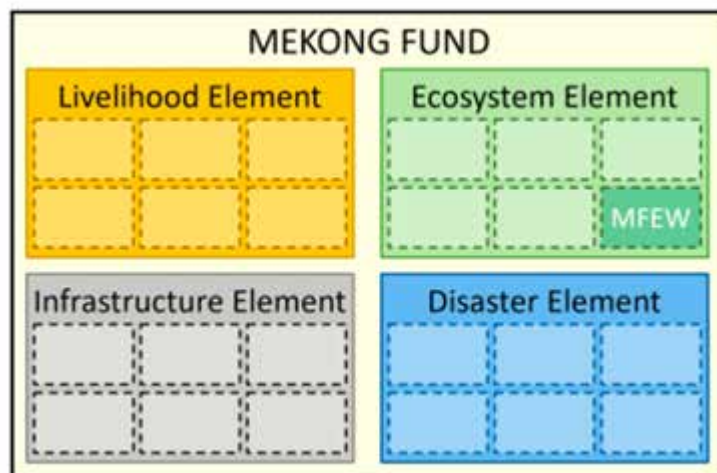


Figure 5. Four Potential Windows of the Mekong Fund

The trial run will focus on the **Ecosystem Window** of the Mekong Fund, which creates grant-giving opportunities for projects that strengthen livelihoods and safeguard the environment by preserving wetlands and watersheds of outstanding ecological value in the Lower Mekong Basin. These projects benefit the people living in and around them.

The Mekong Fund Ecosystem Window Trial (MFEW) will specifically disburse funds to support and facilitate local community engagement in wetland and watershed biodiversity conservation and related livelihood improvement in and around regionally significant ecosystems.

The MRC Secretariat is supported by the German Federal Ministry for Economic Cooperation and Development through the KfW Development Bank to finance this *Ecosystem Window*. The trial run is expected to evolve into permanent innovative financing for the MRC within five years.

“We must not only mitigate the impact of development and climate change but also support those communities suffering the most from changes to the river’s flow regime and across the Lower Mekong Basin,”
said Chumlarp Tejasen, Director of Foreign Affairs Division of the Office of the National Water Resources within the Office of the Prime Minister of Thailand.

Through the 1995 Mekong Agreement, the MRC was primarily founded to balance the trade-off between the economic benefits of development and minimising any impact on the river’s ecosystem and the millions of fishing and farming families relying on it. Unfortunately, climate change-caused floods and droughts have worsened the situation. In response, the MRC not only advocates for mitigation policies, procedures, and projects but also seeks to introduce a financial mechanism by creating the Mekong Fund.

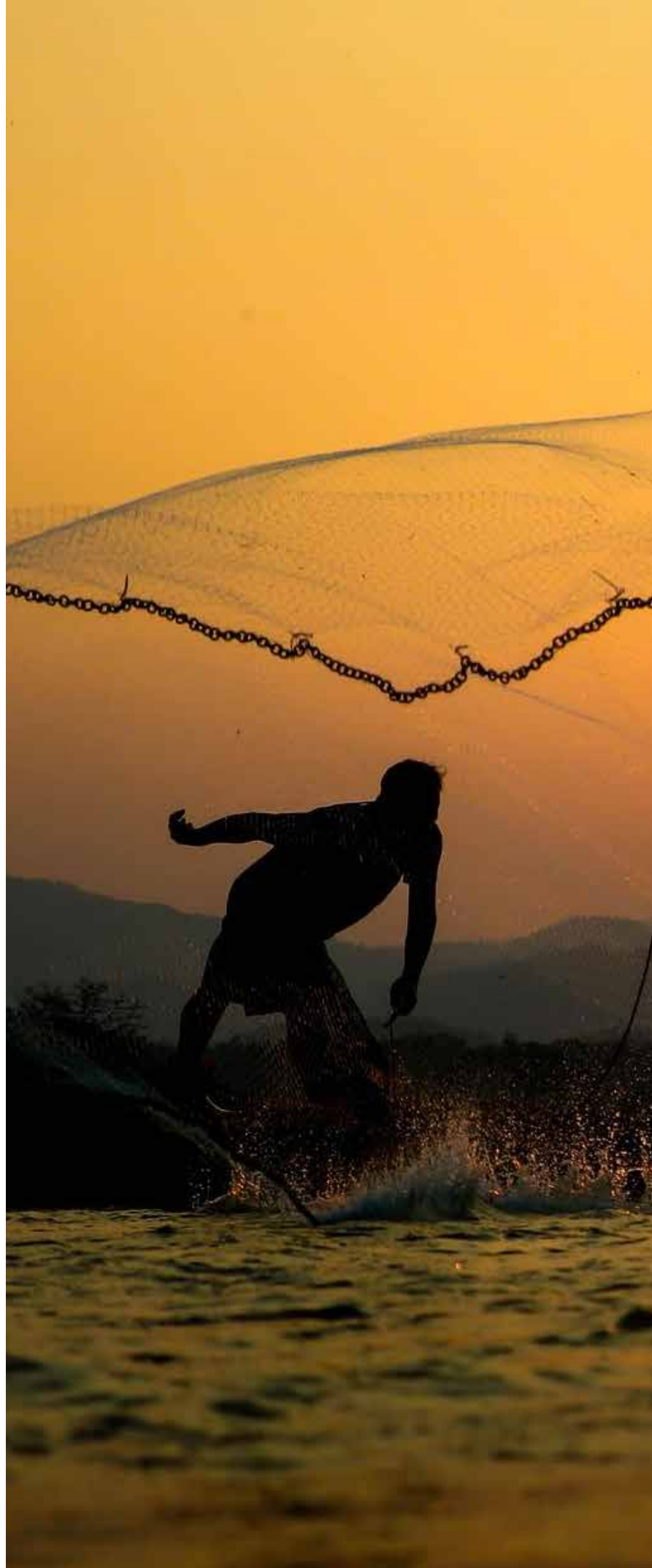
As the *Basin Development Strategy (BDS) 2021–2030* states, a regional Mekong Fund could also attract funding to finance joint social and environmental investment opportunities of transboundary significance. An operational fund would enhance trust between MCs and unlock new opportunities for cooperative development of water resources. It would also address ongoing social and environmental concerns about development projects’ transboundary impacts and the need to help communities adapt to these changes.

Since June 2020, relevant MRC Expert Groups comprised of key MC representatives have discussed all these aspects. However, creating such a fund is a complicated process, as it involves a mix of at least seven components: the project pipeline, institutional arrangements, governance needs, legal issues, types of funding and

financing, capital sources, and a system to monitor, evaluate and measure the impact.

Concurrently, the MRC Secretariat actively dialogues with Development Partners regarding the yet-to-be-formed Mekong Fund. Germany has expressed a pledge to support the Ecosystem Window of the Mekong Fund Trial (MFEW), with a commitment of EUR 15 million from the German government. As a prototype project and ‘quick start’ mechanism, the *Ecosystem Window* will develop a valuable set of systems, structures and capacities that can eventually be incorporated into the larger Mekong Fund set-up to ensure the future success of the Mekong Fund.

With the MFEW’s fund model and core design approved by the Joint Committee (JC) at its 56th Meeting in Vientiane, Lao PDR, the next step for the MFEW will be Phase II of its Feasibility Study to elaborate further on the MRC JC and Member Countries’ guidance and comments on MFEW’s governance responsibilities and financial flow, which will yield a final project design document.





Global Environment Facility Approves a \$12-million Project "Enhancing Transboundary Fisheries Management in the Lower Mekong Basin"

Progress and Evidence of Change

The Global Environment Facility (GEF) Council has approved a \$12-million project, "Enhancing Transboundary Fisheries Management in the Lower Mekong Basin," through the International Union for the Conservation of Nature (IUCN) and to be executed through the MRC. The project aims to harmonise fisheries governance and stabilise fish stocks in the Lower Mekong Basin to sustain livelihoods and ensure food security.

The project is the result of concerted efforts and collaboration between the MRC and its Member Countries. The transboundary fisheries project's overall goal is to strengthen regional planning and investment processes to conserve transboundary fisheries to livelihoods and food security, provide governments with an up-to-date research base for decision-making on water resource development, and strengthen the capacity of fishing communities to adapt to change.

This will be achieved by reducing transboundary threats that environmental degradation and climate change pose to aquatic biodiversity, ecosystem functioning and fisheries-related livelihoods; enhancing the resilience of rural communities to environmental and climate-induced changes; improving the sustainability and productivity of fisheries; and strengthening the research capacity, literacy and regional research collaboration within fisheries and social sciences.

The project aims to improve the management of cross-sector trade-offs and to harmonise national/regional fisheries management. Therefore, it aims to stabilise fish stocks so that they do not decline below 2020 levels. This will substantially contribute to the food security of local communities along the LMB and the conservation of globally significant biodiversity.

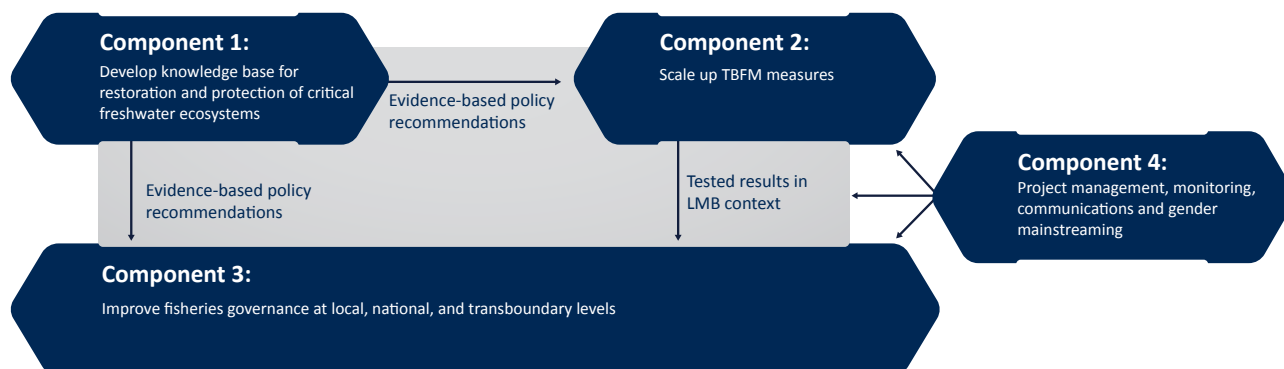


Figure 6. GEF-Fishery Project Components

The GEF “Enhancing transboundary fisheries in the Lower Mekong Basin” Project is a vital initiative. Building on the MRC’s achievements in developing a transboundary action plan for sustainable fisheries management, this project aligns with the BDS. It focuses on the execution of a jointly agreed action plan within the Lower Mekong Basin to advance sustainable fisheries management.

The project fosters constructive dialogue and engagement by taking a proactive approach to enhancing the resilience of fishing communities. The project will employ a multi-disciplinary approach to understand the complex relationships between environmental degradation, climate change, fisheries, and livelihoods, ensuring that this comprehensive insight informs effective interventions.

“The ongoing effort from MRC will help to address the impacts on fisheries from infrastructure developments and climate change by providing key insights and policy recommendations for the fisheries sector for more coordinated implementation and basis for proposing a future institutional framework for implementation of the new fisheries management options and practices.”, shared by Dr Truong Hong Tien, Deputy Director General of the Viet Nam National Mekong Committee Secretariat and Alternate Member of the MRC Joint Committee for Viet Nam.

A key strategy of the project is also to establish fishing cooperatives supported by mini-trust funds. These funds are intended to provide essential core funding, ensuring the efficient management of fish conservation areas, thereby contributing to the project's overall objectives of sustainable fisheries management and community resilience in the Lower Mekong Basin

*H.E. So Sophort, the Secretary General of Cambodia National Mekong Committee Secretariat and a member of the MRC Joint Committee for Cambodia, expressed his excitement about the GEF funding for transboundary fishery management of the Mekong River. According to Sophort, this funding will have a direct positive impact on vulnerable communities and will be particularly beneficial for transboundary fisheries management, which is a critical aspect of maintaining the ecological balance of the Mekong River. He added, **“It will significantly improve the livelihoods of people who depend on the river for their sustenance”.***

The LMB is the world's largest inland fishery and home to nearly 1,200 fish species, making it the world's third most biodiverse river system after the Amazon and Congo. Fisheries resources, including fish and other aquatic animals, are vital to regional food security and nutrition, cash income, and employment and have strong cultural and religious significance. Fish yield within a range of 1.5-1.7 million tonnes, and more than 400,000 tonnes of OAA, valued at USD\$8 billion, are harvested annually from the Lower Mekong Basin.

Unfortunately, fish stocks are declining largely due to a lack of effective and balanced cross-sector coordination and the absence of harmonised fisheries management across the Lower Mekong Basin. The baseline scenario sees fish stocks declining further, losing globally recognised biodiversity and local food security.


The BDS (2021-2030) and SP (2021-2025) have identified two key strategic activities transboundary fisheries resources and environmental assets management and governance. The Mekong Basin-Wide Fisheries Management and Development Strategy (BFMS) 2018-2022 and its Project-based Action Plan (2021-2025) identified the importance of transboundary fisheries management in the LMB and the restoration of key fish habitats (connectivity) with regional/transboundary importance in the LMB. However, funding for the jointly agreed action programme was not secured.


As a consequence, the IUCN and MRC have been working together to explore potential funding from GEF-8 International Waters to support the Transboundary Fisheries Management in the Lower Mekong Basin. In 2023, a policy and options for investment were reviewed and agreed to by the MCs, and a funding proposal was submitted and reviewed favourably by GEF for funding, with a formal announcement to be made in early 2024.

The GEF’s 186 member governments allocated \$916 million for international action on biodiversity, climate change, nature renewal, and pollution control. They advanced five Integrated Programs designed to tackle complex challenges in their entirety.

In 2024, the MRC and the IUCN will continue to collaborate and work together to progress the development of the project design and the full Project Document of the GEF “Enhancing transboundary fisheries management in the Lower Mekong Basin” project.

Output Indicator Status

	Status	Output Indicator
Report on Progress	 Partially Achieved	2.1.2 Evidence of national government's improving their capture fisheries plans, policies, laws, and institutional arrangements and/or enhancing implementation.
	Target	At least one national line/implementing agency in each country has modified or enhanced the implementation and enforcement of its regulatory and management systems to improve the sustainability of capture fisheries
	<ul style="list-style-type: none"> ■ Policy and options for investment were reviewed and proposed to MCs and agreed upon in 2023. ■ The Global Environment Facility (GEF) funding proposal for Transboundary Fishery Management in the Lower Mekong Basin has been successfully submitted and favourably reviewed by the GEF Secretariat. As a result, it has been granted a substantial award of \$12 million USD. The official announcement of this award is scheduled for early 2024, marking the commencement of the implementation phase. 	

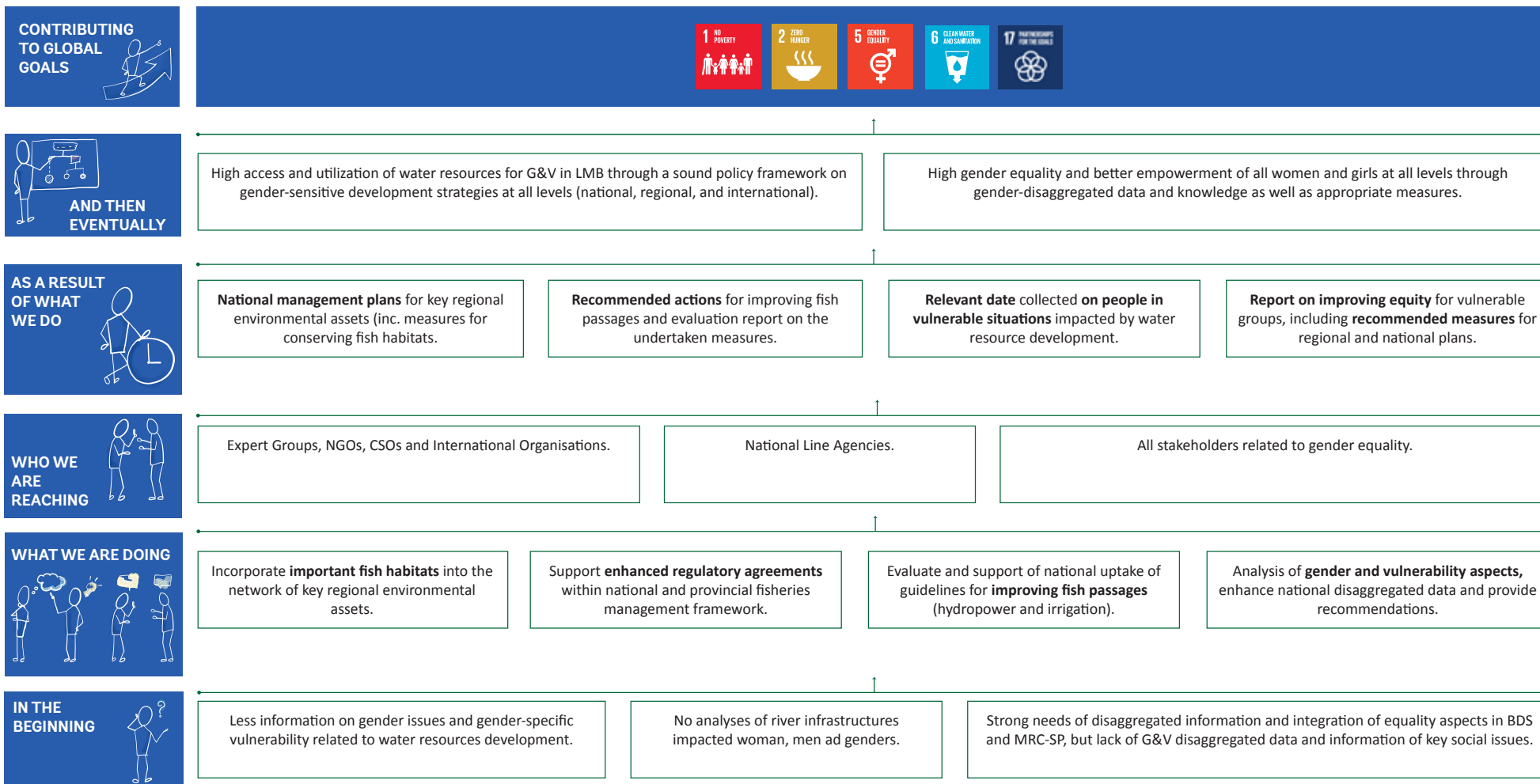
Status	Output Indicator
 Partially Achieved	2.1.3 Evidence of effective fish passage design and operation in water infrastructure.
	Target All hydropower projects on the Mekong mainstream and key irrigation schemes have effective fish passage in place
<ul style="list-style-type: none"> ■ The fishways on the irrigation scheme were successfully constructed through pilot testing to revise the fishway guidelines in Cambodia and Thailand. ■ Results of successful fish pass monitoring in Xayaburi HPP were shared with MRC during the site visit in 2023. ■ The fishway design guidelines for mainstream hydropower projects finalised as part of the PDG 2021. ■ Fish passage facilities in operation at Xayaburi and Don Sahong dams. ■ Fish passage facilities proposed at Pak Beng, Luang Prabang, Pak Lay, Sanakham dams. ■ For fish-friendly irrigation: Collaboration to promote fish-friendly irrigation with other institutions including Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF), Embassy of Japan in Lao PDR (EOJ), Australian Centre for International Agricultural Research (ACIAR), Charles Sturt University (CSU), U.S. Department of Interior (USDIO), U.S. Agency for International Development (USAID), Japan International Cooperation Agency (JICA), Asian Development Bank (ADB), Southeast Asian Fisheries Development Center (SEAFDEC) ■ The MRC Fishway Guidelines and Manuals were developed and published in English and riparian languages. ■ Fishways installed using the MRC Fishway Guidelines (including the draft stage of the guidelines): <p>(Completed)</p> <ul style="list-style-type: none"> ■ Cambodia: Kbal Hong Fishway (funded by USAID) ■ Lao PDR: Houay Mak Hiew Fishway (funded by ADB), Nam Pok Fishway (funded by ACIAR) ■ Thailand: Hany Wang Chang Fishway (funded by USAID) ■ Viet Nam: Ea Tul Fishway (funded by USAID) <p>(On-going)</p> <ul style="list-style-type: none"> ■ Lao PDR: Nam Mone Fishway & Nam Kouang 2 Fishway (funded by ACIAR) ■ Cambodia: Developing design standards of irrigation headworks referring to the MRC Fishway Guidelines (JICA project) <p>(Planned)</p> <ul style="list-style-type: none"> ■ Cambodia: ACIAR FishTech Project, ADB IWRM Project ■ Lao PDR: ADB Flood & Drought Mitigation & Management Project, Grant Assistance Project of the Embassy of Japan (EOJ) ■ Fishway monitoring in a selected fishway was conducted in each Member Country in 2023 using the MRC Fishway Guidelines. ■ In 2023, each Member Country used the MRC Fishway Guidelines to identify potential barriers through remote assessment in a selected catchment. ■ Human resources development: Handover of the MRC Fishway Guidelines & Manuals to Thangone Irrigation College in Lao PDR will be delivered in Feb 2024. 	

	Status	Output Indicator
Report on Progress	<p>● Partially Achieved</p>	<p>2.1.4 The degree to which disaggregated data on relevant indicators of gender and vulnerability are being collected at the sub-national level.</p>
	<p>Target</p>	<p>Data for agreed indicators on gender and vulnerability collected and shared with the MRC Secretariat</p>
	<ul style="list-style-type: none"> ■ The Socio-Economic Data under the Mekong River Basin Indicative Framework has been collected and transmitted by MCs within DAGAP in 2023. Additional gender and vulnerability data/indicators has been identified in the report on "an approach for gender and social vulnerability assessment", which was consulted and agreed with MCs in 2023. ■ As a result, the socio-economic data, including gender-disaggregated data and additional gender and vulnerability data at national and provincial levels from 1981-2020, were collected by MCs and transmitted to MRC Secretariat in 2023. ■ More data collection on gender and vulnerability indicators and assessment will be conducted in 2024 to prepare a report on improving equity for vulnerable groups, including recommended measures for regional and national plans. 	



Pathway to Change for Social Dimension

Enable inclusive access and utilization of the basin's water and related resources



Contribution to SDGs for Social Dimension

SDGs	Targets
	<p>1.b Create sound policy frameworks at the national, regional, and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.</p>
	<p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters and that progressively improve land and soil quality</p>
	<p>5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.</p>
	<p>6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.</p> <p>6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.</p>
	<p>17.18 By 2020, enhance capacity-building to developing countries to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location, and other characteristics relevant in national contexts</p>

The **Social Dimension** strives to “enable inclusive access and utilisation of the basin’s water and related resources.” This dimension contributes to *SDG 1: No Poverty; SDG 2: Zero Hunger; SDG 5: Gender Equality; SDG 6: Clean Water and Sanitation; and SDG 17: Partnership for the Goals.*

Fish in the basin are under pressure, including unsustainable fishing, and fisheries management needs to improve. Fish are important to ensure sustainable livelihoods for riverine communities in the Lower Mekong Basin, as they are often their principal source of protein and provide income. The MRC published a Technical Guidance for the Protection and Restoration of key fish habitats of regional importance in 2023 to identify the main threats to fisheries and design, implement and monitor appropriate actions.

In 2023, the Global Environment Facility (GEF) Council developed a \$12-million fisheries project, "Enhancing Transboundary Fisheries Management in the Lower Mekong Basin", to be executed by MRC through the International Union for the Conservation of Nature (IUCN). It aims to harmonise fisheries' governance and stabilise fish stocks in the Lower Mekong to sustain livelihoods and food security by improving cross-sector trade-offs and harmonising national/regional fisheries management. The goal is to stabilise fish stocks at 2020 levels. The MRC and the IUCN will continue to collaborate and work together to progress the project design development and the full Project Document of the GEF "Enhancing transboundary fisheries management in the Lower Mekong Basin" project in 2024. This work will contribute to SDG 2: Zero Hunger, especially for SDG 2.4, which ensures sustainable food production systems and implements resilient agricultural practices by 2030.

Improving the decision-maker's understanding of Mekong-specific needs, rights, challenges, and opportunities in water, food, and energy security for women and men in vulnerable situations will help identify measures to improve equity for vulnerable groups in different parts of the basin. The MRC is working with national governments, including the statistics office, to ensure national data collection and processing mechanisms enable the assembly and analysis of sub-national, national and regional datasets on gender and other dimensions of vulnerability. Evidence of improvement within the national governments has informed the SoBR, LMB Atlas Maps, and the updated SE database.





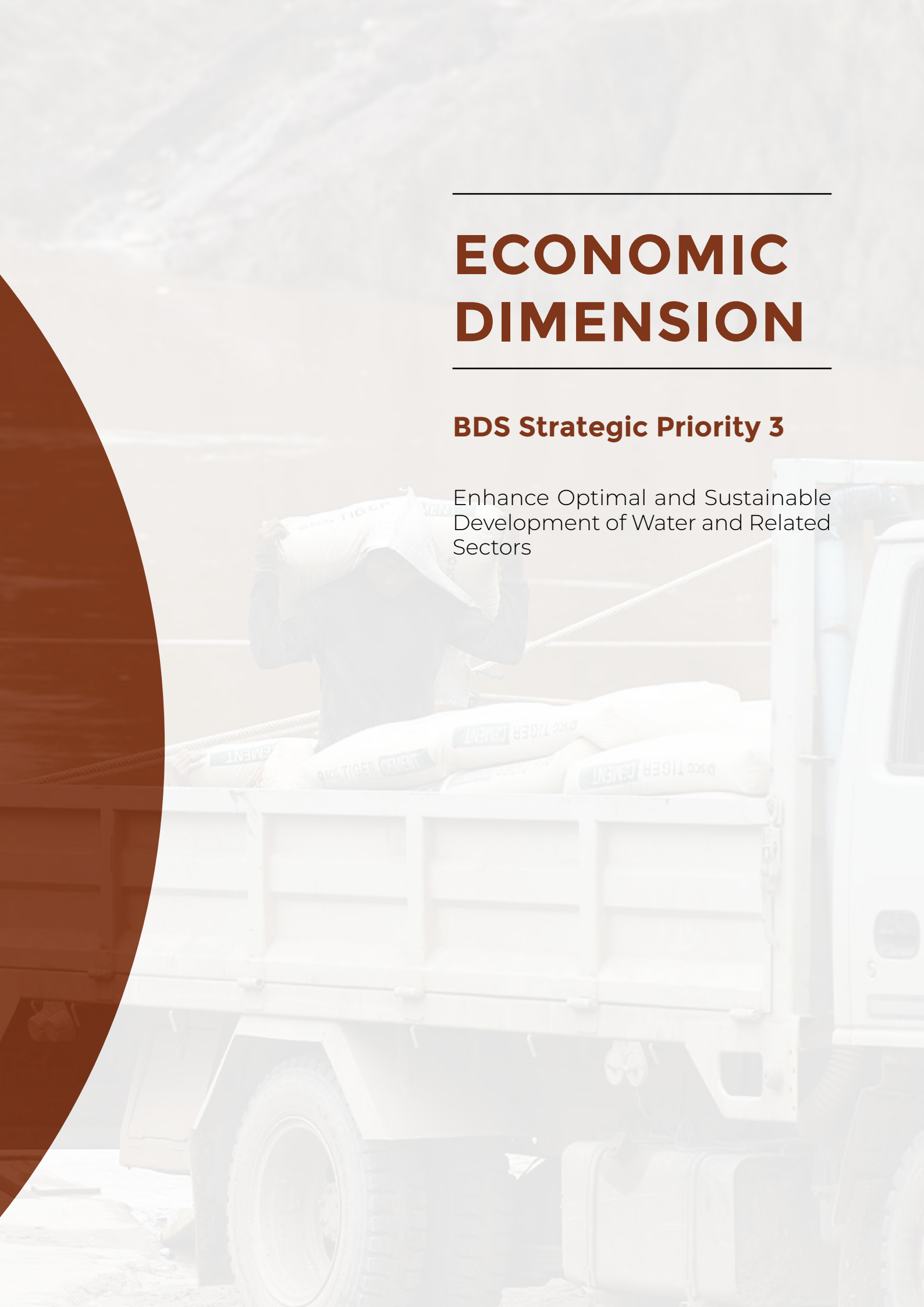
This important work is expected to continue into 2024, focusing on reaching riverine communities through community development-based projects such as the Mekong Fund Ecosystem Window Trial and the GEF Fisheries project. This work contributes to SDG 1: No Poverty, SDG 5: Gender Equality, SDG 5: Clean Water and Sanitation, and SDG 17 Partnerships for the Goals, specifically 1b, 5c, 6.1, 6.2, and 17.18 as they relate to gender equity and vulnerability.



ECONOMIC DIMENSION

BDS Strategic Priority 3











Enhance Optimal and Sustainable
Development of Water and Related
Sectors



Introduction

Over the last few years, balancing economic growth while safeguarding the environment has been challenging for the MRC, especially during the COVID-19 pandemic and the subsequent years. Fortunately, 2023 was a year of more engaged activity within the region, which included important work with the basin countries and agencies in implementing the regional sector strategies and in helping to facilitate the identification and implementation of investments and associated measures in irrigated agriculture, sustainable hydropower, navigation, environmental and fisheries management. Under this strategic priority, the SoBR 2023 has shown improved economic growth due to hydropower, rice, and tourism, enabling increased basin benefits for all countries. The MRC has contributed to the Economic Dimension through the facilitation of proactive regional planning and the enhancement of the inclusive growth and sustainability of irrigated agriculture, hydropower, navigation, environment and fisheries sectors.

Table 4. Economic Dimension as shown in the State of Basin Report 2023

BDS Outcomes	Strategic Indicators	Condition	Trend	Status and Key Issues	BDS Progress
3.1 Increased economic growth of all basin countries from more proactive regional planning	Contribution to basin economy			Enabling increased benefits and reduced costs of development for all countries Identifying net economic benefits within sectors and accounting for externalities	
3.2 Enhanced inclusive growth and sustainability in irrigated agriculture, hydropower, navigation, environment and fisheries sectors	Economic performance of water-related sectors			Ensuring inclusive growth and sustainability considering the impacts on the environment and the livelihoods of vulnerable people	
 No immediate concerns	 Some significant concerns to address	 Considerable concern, urgent action needed	 Insufficient data to form a view, requires action to address knowledge gaps		

MRC Contribution to BDS Outcome and Output

The BDS under this dimension specifies one strategic priority, two outcomes, and six outputs to be achieved by 2030. By this timeline, it is expected that adapted regional and national development plans for Mekong water resources will have higher overall benefits and lower overall costs than earlier versions. In addition, changes to national plans will be considered through sovereign processes, taking into account the basin-wide alternative development scenarios prepared and assessed through a more proactive regional planning (PRP) approach. Economic growth and the contribution of the basin's strategic resources (food, water, energy) to national and regional demands are expected to be higher in individual countries and for the region as a whole, as projects take into account synergies and trade-offs between basin-wide sectoral development to increase benefits, reduce costs (including for mitigating adverse impacts), and provide long-term water security against major floods and droughts.

This value will be realised through intersectoral linkages and the opportunity to achieve multiple benefits. These include the mitigation of floods and droughts, with the long-term sustainability of industries as a key driver, based on the PRP under Outcome 3.1 and the implementation of priority investments and associated measures consistent with or outlined in basin-wide/regional sector strategies. Each sector will aim to add value to the economy rather than detracting from it and draining resources, including the labour and capital from other more valuable sectors.

Under Output 3.1.1, the MRC will undertake a more PRP approach to inform the Basin Development Plan and associated national plans for water resources development through its comprehensive concept note, with terms of reference, scenario formulation, and assessment methodology. Under Output 3.2.1, the MRC will facilitate the irrigated agriculture investment and associated measures through regional guidelines and policy papers. Under Output 3.2.2, the recently approved Sustainable Hydropower Development Strategy will be implemented in synergy with other regional energy plans, while navigation rules under Output 3.2.3 will be harmonised and investment measures reviewed as part of implementing the Navigation Master Plan. Under Output 3.2.4, the Strategy for Basin-wide Environmental Management is implemented to contribute to the management and protection of ecosystem services of wetlands and watersheds. Output 3.2.5 will see the MRC identify and implement an investment to adapt to changes in fish population and catch composition under changed river conditions. Part 2 of the AR 2023 provides a detailed report on these activities.

The following section captures evidence of change and progress made in 2023 through the key success story of fish-friendly irrigation and fish-way guidelines along the Mekong.





MRC Fish-friendly Irrigation and Fishway Monitoring in the Lower Mekong Basin Reaches Local Communities and Shows Early Signs of Improvement

Progress and Evidence of Change

The Mekong River is home to one of the world's most plentiful fisheries. Not only do millions of families rely on fish for food and nutrients, but fish are also crucial for income and livelihood. Initiatives to promote fish-friendly irrigation through removing barriers, installing fishways, and undertaking fishway monitoring in the LMB are benefiting communities, improving ecosystems in rivers, and making irrigated agriculture and rice-fish systems in paddy fields more sustainable.

To persist and thrive, fish must be able to move freely and migrate throughout the Lower Mekong Basin within their natural environment. However, throughout the LMB, tens of thousands of barriers to fish migration have been constructed. Dams, weirs, regulators, floodgates, and road crossings may all form too high obstructions for fish to pass. Although dams for hydropower are obvious barriers to fish migration, the most numerous barriers are low-level structures built mainly for irrigation.

These barriers have a significant impact on fish, as preventing migration disrupts their life cycles of feeding and spawning, while concentrating fish into certain areas can lead to over-exploited catches by fishing communities. The cumulative impact of these barriers on the LMB fish populations is significant, with long-term implications for the system's continued biodiversity and productivity.

The construction of a fishway or fish passage at a barrier is a significant undertaking and needs to be done at high-priority sites first. Previously, little guidance was available on the assessment and prioritisation of fish passage barriers and fishway design for low-level structures such as irrigation facilities.

To address this issue, the MRC developed two guidelines in 2021 to promote fish-friendly irrigation in the LMB, with Japan providing funding and technical support and collaborating with the ACIAR, the CSU, and the U.S. Department of Interior (USDOI). The first document, "Guidelines to Prioritising Existing Fish Passage Barriers," provides a concise method for practitioners to identify the highest-priority barriers in selected catchments, which need a fishway installed. The second document is "Guidelines on Fishway Design, Construction, Operation and Maintenance," which describes the design principles and key design criteria, as well as the most common design mistakes.

To date, eight fishways have been installed in the MCs by international development agencies. As a further step toward the uptake of the MRC Fishway Guidelines, in 2023, the MCs have begun prioritising the barriers for fish passage installations.

This has included identifying potential barriers through remote assessment using Geographical Information Systems (GIS) technology within the selected catchment of each MC using the MRC Fishway Guidelines.

The MRC Fishway Guidelines are instrumental in advancing fishway installation and fostering fish-friendly irrigation practices across the Member Countries. Adherence to these guidelines yields substantial ecological benefits, fostering healthier river ecosystems and promoting sustainable agricultural practices. The Fishway Guidelines are key to improving river ecosystems and enabling sustainable practices in irrigated agriculture and rice-fish systems. They contribute to the conservation of fish species and their populations. These aquatic resources serve as essential sources of protein, nutrition, and livelihoods for local communities, including vulnerable groups and women.

According to Dang Thi Kim Nhung, the Institute for Water Resource Planning, Ministry of Agriculture and Rural Development of Viet Nam, “Currently, MRC Secretariat developed technical guidelines for fish-friendly irrigation schemes that help improve fish populations to pass the irrigation barriers and improve the design and construction of fish ladders attached to water structures such as dams, dikes, or weirs. This guideline was applied to a pilot project in Central Highland, where a fish passage at the spillway was constructed and tested for efficiency. The project also determined a list of barriers to be equipped with the fish passages.”

The guidelines offer comprehensive guidance to government officers, irrigation engineers, and fish biologists on various aspects of fishway installation and management. These cover various aspects, including prioritising fishway installation, designing effective fishways, ensuring proper construction, conducting inspections, monitoring progress, and making necessary adjustments. By following the MRC Fishway Guidelines, the installation and operation of fishways become more efficient and effective, ultimately benefiting both aquatic ecosystems and the communities that rely on them.

“This successful case shows that the construction of fish passages in the Mekong basin is essential for fish-friendly irrigation,” Mr Phonepaseuth Phouliphanh, Secretary General Lao National Mekong Committee and Member of the MRC Joint Committee for Lao PDR, said. “Improved fish production will enhance the resilience of the entire ecosystem, benefit local economies and sustain local community livelihoods.”

In addition, fishways throughout irrigation facilities were monitored in the MCs to survey their effectiveness in collaboration with the Australian Centre for International Agricultural Research (ACIAR), Charles Sturt University (CSU), and the Southeast Asian Fisheries Development Center (SEAFDEC). A number of fish and various fish species ascending the fishways were monitored throughout irrigation facilities to understand how effective the infrastructure has been, with the national fishway teams supported by international research institutions. Early indications show that the presence of fish species has increased following the installation of the fishways. The results of the remote assessment for identifying potential barriers and the fishway monitoring were shared with all MCs to exchange lessons learned.




Following the development of the two guidelines in 2021, In 2022, the MRC began helping the MCs apply the two MRC Fishway Guidelines. The MRC made a detailed activity plan with the MCs to prioritise barriers and monitor fishways. In addition, each MC formed a national fishway working team, including fish biology and irrigation experts, for smooth and successful prioritisation and monitoring process implementation.

Furthermore, the MRC coordinated and provided the MCs with opportunities to build staff capacity related to fishways through collaboration and partnership with international institutions, such as the Ministry of Agriculture, Forestry and Fisheries of Japan; the ACIAR; the CSU; the USDOL; the U.S. Agency for International Development; and the SEAFDEC.

Given the many barriers to irrigation facilities in the LMB, this effort might be a small step, but it is also an essential step towards fish-friendly irrigation. The MRC continues to challenge fish-friendly irrigation beyond 2023. In 2024, the MCs will continue prioritising potential barriers through field appraisal, biological assessment,

and socio-economic assessment for the identified potential barriers in the remote evaluation, as well as further fishway monitoring. The results of these activities will be prepared as country reports and shared with all MCs.

Output Indicator Status

	Status	Output Indicator
Report on Progress	 Partially Achieved	3.1.1 The degree to which the basin countries have discussed and agreed to the formulated basin-wide alternative development scenarios and assessment methodology and approach and are contributing to the assessment of the scenarios.
	Target	Basin countries have agreed with the formulated basin-wide alternative development scenarios and the assessment methodology, and line/ implementing agencies are engaging and contributing to the scenario assessment process
		<ul style="list-style-type: none"> The inception phase began in February 2023.
Report on Progress	 Partially Achieved	3.2.1 The number of regionally identified investments and measures taken up in national water-related planning (Irrigation & agriculture)
	Target	At least 1 investment and 1 measure taken up in each of these 5 MRB water-related sectors.
		<ul style="list-style-type: none"> The MRC Fishway Guidelines for Fish-friendly Irrigation were developed. The guidelines' uptake activities are under implementation. Technical guidance on broad irrigation technologies was developed. Two draft technical guidance for specific irrigation technologies, irrigation Asset Management and Intermittent Irrigation, were formulated. The MCs provided the first round of comments in the first half of 2023. The two technical guidance are expected to be finalised in 2024. This guidance supports irrigated agriculture in the member countries' adaptation to climate change and improving food security. Several new investment projects related to the Fishway, the Irrigation Asset Management, and the Intermittent Irrigation technologies have started and/or are under processing in the Member Countries. The first draft of the Technical Guideline on Sustainable Groundwater Use and Management for Agriculture in the Lower Mekong Basin is being prepared. It is scheduled to be finalised by the end of 2024.
Report on Progress	 Partially Achieved	3.2.2 The number of regionally identified investments and measures taken up in national water-related planning (Hydropower).
	Target	At least 1 investment and 1 measure taken up in each of these 5 MRB water-related sectors.
		<ul style="list-style-type: none"> The MRC Council approved SHDS at its 28th meeting in November 2021. SHDS was promoted through the MRC Secretariat stakeholder forum. Several SHDS activities were implemented, including updating PDG and disseminating at both regional and national levels. HPPs made improvements in their project designs.


Report on Progress

Status	Output Indicator	
● Partially Achieved	3.2.3	The number of regionally identified investments and measures taken up in national water-related planning (Navigation).
	Target	At least 1 investment and 1 measure taken up in each of these 5 MRB water-related sectors.
<ul style="list-style-type: none"> ■ The International Maritime Dangerous Goods (IMDG) Code and the Material Safety Data Sheet (MSDS) of the International Maritime Organization (IMO) were established for the region. Additionally, a manual on the carriage, handling, and storage of dangerous goods in the Mekong River Basin was developed, and training was provided to Member Countries. In 2022, the MRC Secretariat continued its support by providing GPS devices to tourist boats in Luang Prabang along the Mekong River. The GPS system was intended to aid navigation during low water situations caused by climate change and to promote safe and effective cross-border waterborne transport on a critical route from Huey Xai to Luang Prabang. ■ In 2023, MRC assisted Thailand and Lao PDR in drafting a MoU on the harmonisation of navigation rules and regulations with 13 annexes. The MRC Secretariat anticipates that in 2024, Lao PDR and Thailand will enshrine their commitments by signing a Memorandum of Understanding. ■ The MRC Secretariat assisted Cambodia and Viet Nam in organising bilateral meetings to discuss the harmonisation of navigation rules between the two countries. MRC Secretariat proposed a draft of common rules and regulations regarding vessel and port waste management, emergency and oil spill response, and contingency plans in 2021. The agreement has not yet been reached. Following the bilateral meeting in 2023, the NMCSs proposed a priority list of activities. 		

Report on Progress

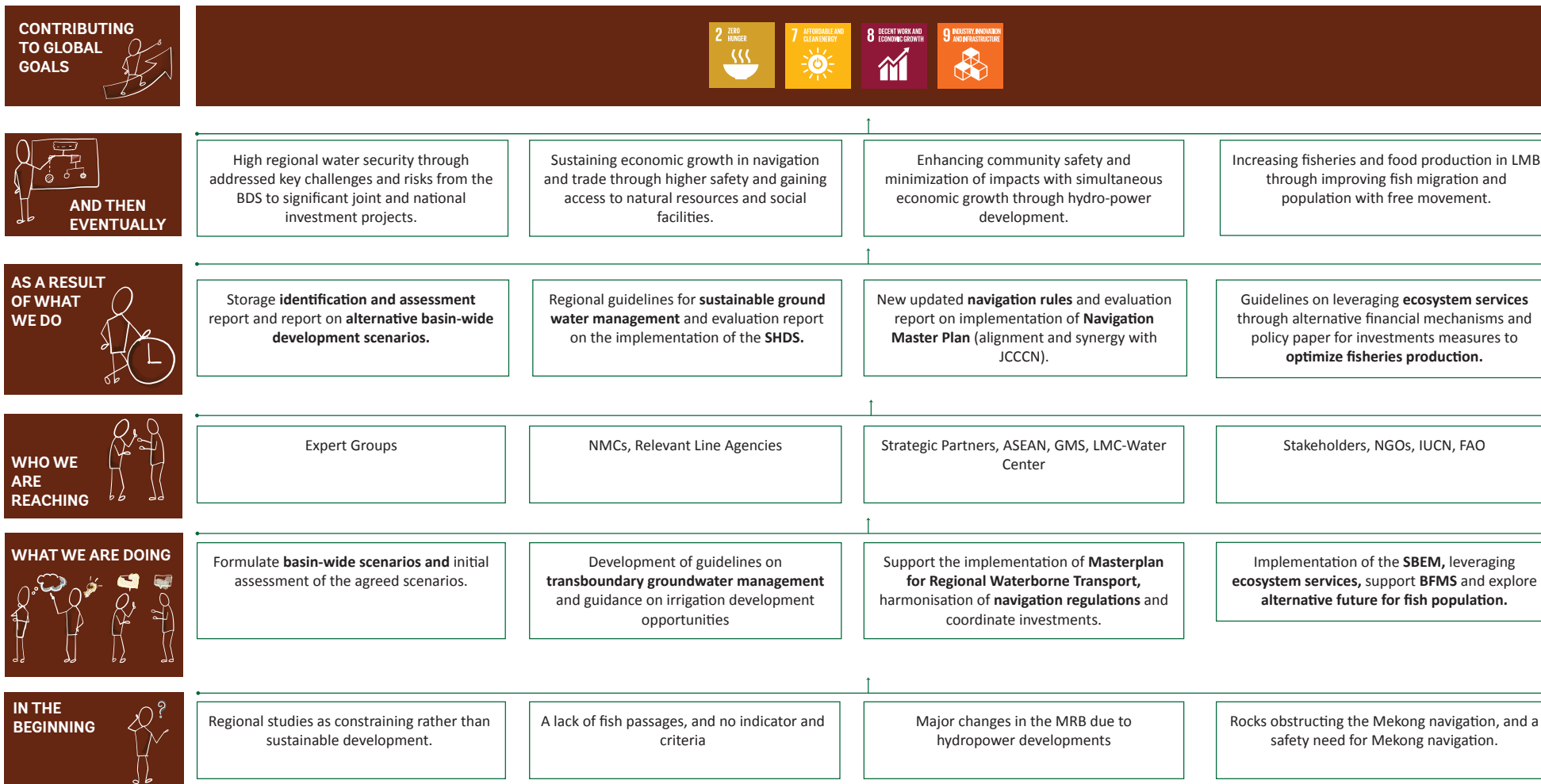
● Partially Achieved	3.2.4	The number of regionally identified investments and measures taken up in national water-related planning (Environment).
	Target	At least 1 investment and 1 measure taken up in each of these 5 MRB water-related sectors.
<ul style="list-style-type: none"> ■ Under the Regional Cooperation Programme (RCP), two Project Information Forms (PIF), one on transboundary fisheries management in the Lower Mekong Basin and another one on transboundary flood and drought management in the LMB, have been drafted and consulted with the MCs for submitting to GEF8-IW. These are being done in collaboration with IUCN for the fisheries project and with FAO and Germany's support through GIZ for the flood and drought management project. The PIFs have incorporated the priorities of the MCs and have been designed in alignment with the BDS, MRC SP, NIPs, MASAP, national strategies, and MRC sectoral guidelines and strategies. The PIFs were finalised to be further consulted with the MCs and submitted to the GEF council in 2023. 		



Status	Output Indicator	
 Partially Achieved	3.2.5	The number of regionally identified investments and measures taken up in national water-related planning (Irrigation & agriculture).
	Target	At least 1 investment and 1 measure taken up in each of these 5 MRB water-related sectors.
	<ul style="list-style-type: none"> ■ For fish-friendly irrigation: Collaboration to promote fish-friendly irrigation with other institutions including Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF), Embassy of Japan in Lao PDR (EOJ), Australian Centre for International Agricultural Research (ACIAR), Charles Sturt University (CSU), U.S. Department of Interior (USDOI), U.S. Agency for International Development (USAID), Japan International Cooperation Agency (JICA), Asian Development Bank (ADB), Southeast Asian Fisheries Development Center (SEAFDEC). ■ The MRC Fishway Guidelines and Manuals were developed and published in English and riparian languages. ■ Fishways installed using the MRC Fishway Guidelines (including the draft stage of the guidelines): 	
	<p>(Completed)</p> <ul style="list-style-type: none"> ■ Cambodia: Kbal Hong Fishway (funded by USAID) ■ Lao PDR: Houay Mak Hiew Fishway (funded by ADB), Nam Pok Fishway (funded by ACIAR) ■ Thailand: Hauy Wang Chang Fishway (funded by USAID) ■ Viet Nam: Ea Tul Fishway (funded by USAID) 	
	<p>(On-going)</p> <ul style="list-style-type: none"> ■ Lao PDR: Nam Mone Fishway & Nam Kouang 2 Fishway (funded by ACIAR) ■ Cambodia: Developing design standards of irrigation headworks referring to the MRC Fishway Guidelines (JICA project) GEF funding application of \$12 million to support fisheries investment was granted a substantial award of \$12 million USD. The official approval and announcement of this award is scheduled for early 2024, marking the commencement of the implementation phase. 	
	<p>(Planned)</p> <ul style="list-style-type: none"> ■ Cambodia: ACIAR FishTech Project, ADB IWRM Project ■ Lao PDR: ADB Flood & Drought Mitigation & Management Project, Grant Assistance Project of the Embassy of Japan (EOJ) ■ Fishway monitoring in a selected fishway was conducted in each Member Country in 2023 using the MRC Fishway Guidelines. ■ Potential barriers identification through remote assessment in a selected catchment was conducted in each MC in 2023 using the MRC Fishway Guidelines. Human resources development: Handover of the MRC Fishway Guidelines & Manuals to Thangone Irrigation College in Lao PDR will be delivered in Feb 2024 ■ Some activities to support fisheries restoration at Anlong Chheuteal Conservation Zone (Cambodia), Pak Peung Wetland Area (Lao PDR), Lower Songkhram River (Thailand), Lang Sen Wetland National Reserve (Viet Nam) have been initially drafted and proposed for further investments. However, proposed activities have not been discussed comprehensively, considering its feasibility and sustainability under national/local context and the scope of regional investment. ■ A policy paper on options for investment and associated measures to optimise fisheries production under changed river conditions was finalised in 2023. ■ The national uptake of the investment and measures will be developed in 2024. 	

Pathway to Change for Economic Dimension

Enhance optimal and sustainable development of water and related sectors



Contribution to SDGs for Economic Dimension

SDGs	Targets
 <p>2 ZERO HUNGER</p>	<p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters and that progressively improve land and soil quality.</p>
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.</p>
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.</p>
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>9.1 Develop quality, reliable, sustainable, and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.</p>

The third strategic priority is the **Economic Dimension**, which focuses on optimising the sustainable development of water and related sectors by increasing regional benefits and decreasing regional costs. The economic dimension links to four SDGs: 2: Zero Hunger, 7: Affordable and Clean Energy, 8: Decent Work and Economic Growth, and 9: Industry Innovation and Infrastructure.

The SoBR 2023 has shown an improvement in the economic condition of the Mekong Basin. Specifically, fish, one of the region's most important resources—the latest 2022 assessment suggests that, in general, a similar amount of fish are being caught, with an annual yield of nearly 1.7 million tonnes and other aquatic animals around 443,000 tonnes. The economic value of these capture fisheries and aquatic animals is as high as US\$9.1 billion per year.

Overall, living conditions and well-being are improving across the basin. In Cambodia, for example, household income doubled from 2013 to 2020, the poverty level halved, and access to water resources has increased to a similar level in Thailand and Viet Nam. Cambodia also has 80% access to electricity, while Lao PDR, Thailand, and Viet Nam have almost 100%.

In addition to fish, the Mekong continues to be significant for the economies of the basin countries. The quantity of rice produced has grown strongly over the last 20 years, with the latest figure, in 2020, of over 51 million tons, half of which was produced in Viet Nam and around a third in Thailand. There has also been a major growth in aquaculture production, especially in the Delta, where the volume produced has increased from 1.8 million tons in 2015 to 2.4 million tons in 2020. Cambodia, traditionally relying mostly on captured fisheries, expanded its aquaculture production in 2020. In summary, the Mekong water and related resources contributed 188 billion dollars to the Mekong economy (2019), up from 139 billion dollars in 2015 – a 35% increase.

To optimise sustainable development, the MRC delivered on a number of initiatives by supporting the countries in applying two new Fishway Guidelines for the thousands of irrigation schemes, removing some of the barriers, or building new fish passes. To date, eight fishways have been constructed in the MCs following the guidelines, with two more planned.

In addition, fishways were monitored throughout irrigation facilities to understand how effective the infrastructure has been, with the national fishway teams supported by international research institutions. Early indications show that the presence of fish species has increased following the installation of the fishways.

In 2023, the MRC also commenced work on Proactive Regional Planning, which aims to discuss and agree on a formulated basin-wide alternative development scenario and assessment methodology and approach.







CLIMATE CHANGE DIMENSION













BDS Strategic Priority 4

Strengthen Resilience Against Climate Risks,
Extreme Floods, and Droughts

Introduction

The greenhouse gas emissions of MRB are rising by 1.3 to 3.6% per annum. The emissions are dominated by agriculture, land use change and forestry. The impacts of flood and drought in the LMB due to climate change can potentially exacerbate the frequency and severity of floods and droughts, with more people and assets at risk. This effect is reinforced by population growth and floodplain development. The Mekong countries need to take steps to increase water security. Communities must be as prepared as possible to adapt to the changing circumstances while strengthening the resilience of basin communities and adapting to climate change and climate variability.

Table 5. Climate Change Dimension as Shown in the State of Basin Report 2023

BDS Outcomes	Strategic Indicators	Condition	Trend	Status and Key Issues	BDS Progress
	Greenhouse gas emissions			Emissions are rising even if only a small proportion of global emissions	
4.1 Better informed and prepared basin communities against changing river conditions, and more frequent and severe floods and droughts	Climate change trends and extremes			Temperature increases Possible precipitation changes, but requires further investigation Sea-level rise at the delta Potential for more severe floods and droughts	
4.2 Better disaster management and adaptation to water resources development and climate risks	Adaptation to climate change			More comprehensive and integrated investment needed to match the scale of the challenge	
 No immediate concerns	 Some significant concerns to address	 Considerable concern, urgent action needed	 Insufficient data to form a view, requires action to address knowledge gaps		

MRC Contributions to BDS Outcomes and Outputs

Under this dimension, the BDS specifies one strategic priority, two outcomes, and seven outputs to be achieved by 2030. By this period, the BDS aims to ensure that, in the face of changing river conditions, more extreme floods and droughts, Mekong communities will be better informed and prepared. This will be achieved through comprehensive basin monitoring, timely assessment, more accurate forecasting and early warning, and communication systems. This should occur through an integrated whole-of-basin monitoring network, which feeds this data and other data into integrated data and information systems. In turn, these systems should allow for better assessment, analysis and forecasting through enhanced models and tools, as well as information sharing and timely notification to key stakeholders. It is also expected that new knowledge will be shared, and that capacity will be built for disaster response.

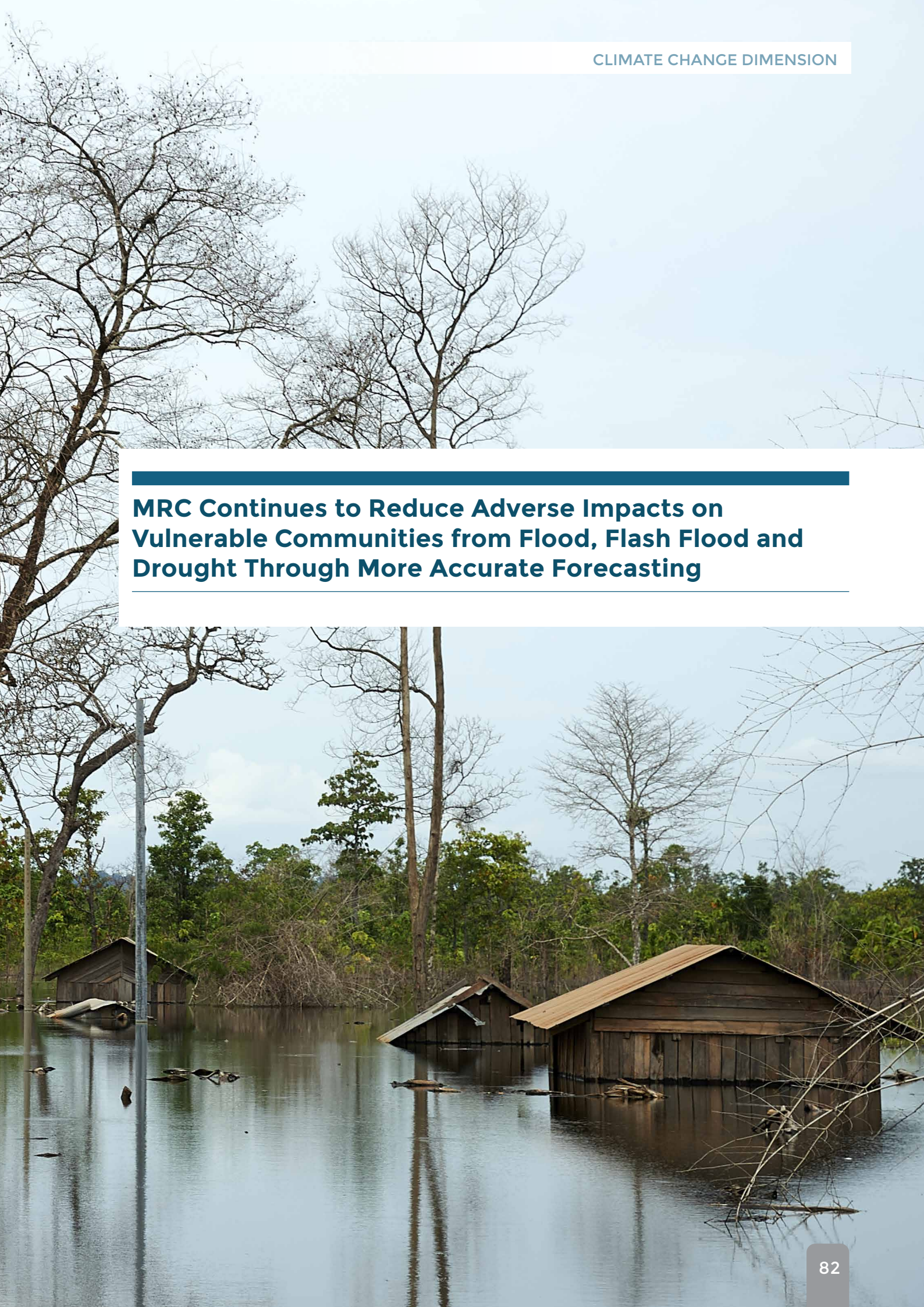
Within the same timeframe, national development plans are to be implemented in response to more disasters (including floods and droughts) and salinity intrusion due to climate change, rising sea levels and unexpected impacts of water infrastructure projects. These key projects include those geared toward increasing dry season flows to support agriculture during drought and mitigate salinity intrusion during low flows and in response to sea level rise. Transboundary cooperation projects on climate change adaptation facilitate the identification of these significant joint and national projects by building trust and enhancing joint planning and problem-solving. It is also expected that the use of infrastructure for flood and drought mitigation is coordinated, including through transboundary cooperation, and that floodwater management is coordinated to enable the storage and conveyance of floodwaters in an efficient and cost-effective way. Measures to adapt to flood and drought are to be mainstreamed into national sector strategies, plans, and projects.

Under Output 4.1.1 (consolidation of a core river monitoring network for the mainstream and remaining national river monitoring networks), the MRC will enhance monitoring and reporting on the core river monitoring activities (hydrology, water quality, ecological health monitoring, fisheries, and sediment). Work will be conducted under Output 4.1.2 to improve and integrate data and information systems (databases, QA/QC procedures, and satellite imagery repository) for more effective basin-wide data management and sharing. Under Output 4.1.3 (compatible Decision Support Systems in line with reinvigorated data, modelling, forecasting, and communication capabilities), the MRC will upgrade the DSF, spatial datasets for digital maps, and MRC Web Portal at regional and national levels.

A detailed report on these activities is documented in Part 2 of this AR 2023.

The following section illustrates evidence of change and progress made in 2023 through the key success stories on Flood and Drought efforts and the Channel on Mekong Flood and Drought Forecast.



A photograph showing a flooded rural area. In the foreground, several wooden houses with gabled roofs are partially submerged in water. The water is calm, reflecting the sky and the trees. In the background, there are several tall, bare trees and a dense line of green trees. The sky is overcast and grey. A utility pole is visible on the left side of the image.

MRC Continues to Reduce Adverse Impacts on Vulnerable Communities from Flood, Flash Flood and Drought Through More Accurate Forecasting

Progress and Evidence of Change

The LMB has experienced four straight years of low flow, and drought has brought hardships for millions of vulnerable fishing and farming families. These communities must also deal with the risk of floods, flash flooding and typhoons. All these factors have become more unpredictable due to climate change. To address these risks, the MRC Vientiane Declaration stressed the importance of MRC's work in helping to reduce adverse impacts on vulnerable communities from flood and drought with the establishment of more accurate forecasting with modern tools and collaboration to support early warning and disaster preparedness through integrated regional flood and drought management.

With this commitment in mind, the MRC met several new milestones in 2023 through innovative flood, flash flood and drought monitoring, modelling, and forecasting to help the region better cope with, prepare for, and respond to such events.

The Mekong River experiences flooding every year, which can bring both positive and negative impacts to the LMB. The annual flood pulse drives the basin's fisheries, maintains river morphology, and deposits sediments to improve soil fertility. Floods can also adversely affect economic and human activities, endangering lives and causing damage to infrastructure, settlements, and essential services.

Flash floods, alongside riverine floods, also pose a significant threat to communities residing in the mountainous areas of the LMB. These natural disasters can lead to tragic loss of life, infrastructure damage, and destruction of crops. Rapid water flow and debris can trigger landslides and mudslides, worsening the damage and posing risks downstream. Flash floods disrupt transportation, isolate communities, and harm livelihoods, especially in rural areas with limited access to emergency services.

On the other hand, drought brings socio-economic hardship to riparian countries. The duration and magnitude of drought impacts have significantly increased over the past two decades. With different climate scenarios, the LMB is likely to see more severe droughts due to less precipitation, high air temperature, and high evapotranspiration. The increase in population relying on Mekong water also increases water demands from all sectors.

During the flood season (June-October), the MRC Regional Flood and Drought Management Centre (RFDMC) produces and disseminates a daily forecast, daily flood bulletin, and quantitative flood forecast, providing advice on expected water levels in 1 to 5 days' time at 22 stations to enable early warning, preparedness and

response when needed. RFDMC also provides water level monitoring in the dry season (November-May). The Drought Forecasting and Early Warning System of the MRC/RFDMC is operating for weekly drought monitoring, weekly drought forecasting, and monthly outlook.

The MRC has enhanced flash flood management in the LMB through the implementation of the Flash Flood Guidance System (FFGS). This system has evolved into the Southeast Asia Flash Flood Guidance System (SEAFFGS), extending its reach to other Asian countries. SEAFFGS integrates various data and forecasting techniques to provide timely updates (1- 3- 6- 24- hourly updates) on potential flash floods, including their onset, intensity, and potential impact in vulnerable areas. Additionally, SEAFFGS facilitates early warning dissemination through various communication channels, enabling prompt response and evacuation procedures as needed.

In July 2023, the MRC Secretariat also set up the TV Channel on Mekong Flood and Drought Forecast to reach the wider community with the aim of improving public awareness and understanding of Mekong River conditions in the Lower Mekong River Basin. The TV channel provides regular updates on current water levels and flows and forecasts flood and drought risks for people living along the Mekong River, broadcasting in English with subtitles in Mekong languages.

During the rainy season, the channel runs every Monday on the MRC Secretariat's social media platform of Facebook, LinkedIn, and YouTube. In special or emergency situations, the channel also features special episodes that provide up-to-date information to help the public respond appropriately. Each episode typically begins with an overview of rainfall updates and the current flood situation, based on data collected from 22 monitoring stations along the Mekong River. The channel then zooms in on specific hotspot areas, such as stations experiencing unusually high-water and low-water levels during the forecasting week or the water levels in Tonle Sap, which is considered the heart of the Mekong, and at Tan Chau and Chau Doc, which are influenced by tides from the sea.

The dry season episode updates drought monitoring and forecasting in the Mekong River Basin for metrological and agricultural drought and drought risk once a month. Additionally, community news is highlighted, focusing on significant events in the previous week.

The introduction of the MRC TV Channel on Flood and Drought Forecasting is a part of the MRC's continued efforts to bring updated and helpful information on flood and drought risks to people in the Basin in a more accessible way. In addition

to the MRC website updates, the channel, the first service in the LMB, is an effective medium to reach millions more people living along the Mekong River. Real-time, live, and accessible information on floods and droughts is beneficial for the Mekong community as it ensures timely information is communicated quickly, clearly, and efficiently to all affected in the LMB, including women and vulnerable groups, to ensure preparedness to respond.



MRC TV Channel presented by Ms Hoa Nguyen Ngoc, an Operational Hydrometeorologist/Forecaster at the Regional Flood and Drought Management Center

The MRC TV Channel is crucial in disseminating technical information during various seasons, including floods, droughts, and special situations like flash flooding and typhoons. By presenting this information in a simple and accessible format, the channel ensures that ordinary people can understand and engage with critical topics. The channel provides an interactive platform for the general public to stay informed about flood and drought issues and swiftly reaches affected communities within the LMB. Its accessibility ensures that vital information is available to those who need it most. For instance, during the 2023 flood season, the channel assisted farmers in making informed decisions about planting crops. Reaching 410,000 viewers through 17 episodes on Facebook contributes to community resilience.

In the Development Partners' statement at MRC's 30th Council Meeting in November 2023, the DPs congratulated the MRC on the launch of the Mekong Flood and Drought Channel, which will contribute to better preparedness and adaptation, and we look forward to the launch of the MRC's mobile application. DPs strongly encourage inclusive and effective dissemination of information, including real-time or near real-time flood and drought warnings, to vulnerable communities, as prioritised in the Vientiane Declaration.

*To address these challenges, Dr Anoulak Kittikhoun, CEO of the Mekong River Commission Secretariat, stated: **"The MRC currently provides daily river monitoring, flood forecasting, flash flood guidance information, and drought forecasts to support Member Countries in managing risks. We are also working on drought adaptation measures. The launch of the MRC TV Channel on Flood and Drought Forecasting is a part of our continued efforts to bring updated and useful information on flood and drought risks to people in the Basin in a more accessible way. We hope the channel and our website updates can effectively reach millions more people living along the Mekong River."***

The MRC also joined forces with partners to employ cutting-edge technology to improve short-term flood, flash flood and drought forecasting capacity.



With the support of Japan's Official Development Assistance (ODA), the MRC made progress with implementing the *Flood and Drought Management Project 2021-2024*: first, to develop medium-to-long-term flood and drought forecasting, plus analyse extreme weather events and climate shifts; the second part focuses on drought, for improving Drought monitoring and how to operate the forecast and early-warning system, and the use of the Drought Adaptation Guidelines for the Basin. This will be critical for MCs to plan better for prevention and response.




On the flood-mapping front, progress was made at the regional level, with the MRC developing a tool directly linked to long-term forecasting – the existing River Flood Forecasting System (RFFS) – that can map a flood's extent, depth, and duration. At the national level, testing of the new mapping tool through four pilot projects was underway in 2023 along the Mekong and its tributaries – one in each of the four Member Countries.



In 2024, the MRC aims to complete the installation of new drought monitoring stations, finalise the Drought Adaptation Guidelines for the LMB, continue developing and disseminating weekly drought bulletins, update the tools for communicating and disseminating flood, flash flood, and drought information, including webpages and mobile apps, update the Regional Flood and Drought Management Centres facilities, and install a situation room.

The MRC TV Channel on Flood and Drought Forecasting will continue in 2024, broadcasting monthly during the dry season and then weekly during the rainy season. The Channel will aim to gain support from other public figures and Influencers from the four Member Countries to promote the channel to a broader audience. This will help support disaster management and emergency response and contribute to building a more resilient and sustainable Mekong River Basin.

Output Indicator Status

	Status	Output Indicator
Report on Progress	 Partially Achieved	4.1.1 The degree to which the core river monitoring network for the mainstream is operational, providing the data and information required by basin countries.
	Target	The core river monitoring network for the mainstream is fully operational as designed and agreed upon among basin countries.
Report on Progress	 Partially Achieved	4.1.2 The degree to which the MRC data and information have been upgraded to good international standards.
	Target	Key stakeholders and users find the MRC data and information system much improved compared to the 2018 review.

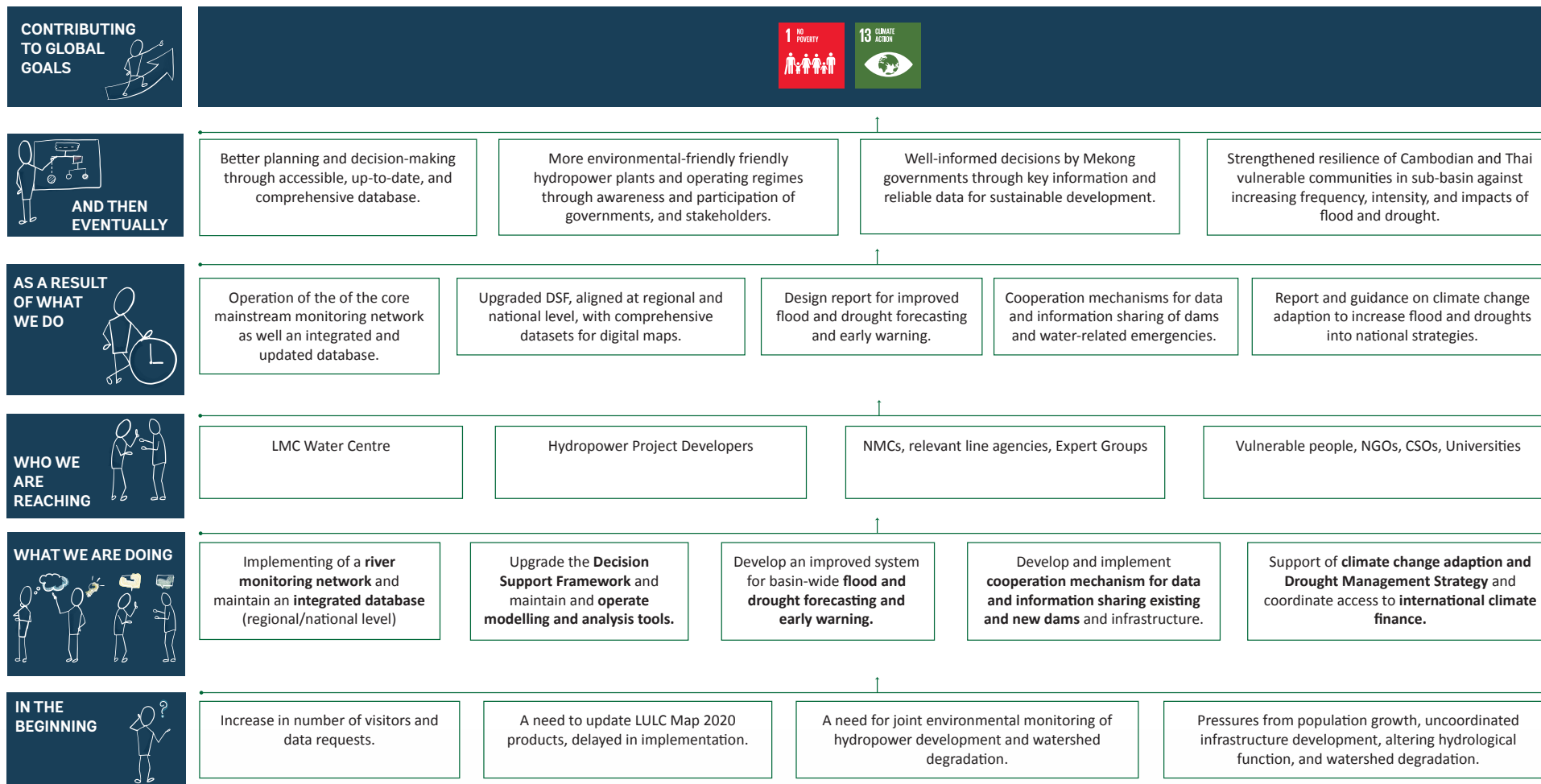
	Status	Output Indicator
Report on Progress	 Partially Achieved	<p>4.1.3 The degree to which the MRC DSF has been upgraded to the latest DSS standards (as demonstrated by the national DSS's managed by HAI (Thailand) and HIC (Myanmar)).</p> <hr/> <p>Target MRC DSF is upgraded to comply with international DSS standards and is compatible with other DSS's in basin countries.</p> <hr/> <ul style="list-style-type: none"> ■ The DSF prototype is developed and under improvement, and consulted with the MCs. The MRC upgraded DSF will be operational and automatically run in near real-time, serving the MRC procedures (PMFM, PWUM).
	 Partially Achieved	<p>4.1.4 The degree to which the services of improved basin-wide flood and drought forecasting and early warning systems are being used by the responsible national agencies and other target users, including vulnerable groups.</p> <hr/> <p>Target RFDMC services and products are evaluated on average as at least 'highly satisfactory' by national agencies and other users (through a user satisfaction survey).</p> <hr/> <ul style="list-style-type: none"> ■ Technical information and bulletins have been revised, updated, and published; and are available on the MRC website. ■ The integration of the bulletin of RFF, FFG, and drought is being processed. The new and integrated tools for medium-range (1 month) and long-range (3-6 months) seasonal forecasts/outlooks have been developed. ■ The Mekong flood and drought channel, launched in early 2023 and is available on Facebook, YouTube, and LinkedIn, broadcasts weekly updates during the rainy season and monthly updates during the dry season. ■ During Flood season (June-October), the RFDMC produces and disseminates a daily forecast, daily flood bulletin, and quantitative flood forecast, providing advice on expected water levels in 1 to 5 days' time at 22 stations. ■ Applied the new tools GPM-BICO for correcting and analysing extreme satellite-based rainfall for more accurate riverine flood forecasting. ■ During the Dry season (November-May), the RFDMC produces and disseminates a weekly drought bulletin for the Lower Mekong Basin every Monday. ■ The news and integrated bulletins for Daily Flood forecasting, Weekly River monitoring and forecasting, and Weekly Drought monitoring and forecasting bulletins have been updated and operational and shared with MCs.
Report on Progress	 Partially Achieved	<p>4.1.5 The extent to which China and Myanmar collaborate in preparing the SOBR 2023 and data gaps in all basin countries have been addressed in accordance with the MRB-IF.</p> <hr/> <p>Target Data, information, and analysis from China and Myanmar are included in the SOBR 2023, and there were no substantial data gaps in the implementation of the MRB-IF.</p> <hr/> <ul style="list-style-type: none"> ■ Data and information on China and Myanmar were incorporated throughout 5 dimensions of MRB-IF. ■ Data gaps for SOBR 2023 were identified and agreed to be filled by the 4 regional studies on the extent of salinity intrusion, condition of riverine, coastal, and estuarine habitats, economic values of LMB wetlands ecosystem services, and fish yield survey assessment. ■ Socio-economic data, including gender-disaggregated data under MRB-IF, were collected within DAGAP by MCs and transmitted to the MRC Secretariat in 2023. Some data gaps, challenges, and lessons learned were identified from this data collection process, which was discussed and agreed upon with MCs for additional data collection, especially for gender and vulnerability data/indicators, which will be further conducted in 2024. ■ The final draft of SoBR 2023 was shared for review with China and Myanmar and received positive comments. It was then finalised, and MCs were consulted in December 2023.

	Status	Output Indicator
Report on Progress	Partially Achieved 	4.2.1 The degree to which dam operations data are being shared among basin countries.
		Target At least 1 dam cascade has a communication and data and information sharing mechanism in place to prevent and manage emergencies, considering the identified needs of vulnerable groups, while the basin countries are considering communication and data and information sharing cooperation mechanism for the mainstream.
		<ul style="list-style-type: none"> ■ A report on experiences and opportunities for cascade operation was finalised. ■ Two pilot projects were carried out to establish and implement the data and information sharing and communication mechanism for cascade dam operation and emergency management. The two pilot projects were completed in 2023 with a dashboard for information sharing.
Report on Progress	Partially Achieved 	4.2.2 The degree to which the regional climate change adaptation needs are addressed through national sector strategies and plans; and regional flood and drought adaptation guidelines are being used at a national level.
		Target 1 national sector strategy and plan from each member country being implemented consistent with regional recommendations and guidelines.
		<ul style="list-style-type: none"> ■ The MASAP has been integrated into selected national flood management activities. For example, the concept note on flood and drought in the Mekong Delta has been formulated. In 2022, Cambodia, Lao PDR, Thailand, and Viet Nam identified the national drought management activities for regional climate change mainstreaming. ■ Each MC reviewed the national policies and strategies for mitigating and managing drought and identified a short-list of activities potentially suitable for mainstreaming a regional perspective on drought management. ■ Regional meeting organised in February 2023 to discuss the report on MASAP mainstreaming. EGBP Meeting organised on 19 October to discuss the regional report on MASAP mainstreaming.





Pathway to Change for Climate Change Dimension

Strengthen resilience against climate risks, extreme floods, and droughts



Contribution to SDGs for Climate Change Dimension

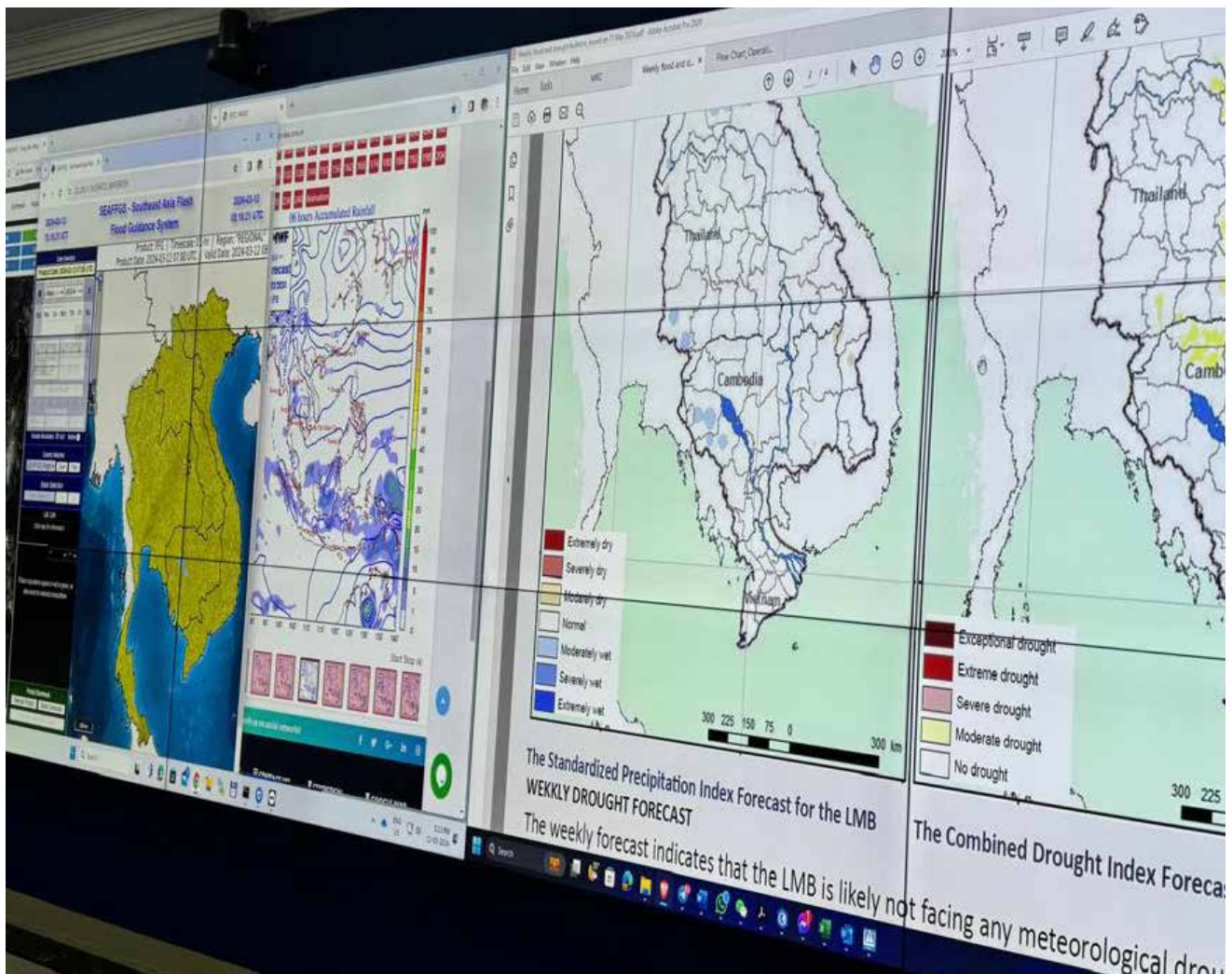
SDGs	Targets
	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters.
	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. 13.2 Integrate climate change measures into national policies, strategies, and planning.

In 2023, the MRC made significant strides in addressing climate risks, floods, and droughts, aligning with its strategic priority to bolster resilience against climate change. These efforts contribute to advancing Sustainable Development Goals (SDG) 13: Climate Action and SDG 1: No Poverty. The MRC enhanced its role as a regional knowledge hub by improving the communication and utilisation of river monitoring data and flood and drought forecasting information. Innovatively, the MRC expanded its forecasting capabilities, developing the ability to provide medium to long-term forecasts—spanning one month, three months, and up to six months. This advancement has been rolled out later in the year, offering crucial planning tools for prevention and response strategies against climate risks.

In July 2023, the MRC launched a TV Channel focused on Mekong Flood and Drought Forecasting. The channel aimed at raising public awareness and understanding of conditions in the LMB and reached nearly half a million people during the rainy season.

Phase I of the Joint Study on Changing Hydrological Conditions in the Mekong Basin was completed in 2023, and Phase II has now commenced. The institutionalisation of the joint expert group established for the Joint Study, which includes the four Member Countries, and the two dialogue partners, China and Myanmar, has been agreed to oversee future joint studies and launch the Lancang-Mekong survey, with a joint BDS in 2029 the ultimate goal.

Progress was also made in redesigning and expanding the MRC Core River Monitoring Network (CRMN), ensuring reliable and accurate data for analysis, forecasting, and planning. Furthermore, regional climate adaptation and flood and drought adaptation activities saw national uptake, with the Joint Project 9C-9T between Cambodia and Thailand highlighting the need for continued funding. Efforts to secure additional funding through avenues such as the Global Environment Facility (GEF), Green Climate Fund (GCF) accreditation, and the Climate Adaptation Fund were actively pursued, indicating a proactive approach to climate resilience in the Mekong region.





COOPERATION DIMENSION

BDS Strategic Priority 5

Strengthen Cooperation Among All Basin
Countries and Stakeholders

4th SUMMIT
MINISTERIAL MEETING
FOR THE 4th MRC SUMMIT

4th SUMMIT
MINISTERIAL MEETING
FOR THE 4th MRC SUMMIT













4th SUMMIT
MINISTERIAL MEETING
FOR THE 4th MRC SUMMIT



Introduction

As the Mekong River Basin becomes more developed and regulated by hydropower projects and climate change intensifies with more extreme weather, there is an increasing need for more data, information sharing, and cooperation (BDS 2021-2030). Stronger cooperation is critical in all areas – from river flow management to sediment management, management of emergencies, and design and management of hydropower cascades. Strengthening the MRC’s role as the intergovernmental river basin organisation and ensuring effective coordination among all regional mechanisms, partners, and stakeholders who work on water resources management are equally important for the integrated management of the entire river basin.

Table 6. Cooperation Dimension as Shown in the State of Basin Report 2023

BDS Outcomes	Strategic Indicators	Condition	Trend	Status and Key Issues	BDS Progress
	Self-finance of the MRC			National budget pressures post covid-19	
5.1 Strengthened Mekong River Commission for more effective implementation of the Mekong Agreement	Benefits derived from cooperation			Challenges in evaluating and communicating the benefits of cooperation and joint projects Coordination of project activities across the basin Identifying, financing and implementing joint projects that increase benefits and reduce costs for all basin countries	
5.2 Increased joint efforts and partnerships for more integrated management of the entire river basin	Equity of benefits from the Mekong River system			The need for joint investment and associated cost and benefit sharing mechanisms between countries	
	 No immediate concerns	 Some significant concerns to address	 Considerable concern, urgent action needed	 Insufficient data to form a view, requires action to address knowledge gaps	

MRC Contributions to BDS Outcomes and Outputs

Under the cooperation dimension, the BDS specifies one strategic priority, two outcomes, and seven outputs to be achieved by 2030. By then, it is anticipated that the MRC's role as the only treaty-based, intergovernmental river basin organisation in the Mekong is strengthened.

The MRC focuses on its strengths and comparative advantage in its cooperation arrangements and operations to attain this. It will also sharpen its core functions to avoid duplication and complement other broader cooperation mechanisms towards common basin and regional objectives. Implementation has already further shifted to implementing agencies at the national level, including through the operation of joint basin expert groups. Such implementation is supported and facilitated by regional and national secretariats. In addition, the regional platform for cooperation on Mekong water resources management among basin countries, long established by the MRC in the Lower Mekong River Basin and recently enhanced by the MLC Water cooperation for the whole basin, will be refined, strengthened, and transformed, with clear principles of cooperation.

Several key outputs are planned, some of which have already been achieved and some underway. Output 5.1.1 will see the MRC implement and enhance its procedures through the Joint Committee Statement and Joint Action Plan, develop a comprehensive technical proposal, and update guidelines for the PNPCA and PDIES. Under Output 5.1.2, the MRC will develop and implement several activities, including National Indicative Plans (NIPs), an organisational development plan towards 2030, MWPs, annual reports, the 4th Summit, the mid-term review of the Strategic Plan, and the development of the MRC Strategic Plan 2026–2030, while enhancing the monitoring, evaluation, and reporting system of MRC SP, NIPs and other contributing plans.

The MRC will also explore, under Output 5.2.1, the future institutional arrangements for the entire basin. This will be done by identifying options, institutional development, and a cooperation action plan for managing the Mekong River Basin. Output 5.2.2 (achieving better development pathways based on consideration of trade-offs, benefit-sharing, and risks) will be for the MRC Secretariat to prepare and facilitate high-level discussion papers, a comprehensive concept, and project information notes on proposed joint investment projects and national projects of basin-wide significance based on results of the proactive regional planning.

The MRC will continue cooperating with the Mekong water-related cooperation mechanisms and relevant partnerships under Output 5.2.3. It aims to secure better sharing of year-round data on river flows and dam operations and to realise the Mekong Fund mechanism through multiple partnerships and financing sources. As for Output 5.2.4, the MRC is expected to establish Joint Basin Expert Groups of the six basin countries, which has been trialled for implementation during the Joint Study with China, while Output 5.2.5 will see the MRC further enhance its stakeholder engagement and communication, including a better consolidated and harmonised basin-wide stakeholder platform.

Detailed reporting on these activities is documented in Part II of this AR 2023.

The following section illustrates evidence of change and progress made in 2023 through key success stories on the harmonisation of navigation regulation, Joint Study of MRC Dialogue Partners, document management system, 4th MRC Summit and MRC International Conference, Cooperation and Partnership, Gender and Vulnerability mainstreaming, and Youth and Stakeholder Engagement.





**Lao PDR and Thailand Make Agreement to
Harmonise Navigation and Pollution Rules on a
Shared Mekong River Stretch**



Progress and Evidence of Change

The Mekong River plays a vital role as the lifeblood for millions of Southeast Asians. Despite ongoing road and railway infrastructure development, waterborne transportation along Southeast Asia's largest river remains important for the trading and economic growth of Cambodia, Lao PDR, Thailand, and Viet Nam. However, each country enforces its rules and regulations for vessels and river use, potentially impacting trade optimisation and travel efficiency. This is especially true for the 850 kilometres (530 miles) of the river that marks the border between Lao PDR and Thailand. In 2022, the MRC achieved a significant milestone in reaching a common understanding between these two neighbours to harmonise navigation safety and anti-pollution rules for the Mekong River. In 2023, further collaborative efforts were undertaken to advance this cooperative framework.

The harmonisation of the rules will be agreed upon and formalised through a Memorandum of Understanding (MOU) between Lao PDR and Thailand, which aims to synchronise the rules of both countries and adhere to international standards. This represents a significant advancement from previous practices, where there was no established protocol for managing incidents, such as oil leaks from aged barges or other similar occurrences, despite rocky outcrops, narrow channels, and strong currents during the rainy season. The absence of effective and efficient navigation rules could hinder economic development and activities, causing both countries to forfeit numerous opportunities. This agreement is anticipated to stimulate an increase in traffic and cargo and potentially attract more tourists from China and Thailand. In the long term, this increase in opportunities should also generate more revenue, raise living standards, and improve the quality of life for people along the Mekong.

Mr. Thanatip Jantarapakde, an expert in maritime affairs and part of the Marine Safety and Environmental Bureau at the Marine Department of Thailand, stated that in the past, there was not enough waterborne traffic to encourage significant business expansion. However, he is optimistic that upcoming changes will lead to an increase in traffic, cargo, and tourism from China and Thailand. This surge in opportunities is expected to generate additional revenue, improve living standards, and enhance the quality of life for residents along the Mekong in the long run.

The works in 2023 to harmonise the regulatory framework for navigation between Lao PDR and Thailand engaged stakeholders from the National Mekong Committees and relevant line agencies of both countries in collaboration with experts from the MRC Secretariat. Together, they have formulated and agreed upon thirteen sets of unified rules and regulations on navigation safety and anti-pollution, which were introduced at the meeting. The draft MoU encompassing these harmonised rules and regulations, along with national implementation plans, has been developed between the two countries. This MOU is almost final, with the signing at the ministerial level planned for 2024.

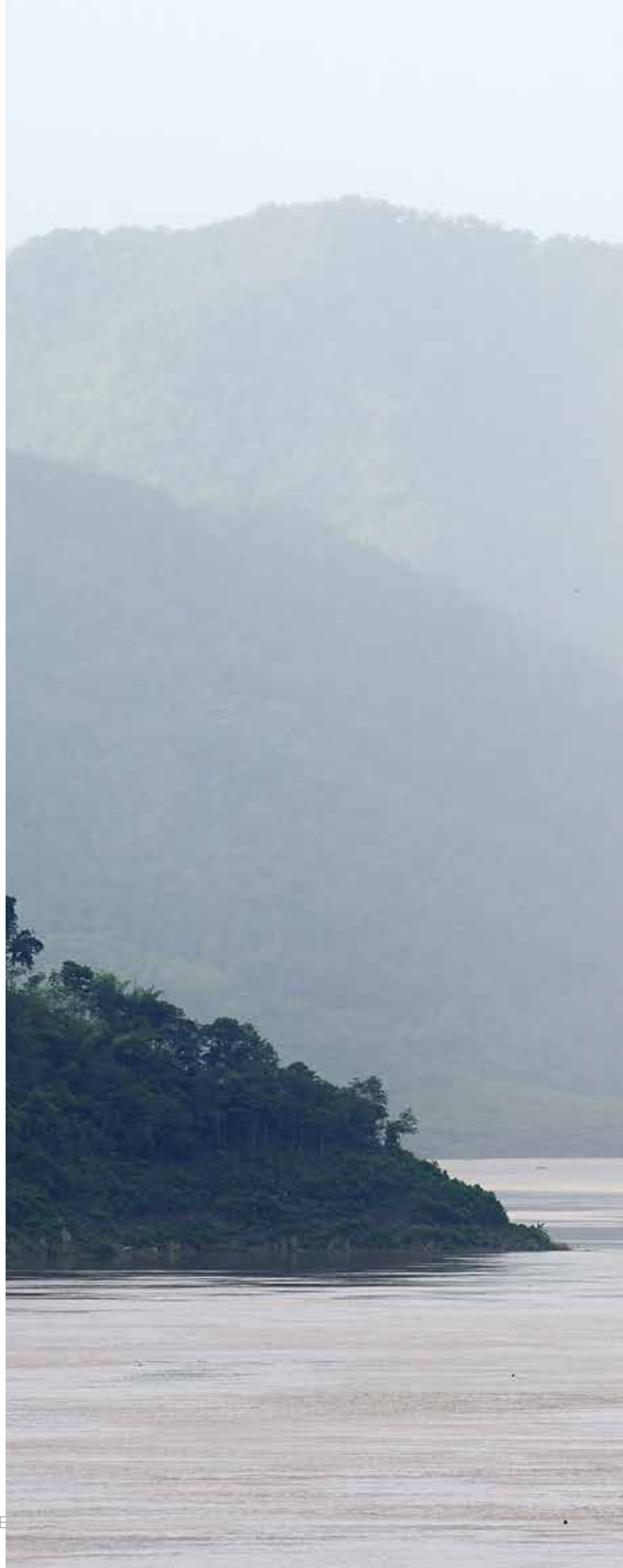
*Mr. Soukkaseum Dalasene, the Director of the Waterways Department at the Ministry of Public Works and Transport of Lao PDR, emphasised the importance of having a common set of rules for navigation along the Mekong River. He stressed that **“Without such rules, opportunities for economic development and beneficial activities could be missed. An effective and efficient navigation system is crucial for leveraging the potential of the Mekong River. Such a system would not only facilitate smoother transportation but also open up opportunities for economic growth and development”**.*

Developing the harmonised rules and MOU has taken some time, and the MRC has effectively facilitated this process over the last eight years. In 2015, the “Master Plan for Regional Waterborne Transport on the Mekong River Basin” was endorsed by the working groups from the National Mekong Committees. The MRC Joint Committee members of Cambodia, Thailand, and Viet Nam approved the Master Plan in June 2016, while in November 2020, the Lao PDR approved the Master Plan.

Annexe 1, Lao-Thai safety regulations for navigation, was included in 2016's Identified Joint Projects for the Joint National Indicative Plan (JNIP) in the Lower Mekong Basin 2016-2020. Subsequently, the joint project for the preparation of safety and anti-pollution rules with the Lao PDR, inspired by the MRC Master Plan for Waterborne Transport in the Mekong River Basin – Action SRE3. "Adopt, implement and enforce harmonised safety and anti-pollution rules for the Lao PDR and Thailand" was identified as Thailand's National Implementation Plan in 2017.

Between 2017 and 2022, an MOU was formulated, encompassing 13 sets of Harmonized Rules and Regulations regarding Navigation Safety and Anti-Pollution on the Mekong River System, spanning from Luang Prabang to Khone Phapheng. In 2023, the working group agreed to recommend that Lao PDR and Thailand sign a non-legally binding MOU with 05 annexes (1,2,4,5 and 6) for the initial phase. These annexes are intended to serve as guiding principles for the two Contracting Parties.

Upon ratification of the MOU, the MRC will facilitate further capacity-building. This will involve training professional staff and government officials on the application and implementation of the rules and regulations. They will be educated on how to monitor compliance at the grassroots level and how to raise awareness among relevant stakeholders and operators. This includes everyone from the local communities, where family boats travel short distances, to the captains of small vessels, and crews of oil tankers.



A wide, calm river flows through a valley. The water is a light, milky brown color. On the right side, a steep, forested hillside rises, covered in dense green trees. In the background, more hills are visible, shrouded in a light mist or haze. The sky is a pale, overcast blue.

Six Mekong-Lancang Countries Agreed on Recommendations of the Joint Study to Share More Data on Dam Operations

Progress and Evidence of Change

In recent years, the Mekong has faced mounting challenges, including historically low water flow, severe droughts and floods, and adverse impacts on fisheries, sediment, and wetlands. These issues are further exacerbated by climate change and water infrastructure development, requiring further investigation. Facts and evidence are essential, if the MRC and Dialogue Partners are to craft wise, practical, data-driven policies and programmes to mitigate those impacts or prevent them from worsening. In response to these challenges, the six Mekong countries embarked on a Joint Study on Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin and Adaptation Strategies. This collaborative effort signifies a proactive approach towards understanding and addressing the complex environmental challenges facing the Mekong River.

On 10 September 2023, Senior Mekong Officials met in Beijing, China. They endorsed the recommendations of the first phase of the Joint Study between the MRC and Mekong Lancang Cooperation to pave the way for better information sharing about reservoir operations on Mekong's water flow and water release and practical solutions for impact mitigation and adaptation.

The endorsement of these recommendations was the result of deliberation by the MRC Joint Committee and the Mekong-Lancang Cooperation (MLC) Joint Working Group on Water Resources Cooperation at their historic first joint meeting. The meeting also made a pact to establish a Joint Expert Group to oversee further collaborative work and to launch the Joint Mekong-Lancang Survey. The Joint Survey will involve both organisations in conducting essential field trips and surveys at key locations in the upper-lower Mekong basin, including relevant engagements and observations on the livelihoods of people and communities living along the river.

A primary recommendation in the short term is for the MRC and MLC to intensify their collaboration to guarantee efficient near real-time sharing of data on storage levels and hydropower operations across the Lancang-Mekong River Basin. This could help downstream communities prepare for and adapt to changes. According to the meeting, institutions and their information platforms are well suited for enhancing notifications of unusual releases and water flow restrictions.

The Joint Study has strengthened cooperation between the six Mekong-Lancang countries to develop a joint understanding of the historical changes in hydrological conditions and the causes of these changes. Providing a clear way forward to implement Phase 1 and commence Phase 2 to understand future trends of hydrological

changes under climate change and resource development. From the Joint Study, the six countries are now equipped to develop adaptation strategies for changing hydrological conditions for sustainable management and development of the LMB, including natural run-off, flood and drought and the reverse flow of the Tonle Sap.

Over the long run, the Joint Study recommends that both institutions jointly formulate action plans and strategies, including a comprehensive flood and drought management strategy and a capacity building plan, that can ensure coordinated water resource management and adaptation to changing river conditions. To support the implementation of the short-term recommendations, the MRC Secretariat will work with the MLC Water Center in consultation with the six countries on a data-sharing agreement and plan.

*In response, Hao Zhao, Secretary-General of the MLC Water Center, told the Regional Stakeholder Forum audience that this joint study should solidify Lancang-Mekong as **“a river of friendship, cooperation and prosperity.”** As Hao explained, the fact upstream and downstream neighbours face similar issues enables them **“to raise awareness of cooperation and join hands to find a new path of rational and sustainable utilisation of water, to solve and respond to difficulties and challenges for Basin development. Information-sharing is very critical for the success of this Study and for river management.”***

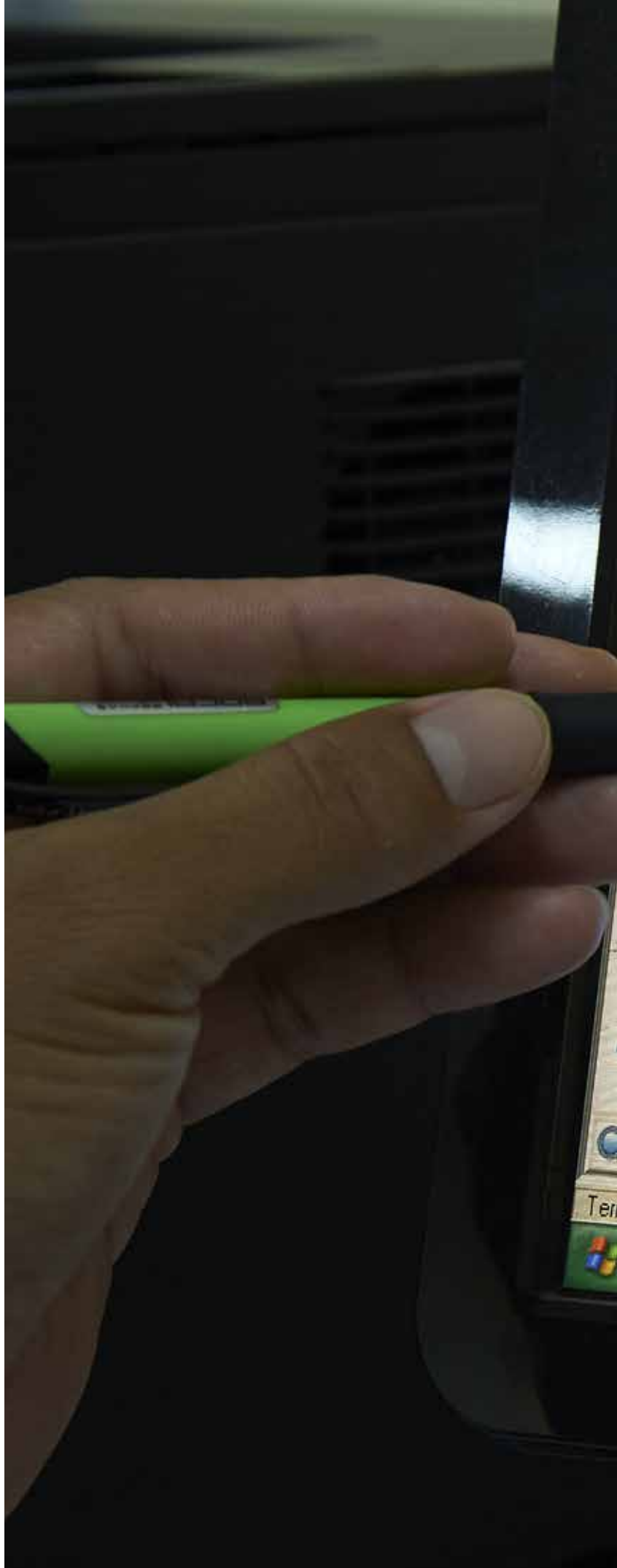
“This is good news for the Mekong and our people,”** said Dr Anoulak Kittikhoun, Chief Executive Officer of the MRC Secretariat, who facilitated the meeting with the MLC Water Center. **“We can now focus on actions to support implementing the recommendations and do what must be done for the basin’s people and our shared river.”

Over the past twenty years, satellite and other data have indicated that droughts have indeed grown more intense and frequent. In recent years, though, some observers have pointed the finger at hydropower development and operation for exacerbating that situation, especially after the historic low flows of 2019. When the river was so low, for example, the lack of oxygen caused algae to bloom, suffocating much of the nearby aquatic life.

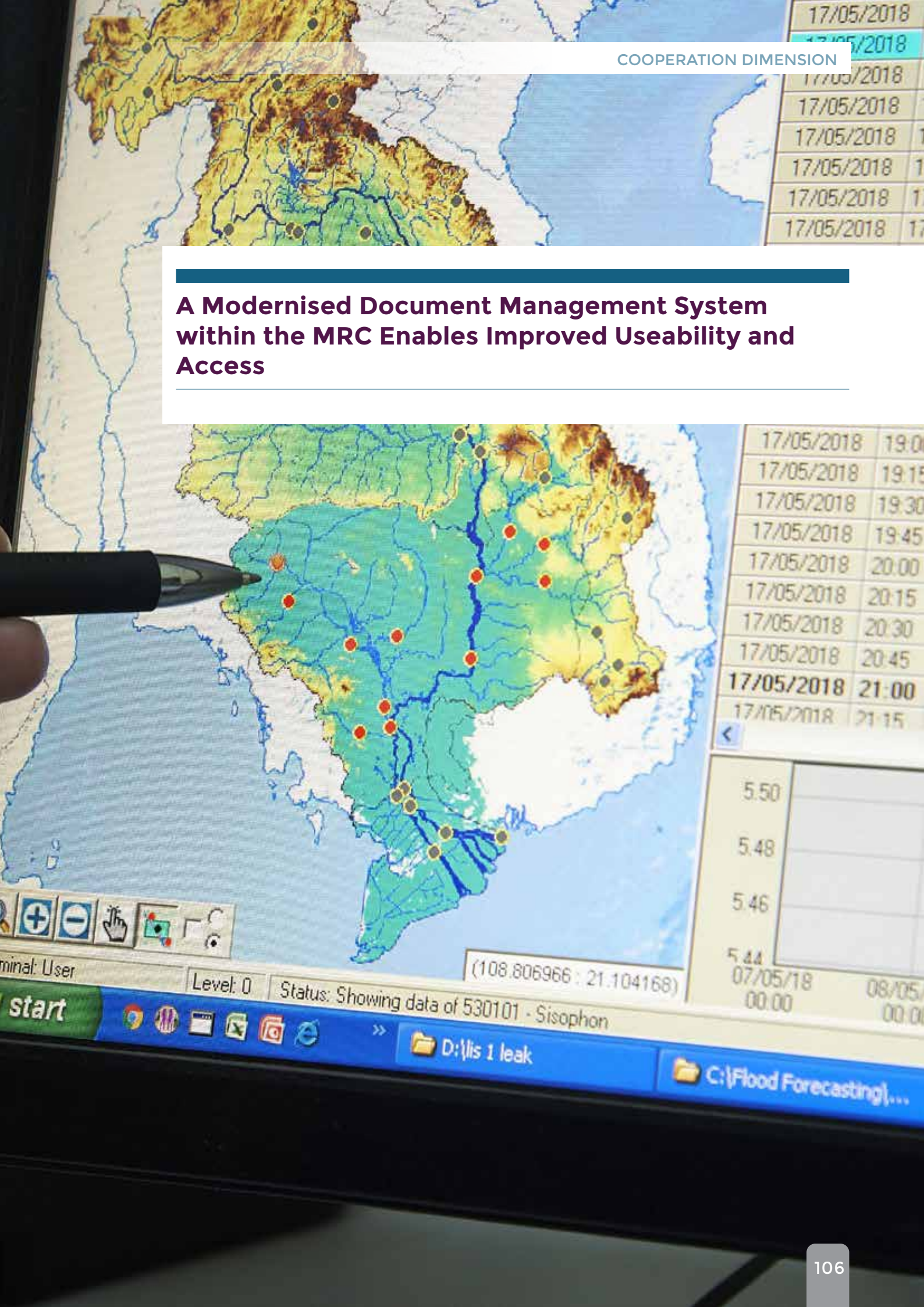
In 2020, after 18 years of only sharing wet-season data, China also agreed to share its dry-season data - when the water flow regime has changed and a dam operator's decision to withhold or release water has more dramatic consequences.

The question of cause is understandably sensitive. However, a fundamental requirement for further cooperation and action is the necessity for a mutual understanding among the riparian countries in the basin, regardless of their geographical position, upstream or downstream. Thus, the 2022 agreement between four Member Countries and their upstream neighbours, China, and Myanmar, to undertake a Joint Study entitled *Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin and Adaptation Strategies* marked a significant advancement in this cooperation.

Moving forward, Phase 2 of this Joint Study will embrace the recommendations, forecast future patterns in the changing hydrology, and suggest strategies for the riparian states to adapt to climatic and demographic shifts – all while maintaining their support for the sustainable management and development of the Basin.



A Modernised Document Management System within the MRC Enables Improved Useability and Access



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Progress and Evidence of Change

Over the years, the MRC has developed extensive documents, yet they are often scattered across different platforms and systems. Consequently, the MRC has worked to consolidate and modernise its document management system (DoMS). This involves digitising its records and developing a customised platform to enable access through the MRC website and data portal. This initiative not only enhances the efficiency of information management but also promotes the MRC knowledge hub role and accessibility for all relevant stakeholders.

The development process of the DoMS aims at processing the digitalisation of approximately 100,000 pages of the existing scanned copies of books and publications from the MRC Library. These digitised materials would have undergone a quality assurance and quality control (QA/QC) improvement process before being uploaded to the MRC DoMS. This substantial effort underscores the MRC's commitment to modernising its information management practices and enhancing accessibility.

Documents within MRC DoMS have been systematically classified in line with the metadata structures of the MRC website, which include Topic, Function, and Publication Category, among others. Digitalised versions of the original documents from the MRC Library have been created using the Optical Character Recognition (OCR) technology, followed by a rigorous QA/QC metadata improvement before uploading on the DoMS, adhering to the established classifications and criteria. OCR, also known as text recognition, extracts and reuses data from scanned documents and images, enabling access to and editing of the original content. The archival process has covered documents authored jointly or by the MRC Library from 1995 to 2015.

Access to these documents has been tiered, enabling different entities such as the MRC Secretariat, NMCS, national line agencies, institutions, and the general public to access certain documents depending on their respective permissions.

A series of events unfolded in 2023. In February, the initial regional training on the MRC Document Management System (DoMS) was organised, closely followed by the DoMS's official launch in March. The MRC embarked on a substantial document digitisation project in July-October, which involved the OCR process of approximately 20,000 pages. In October, the Expert Group on Data, Modelling, and Forecasting (EGDMF) convened a meeting to review the MRC Information System (MRC-IS) enhancements. The DoMS received positive reviews and recommendations during this meeting. Furthermore, October witnessed significant improvements in the

DoMS, including enhanced user interfaces, optimised search functions, and the release of comprehensive User Guides.

These advancements have improved the system's overall user experience and efficiency. The MRC DoMS provides a standardised approach to document control, improves the searchability, trackability and accessibility of digitised information, and allows for the establishment of varying levels of access to information. This improved system facilitates easy access to the MRC's publications for institutions and the general public.

“Emphasising the role of the MRC as a regional knowledge hub, the MRC's modernised document management system ensures standardised control, improved searchability, and enhanced accessibility of digitised information. With different access levels, our platform empowers institutions and the public to access MRC publications easily”. CEO Anoulak said.

The MRC is committed to further modernising its document management system. This will be achieved through the integration of a digital object identifier (public category) to the DoMS documents, synchronisation of the final public DoMS documents with MRC Website Publications and MRC-IS services, and the execution of Digitization Phase II from November 2023. Phase II involves the digitalisation of approximately 40,000 pages spanning from 1995 to 2010 and 1985 to 1994, which includes MRC Secretariat Publications, MRC Cooperation, Country reports, etc. The final digitised documents are to be uploaded into the DoMS in March 2024. The remaining documents will be further worked on in 2024.



4th SUMMIT

VIENTIANE | LAO PDR
2-5 APRIL 2023



4th SUMMIT

Vientiane, Lao PDR, 2-5 April 2023
Innovation and Cooperation for a Water Secure and Sustainable Mekong





**4th MRC Summit Results in Vientiane Declaration
Affirming the Mekong Leaders' Commitment to a
Water-Secure and Sustainable Mekong**

DEVELOPMENT

Progress and Evidence of Change

The 4th MRC Summit and the MRC International Conference held in Vientiane from 2 to 5 April 2023 were successful events, resulting in a unified call to action for a water-secure and sustainable Mekong. Following the historic UN Water Conference in New York, the participants shared a sense of urgency to transform their inspirations into tangible outcomes and make a meaningful difference.

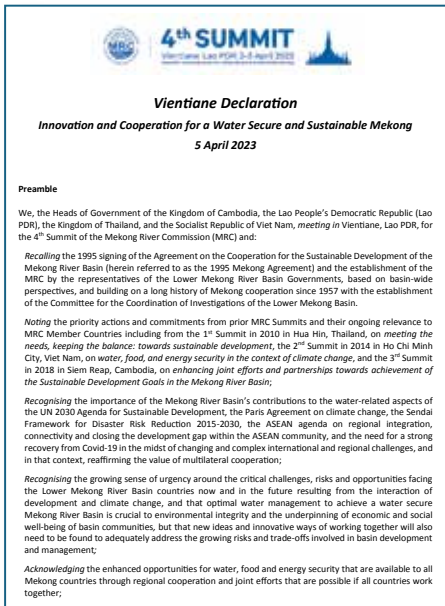
April 2023 marked remarkable achievements of the 4th MRC Summit and International Conference. The high-level events were successfully convened with an inaugural University Competition, the Exhibition of Water-related Technologies, and the 2nd State of the Mekong Address. The Vientiane Declaration was adopted as the key outcome of the 4th MRC Summit. It reiterated the highest political commitment from leaders of Member Countries' Governments on the cooperation for the sustainable Mekong River Basin, reaffirming the role of the MRC as the primary regional water cooperation and diplomacy platform as well as the knowledge hub.

The Vientiane Declaration is more than symbolic; it is significant for several reasons. It acknowledges the development opportunities from large water infrastructure projects but also emphasises the urgency of addressing the growing risks and trade-offs, especially adverse impacts, including transboundary ones. The Declaration calls for the MRC, its partners, and other regional stakeholders to intensify cooperation further and seek innovative solutions.



As the host country's leader, the Laotian Prime Minister, Sonexay Siphandone, formally introduced the Vientiane Declaration. "We call upon all Mekong basin states to join hands in managing the Mekong River Basin based on the principle of mutual respect for sovereignty and shared benefit with the slogan 'One Mekong One Spirit'," said Siphandone.

Among others, the Declaration calls for greater coordination over control and joint management of the water resources. It emphasises the necessity for developmental and managerial strategies to safeguard the sustainability of water resources. The Declaration highlights the importance of identifying alternative investment solutions and considering the linkages between different sectors.



As reiterated by the Heads of Government of the Member Countries in the Vientiane Declaration (2023): “We need both development and management options to ensure sustainability of the environment resource base, to identify alternative investment solutions and adequately consider the linkages between different sectors, to move beyond water-resources planning to encompass operational management, including through opportunities for transboundary coordination, especially in terms of timely and regular sharing of operational data from dams and other water infrastructure.” This would help riparian communities downstream prepare for such fluctuations.

The Declaration articulates the utmost political commitment from the leadership of each country towards the diverse responsibilities of the intergovernmental MRC. While entrusted to promote sustainable, responsible development of the Mekong, the MRC operates as a treaty-based platform for water diplomacy. Its objective is to balance the benefits of development with minimising any harm to the environment, as well as the fishing and farming families. This commitment underscores the importance of sustainable practices and the welfare of local communities in development initiatives.



Cambodian Prime Minister Hun Sen commented that “Achieving sustainable water, food, and energy security is our top priority agenda,” said Hun Sen. We also recognise that the Mekong and its resources ... are vital to the economic growth and well-being of countries and people in the basin ... We must [also] avoid overusing the basin’s resources, which could lead to their permanent loss.”



Following with Viet Nameese Prime Minister, Pham Minh Chinh also called for **“people-centred”** policies and actions by the MRC and Member Countries. **“A population-wide, comprehensive and basin-wide approach should be taken,”** said the Viet Nameese premier, **“to ensure sustainable livelihoods of the people.”**



Thailand's government was represented by Dr Surasri Kidtimonton, Secretary-General of the Office of the National Water Resources within the Office of the Prime Minister of Thailand. Describing the Mekong as the basin's **“main blood vessel,”** Kidtimonton said that as **“the remaining challenges get more complicated ... We all have missions to seek innovative development and management approaches, to extend benefits from development to communities thoroughly, and to identify strategy on water and conflict management mutually”** – including, new financing mechanisms.



On behalf of the MRC Development Partners (DPs), the Swiss Ambassador to Cambodia, Lao PDR, and Thailand, Pedro Zwahlen, acknowledged at the 4th MRC Summit that the MRC's achievements made it **“an inspiration for transboundary water cooperation in other parts of the world.”**

Notably, the largest International Conference in the history of the MRC was convened prior to the 4th MRC Summit. This event drew in over 700 participants from around the globe, providing a platform for the exchange of perspectives, best practices, knowledge, and networking opportunities with stakeholders in water resource management. The conference underscored the MRC's position as a global leader in water diplomacy and river-basin cooperation, particularly due to its comprehensive strategies, guidelines, and capacity to bring key stakeholders together for dialogue

on transboundary issues. The core messages from the conference were incorporated into the Vientiane Declaration, reflecting the collective insights and commitments of the global community.

In securing water resources and ensuring the sustainability of the Mekong, there is a rising call to intensify efforts to coordinate dam project operations. This aims to reinforce collaboration with our upstream neighbours, Myanmar and China.

***“This situation is projected to worsen if we continue business as usual; more needs to be done,”** said Bounkham Vorachit, the Laotian Minister of Natural Resources and Environment, who also represents her country as a Member of the MRC Council.*



In this connection, Vorachit urged the engagement of all stakeholders, including international organisations, the private sector, civil society, and academia. She emphasised the importance of paying particular attention to the livelihoods of the poorest and most vulnerable residents along the river while recognising the crucial role of each nation’s leadership.

On the basin-wide cooperation, Secretary-General Hao Zhao of the Beijing-based Lancang-Mekong Water Center, a partner of the MRC Secretariat, reassured the regional audience that the MRC and MLC water cooperation frameworks would collaborate rather than operate independently.

“The key is to work together, shoulder to shoulder, and to maintain good cooperation,”** Zhao said at the MRC International Conference in April 2023. **“We also need real scientific data to offset misperceptions.”



water management among experts and stakeholders from the Mekong and other regions worldwide. It also contributes to the leader's Summits by delivering key messages about best practices and innovative ideas for the sustainable management and development of the Mekong River Basin.

The MRC Secretariat will facilitate the implementation of the Vientiane Declaration through an action plan and report its progress to the JC and Council.





**Youth Engagement in Innovation Through the
MRC's First-ever River Monitoring Technology
Competition for the Mekong**



Progress and Evidence of Change

The MRC launched its first-ever River Monitoring Technology Competition at the 4th MRC Summit and the MRC International Conference in April 2023. This unique initiative challenges university students from the region to design cost-effective, sustainable technology for monitoring the Mekong's water level, rainfall, soil moisture and water quality. The primary aim of this competition was to foster the development of innovative, home-grown technology solutions for water resource management in the Mekong region. This initiative is a significant step towards reducing the region's dependence on technology from others and promoting self-sufficiency.

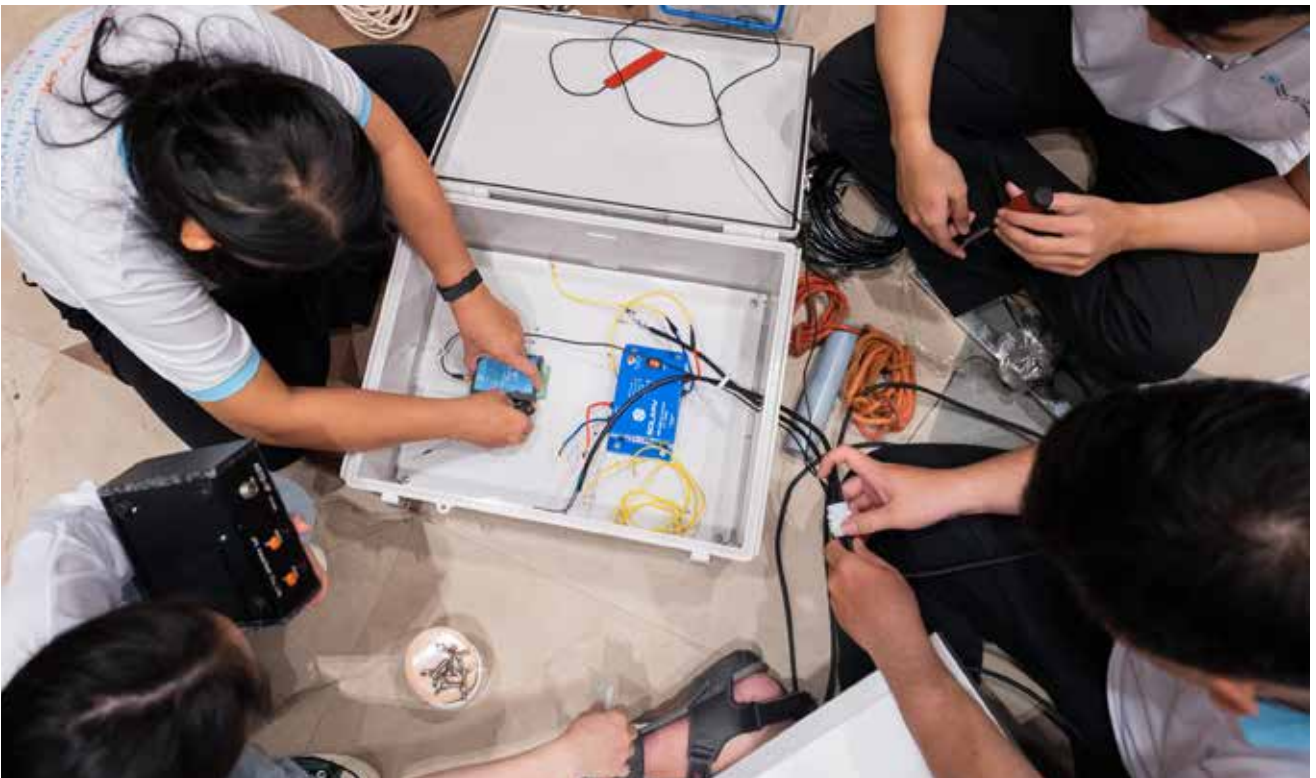
The inaugural MRC River Monitoring Technology Competition targeted innovative students from Cambodia, Lao PDR, Thailand, and Viet Nam. These students, from 15 pre-selected universities across the Lower Mekong River Basin – were tasked with helping to protect the river that serves as the lifeblood for millions of fishing and farming families.

The MRC already operates approximately 250 stations that monitor the environmental aspects of the Mekong River, including hydrology, rainfall, water quality, ecological health, fisheries, soil moisture, sediment, and drought, which affect Southeast Asia's largest river. Yet most of this technology depends on foreign equipment and technology that is often expensive and sometimes outdated.

The competition required participants to develop telemetry-sensor technology that could measure four distinct categories: water level, rainfall, soil moisture, and water quality. These sensors are typically installed in separate stations or outdoors on riverbanks, usually in agricultural areas.

Competitors were tasked with designing a station appropriate for its specific terrain, location, weather, and functions. The station needed to be solar-powered and capable of collecting and transmitting telemetry data from the station to a server in real-time. Entries were judged based on accuracy, durability, cost-effectiveness, and innovation.

The competition unveiled the untapped potential and innovative intelligence of the youth in the Mekong region. They utilised their knowledge to successfully develop technologies for monitoring water resources. These achievements highlight the significant role of youth in technological innovation and sustainable development in the Mekong region. The successful inventions included technologies for measuring and monitoring:



1. Water Level – 1st place went to the Cambodia Academy of Digital Technology, while Thuyloi University of Viet Nam earned Honourable Mention;
2. Water Quality - 1st Place went to the National Polytechnic Institute of Cambodia, with Honourable Mention to the National University of Lao PDR;

3. Rainfall - 1st Place went to the Institute of Technology of Cambodia, with Honourable Mention to the Soutsaka Institute of Technology in Lao PDR;
4. Soil Moisture - 1st Place went to the National University of Lao PDR, with an Honourable Mention to the Can Tho University of Viet Nam.

The winners received an award of USD 5,000 as an incentive for the aspirations of the students and the universities. The winners were invited to present their projects and showcase the invented technology at the 4th MRC Summit – to the regional heads of state and other dignitaries in attendance.

At the competition, ten different sensors were developed and tested by students from a wide range of disciplines, including physics, mathematics, hydrology, chemistry, gaming, information technology, biology, environmental science, oceanography, and meteorology. This multidisciplinary approach enriched the competition and led to the creation of innovative and comprehensive solutions.

“They worked in multi-disciplinary teams and presented at the highest possible standards,”** said one of the three judges, Dr Wayne Robinson, Senior Research Fellow at Australia’s Charles Sturt University. Moreover: **“The presentations were delivered in their non-native language. The judges could not have been more impressed!”

The success of this competition highlights the importance of providing more opportunities for youth to demonstrate their capabilities and knowledge. Given the right opportunities, they can certainly harness their potential and make significant contributions to the region's development. This competition serves as a testament to the fact that the youth are not just the leaders of tomorrow but also the innovators of today. Their meaningful contributions are crucial for the sustainable development of the Mekong region.

In addition, the MRC values youth’s engagement and supports the Young Riparian Professionals through the Junior Riparian Programme. Engaging youth from the Mekong riparian companies in innovative solutions ensures the future generation has the capacity to address the challenges faced in the Mekong.

While the MRC values its international partners, the Chief of Strategy and Partnership of the MRC Secretariat, Mr Santi Baran, says homegrown solutions should deliver cheaper costs, develop local expertise, and offer other benefits – like nurturing the notion that Mekong citizens can solve Mekong problems via technological innovation.

“We hope to inspire our Mekong youth to achieve their true potential – and provide creative responses that solve many of our vexing challenges,” says Baran. “This is the time for you, and for us, to prove that we can develop technology often made far away. You’ll be surprised at how much you can do: for yourself, for your university, for your society, and for the one and only Mekong River.”



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*One Cambodian student from a winning team described it as an eye-opening experience. **“After joining this competition, we realised that no one else can help us if we’re not helping ourselves,”** said Solita Pon from the Cambodian Academy of Digital Technology. **“This competition is a great opportunity for Mekong youths to step up and take on challenges facing the Mekong River. It allows us to express our innovative ideas as well as our feelings—that we not only care about our River but also care about our world.”***  
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The MRC Secretariat will explore the opportunities to collaborate with the winning teams from the MRC River Monitoring Technology Competition. The aim is to test their technologies and promote these locally developed models. The MRC, in cooperation with the ASEAN, will also open another call for the ASEAN-MRC Technology Competition in 2024. This initiative not only validates the innovative solutions created by the youth but also encourages the adoption of home-grown technologies for sustainable water resource management in the Mekong region. It is a testament to the MRC’s commitment to fostering local talent and innovation.



THIRTIETH MEETING

SESSION 1: MEETING

SESSION 2: JOINT MEETING

DEVELOPMENT PART

24 November 2023



MEETING OF THE MRC COUNCIL AND THE MRC DELEGATIONS TOGETHER WITH THE TWENTY-EIGHTTH GENERAL CONSULTATIVE GROUP

2023, Siem Reap, Cambodia



**Cooperation and Partnerships in the Mekong
Strengthened Through Innovative, Honest
Brokering Capacity, Modern Technology and
State-Of-The-Art Knowledge**

Progress and Evidence of Change

The Mekong River, globally recognised as one of the world's greatest rivers for its scale, population density and biodiversity, is strategically situated in Southeast Asia. This dynamic and geopolitically significant region has led the Mekong to become a subject of international interest and attention. Yet the region's largest waterway, first and foremost, winds its way through six riparian countries, originating from China, passing through Myanmar and Lao PDR to Thailand, and flowing into Cambodia and Viet Nam. The sustainability and prosperity of the Mekong River Basin depend on broad cooperation among the riparian countries and the engagement of the regional and international partners in tackling regional and transboundary challenges. With continued cooperation among the riparian countries with Dialogue Partners and other stakeholders, the year 2023 marked a significant milestone for the MRC, with increased funding support and partner engagement, contributing to the implementation of the Basin Development Strategy 2021-2030.

The Mekong River Commission has achieved significant accomplishments in recent years by strengthening cooperation and partnerships with both the Mekong and international partners. These efforts have led to trust-building, knowledge exchange, and the development of innovative tools to inform decision-making for a sustainable Mekong.

In 2023, the MRC continued its efforts to maintain strong relationships with existing partners and reach out to new ones. Specifically, partnership agreements with the existing partners, including ASEAN, MLC Water Centre, United Nations Office for South-South Cooperation (UNOSSC), Korea Water Resources Corporation (K-water), Korea Development Institute (KDI), and Mississippi River Commission (MiRC), have been effectively implemented and enhanced, with close collaboration on ongoing projects, events, and visits benefiting the Mekong countries. On the other hand, broadening partnerships has been explored through Memorandums of Understanding (MOU) with new partners, which were recently concluded with the Asian Institute of Technology (AIT), Stockholm Environment Institute (SEI), and the Republic of Indonesia, paving the way for new joint activities and exchanges.

Several new financing agreements were secured in 2023. The United Kingdom has agreed to support the MRC Mobile App, the Kingdom of Morocco contributed to establishing the MRC Educational Visitor Center, and Canada has pledged to contribute to the Basket Fund. Part of these efforts would contribute greatly to reinforcing the MRC's prominent role as a regional hub for state-of-the-art knowledge, showcasing the MRC's world-class technological application, and emphasising the MRC's water diplomacy role for the Mekong River Basin.

In addition, Germany pledged EUR 15 million to fund the trial implementation of the Ecosystem Window of the eagerly anticipated Mekong Fund. This will benefit those residents who are adversely impacted, whether directly or indirectly, by climate change and the development of the Mekong River. The MRC, in partnership with the International Union for Conservation of Nature (IUCN), also successfully secured a \$12 million Global Environment Facility grant to enhance transboundary fisheries management in the lower Mekong Basin.

Engagement with Dialogue Partners, Myanmar and China, and the MLC Joint Working Group on Water Resources Cooperation has continued to gain momentum in 2023, with several exchanges, engagements, and breakthroughs at both technical and political levels. A significant milestone for MLC-MRC cooperation was achieved during the 3rd Lancang-Mekong Water Resources Cooperation Forum, where an agreement was reached on the recommendations from Phase I of the Joint Study and a pact to establish a Joint Expert Group to oversee further joint studies and launch the Joint Lancang-Mekong Survey.

These developments symbolise the joint efforts of the MRC, a wide range of partners, and stakeholders to contribute to the betterment of the Mekong River Basin. This is achieved through the sharing of information, exchange of views, feedback on inputs to the development and implementation of MRC's products, and recommendations for activities and works.

*DPs acknowledged and congratulated the MRC at the 30th MRC Council Meeting in November 2023 on its work to promote cooperation using the principles of integrated water resources management and a whole-of-Basin approach. **“We are encouraged at the promise of greater data sharing Basin-wide. Increasing data sharing and transparency is necessary to effectively address challenges and will help build trust and strengthen coordination among MRC Member Countries, MRC Dialogue Partners, and stakeholders from the private sector, civil society, academia, and local communities. Continually strengthening trust among these groups is crucial to advancing regional collaboration towards adaptation and resilience”**, stated in the DPs' Joint Statement.*

As the MRC evolves into a strong regional player; it must be innovative, equipped with honest brokering capacity, modern technology, and expert knowledge, and provide timely services to the countries and the wider Mekong community.

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*The MRC Secretariat CEO, Dr Anoulak Kittikhoun, reiterated the importance of cooperation: “**The Mekong River, which belongs to the Mekong countries and their people, is important to the whole world. Therefore, it is our joint responsibility to foster its sustainable development and ensure its preservation through cooperation.**”*  
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Moving forward, the MRC will continue to closely monitor the efficient implementation of the existing partnership agreements and explore collaborations with new potential partners to address gaps in areas of support. This forward-looking approach highlights the ongoing benefits of cooperation in achieving sustainable development goals.





**Focused Work Continues on Mainstreaming
Equity for Gender and Vulnerable Groups
Within the Mekong Basin**

Progress and Evidence of Change

In recent years, gender and vulnerability mainstreaming has become a greater priority for the MRC. This initiative aligns with a global priority – especially Sustainable Development Goal 5, which underscores the importance of gender equality. This commitment demonstrates the MRC's dedication to contributing to the desire for greater fairness and equity.

A milestone for the MRC in 2023 was the implementation of the five-year Gender Action Plan (GAP). The GAP, a crucial component of the broader MRC Strategic Plan 2021–2025, aims to integrate gender and vulnerability considerations into its five strategic priorities. The GAP was implemented through the development of national gender action plans, expediting its incorporation into and implementation of the MRC *Handbook on Mainstreaming Gender*, published in January 2023.

To address the gender and vulnerability challenge, the MRC has prioritised addressing issues by enhancing data collection efforts to measure gender disparity accurately. This approach is critical for understanding and mitigating gender inequity and its impacts. This has been completed through the Social Impact Monitoring and Vulnerability Assessment (SIMVA) and the Data Acquisition and Generation Action Plan (DAGAP) initiative. Under DAGAP, the MRC and their relevant line agencies facilitate the data collection, processing and transmission of data requirements specified for the social and economic dimensions of the MRB-IF.

This data was used to prepare the SoBR 2023 and the LMB Mekong Atlas/Maps and will be used for other regional studies, assessments, and investigations. The Socio-Economic Data, including additional gender and vulnerability, has been integrated into the MRC Secretariat's updated Socio-Economic Database. It is accessible to the public following the MRC Procedures for Data and Information Exchange and Sharing (PDIES).

The 2023 SoBR indicates an improvement in gender equality across countries in the MRB. This progress is reflected in the increased employment share in water-related sectors and the Gender Parity Index (GPI) for primary and secondary education enrolment. However, some countries have experienced a slowdown or decline in progress concerning gender equality indicators related to employment and education. A persistent challenge is the lack of gender-disaggregated data for a wider range of indicators, which is essential for a comprehensive assessment.

Mrs Nguyen Thi Thu Linh, the 2023 Chairperson of the MRC Joint Committee and also the Director General of the Viet Nam National Mekong Committee, stated, “The 2023 SoBR signifies a substantial advancement over the SoBR 2018, primarily due to its available socio-economic data, with particular emphasis on gender and vulnerability metrics. This enhancement strengthens the credibility of the SoBR findings and provides a larger dataset for the Mekong region. Crucially, it demonstrates the MRC’s continued commitment to addressing the challenges and efforts associated with the limitation of gender-specific data.”

On a broader scale, the MRC is focusing on including gender and vulnerable people through consultations for the Joint Action Plans for mainstream hydropower developments. It has also addressed this issue in the MRC’s TbEIA Guideline. Interestingly, in 2023, the Nile River Basin Committee engaged with the MRC to learn from the MRC’s work to mainstream gender and vulnerability.

“If we’re truly serious about gender equity, it cannot only be the responsibility of women who speak up for their rights. Men should champion this issue, too,” says Mr Hak Socheat, Deputy Secretary General of the Cambodia National Mekong Committee. “Moreover, we should publicly track our progress to show our societies that we mean what we say and are taking meaningful action.”

On behalf of the MRC Development Partners (DPs) – Swiss Ambassador to Cambodia, Lao PDR, and Thailand Pedro Zwahlen – encouraged Member Countries at the 4th MRC Summit to promote “gender equality, social inclusion and protection of the most vulnerable groups,” as well as proactively explore the full range of development options.

The Lower Mekong River Basin (LMB) is experiencing increased flood and drought extremes. The most vulnerable are the impoverished and women who rely on Mekong water resources. They are disproportionately impacted by inequity, development, and information access.

Traditional gender roles persist in many Mekong areas, leading to unequal employment and pay opportunities. Women's contributions to water resource development are significant but often overlooked, and their participation in decision-making is limited. Female-led households, typically single-parent, face heightened vulnerability legally, socially, and economically.

Smaller ethnic groups, often living in remote areas, are more vulnerable to changes in access to natural resources on which their livelihoods depend. Access and ownership of resources, political influence, access to public services, and cultural barriers to meaningful economic participation all contribute to the relative vulnerability of different ethnic groups.

This inequity is particularly important in light of future forecasts of increasing temperatures, rising sea levels and more severe droughts – as predicted by the MRC's various studies and the UN's 2021 assessment by the Intergovernmental Panel on Climate Change (IPCC). The challenge remains to plan for such scenarios and bolster societal resilience without clearly understanding the impact on riparian communities and those most affected.

The MRC first began collecting socio-economic data in 2009. In 2011, it sharpened SIMVA into a tool to analyse social vulnerability through the prism of water resources. It was then decided to concentrate on critical areas along the basin, the 15-kilometre corridors, far from roads but along the river. In 2021, the MRC reviewed its data-collection system to understand gender-specific climate change and development impacts better.

The MRC identified significant data and knowledge gaps, particularly in social and economic spheres. To better understand trends in conditions across the LMB, in accordance with the MRC Indicator Framework (MRB-IF), it is important to recognise the inter-dependency between socio-economic dimensions, including gender and vulnerability, and water-related factors such as environment, hydrology, navigation, agriculture and dam safety.

In this regard, the MRC is committed to supporting MCs in filling the data gaps and mitigating the socio-economic and gender-related impacts of water-related development. This includes enhanced socio-economic data collection – including gender-disaggregated data at national and provincial scales.

With more accurate socio-economic data, policymakers in the LMB can better respond to the community's needs. For example, a typical Mekong farming family is vulnerable to natural disasters or upstream hydropower operations– like losing animals during floods. Losses could be calculated, prevented, or managed better with more precise socio-economic data, combined with GPS monitoring and hydrological data on water-level fluctuation. This information should assist the MRC in developing better policies to mitigate the impact, such as working with a hydropower developer to protect that community from floods.

The MRC's ongoing work to improve gender and vulnerability will inform future SoBRs and the next MRC Strategic Plan. Further detailed national and sub-national data disaggregated by gender and other vulnerability dimensions will be necessary to update the MRB-IF.





Efforts Ramped up to Engage with Stakeholders on Critical Mekong Issues



Progress and Evidence of Change

The MRC Regional Stakeholder Forum (RSF) institutionalises and regularly conducts information sharing and consultation, sets an example for transparency, and builds trust among partners and stakeholders. The recent 2023 forum convened nearly 200 participants, emphasising the importance of data sharing and trust-building.

The 13th Regional Stakeholder Forum (RSF) held on 5 October 2023 in Luang Prabang, Lao PDR, served as a collaborative platform for multi-stakeholders to discuss water-resource developments along the Mekong River, Southeast Asia's largest river for millions of lives. The forum centred around critical topics, including the 1st Phase of the Joint Study between the MRC and the Mekong-Lancang Water Resource Cooperation (MLC), the SoBR 2023, mainstream development projects, and Proactive Regional Planning (PRP) initiatives, all under the theme "Data Sharing for Transparency and Trust".

Almost 200 attendees participated, comprising government officials from National Mekong Committee Secretariats, line/ implementing agencies related to energy, environment, fisheries, irrigation, and other water-related developments; the private sector, including hydropower dam developers and others engaged in management, development or investing in dam projects along the Mekong mainstream; MRC Dialogue Partners, MRC Development Partners; and representatives of Civil Society Organisations (CSOs), riverine communities and research institutes.

The forum underscored the importance of sharing data and relevant information to foster trust and enhance transparency, particularly in relation to existing water infrastructure along with Southeast Asia's waterway.



Mr Chanthanet Boualapha, the Laotian Vice Minister of Natural Resources and Environment, stated at the 13th RSF and praised several hydropower projects for openly sharing data on operations. He urged several other projects to follow suit so **“their development can be responsible and address the concerns of our neighbouring countries and communities, whose livelihoods are tied to the river.”**

Beyond the call for hydropower projects to share more data and information, the “Joint Study” between the MRC and MLC exploring how climate change and development impact Mekong’s water flow, which has reached historic lows in recent years, was a breakthrough success of cooperation between the MRC and its Dialogue Partners, China, and Myanmar. The study’s initial findings prompted thoughtful discussions and constructive feedback during public forums, where stakeholders actively engaged and provided recommendations.

One pivotal outcome of this stakeholder engagement is the draft “State of the Basin Report 2023,” a comprehensive assessment of the Mekong River Basin across five priority areas: environmental, social, economic, climate change, and cooperation.

This serves as an action blueprint, identifying the region's pressing challenges. To address these challenges effectively, the MRC, state actors, the private sector, and other stakeholders must share data in a timely and accurate manner as an essential step in collective action.

While the SoBR was still under development, the forum facilitated discussions on key recommendations. Notably, it was suggested that climate risk assessments, informed decision-making, and prioritised adaptation measures were essential in the face of a changing climate. Detailed mitigation strategies related to environmental impact should also be emphasised. Furthermore, engaging riverine communities and CSOs would ensure that those directly affected by water infrastructure development actively participate in planning and decision-making processes.

The stakeholders highlighted the need for a more inclusive, basin-wide approach to water infrastructure data sharing, coordination, and notification. For instance, insights from the Xayaburi hydropower project revealed that most monitored fish could pass the dam, and no significant change in sediment was observed before or after project construction. Lessons learned should be publicly available to enhance transparency and understanding, especially in local languages.





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*Siriphone Souphanthong, vice-governor of Luang Prabang, the host city of the 13<sup>th</sup> RSF, emphasised the region’s commitment to Mekong water security and its alignment with sustainable and green growth aspirations. **“Luang Prabang is prepared to share all hydropower-related information in our area,”** she added.*

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Recognising the interests involved in the Basin and the importance of a shared and informed understanding of different stakeholders’ perspectives, the MRC has been implementing various activities to strengthen relationships with a wide range of actors outside the Member Countries’ governments, including in the private sector, civil society, academia, and other partners working in the Mekong region.






Kol Vathana of the Cambodia National Mekong Committee (CNMC) reiterated that the forum’s primary objective was to foster knowledge sharing and collate feedback on draft studies and development plans for the Mekong Basin. **“The work in the Mekong isn’t limited to the four Member Countries. The river basin benefits multiple regional nations, necessitating inclusive stakeholder involvement,”** Vathana stated.

From 2016 to 2020, the MRC strengthened its engagement with regional stakeholders through a series of RSFs. These forums were instrumental in developing knowledge products and facilitating consultation on proposed projects, guidelines, and strategies.

The RSFs form a multi-stakeholder platform that shares and gains inputs and experience on diversified views on topics and works of public interest. Diversity of opinions enriches the understanding and informs measures to cater for the needs of the Mekong governments and people. While the MRC is exploring ways to enhance this platform, key points, comments, and recommendations shared during the RSFs are recorded and incorporated into the decision-making process. The next Regional Stakeholder Forum (RSF) is planned for the middle of 2024.

Output Indicator Status

Status	Output Indicator	
 Partially Achieved	5.1.1	The degree to which PNPCA and the JAP of mainstream projects are implemented.
	Target	All PNPCA and JAP of mainstream projects are effectively implemented.
Report on Progress	<ul style="list-style-type: none"> PNPCA, and in particular the PC processes were implemented. The JAPs have been implemented for LPHPP, PBHPP, and PLHPP, following the signature of the Concession Agreements and the Power Purchase Agreement. In 2023, a report on JAP implementation for Luang Prabang, Pak Beng, and Pak Lay HPPs was informed at the Joint Committee Meeting. A regional workshop and site visit was done for Luang Prabang. Regional workshops and site visits were conducted. Another regional workshop for PBHPP and PLHPP will be conducted on 2-3 April 24. The SNHPP PC process was delayed. The JAP for SNHPP was not yet approved. 	

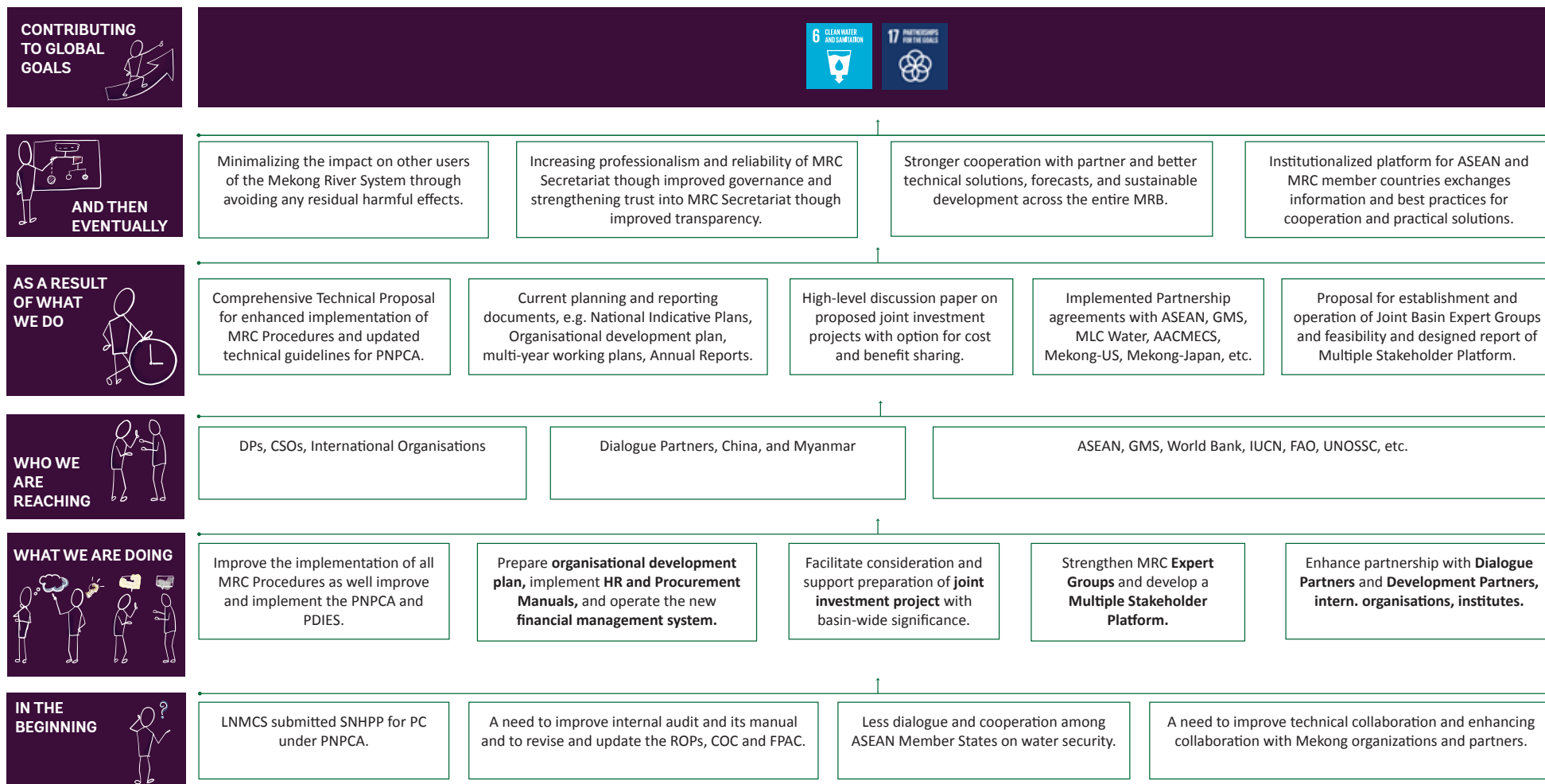
Status	Output Indicator	
 Partially Achieved	5.1.2	The degree to which the MRC Strategic Plan is efficiently implemented with strengthened MRC organisational capacity and national implementation of regional planning and management processes.
	Target	75% of MRC SP key deliverables completed.
<ul style="list-style-type: none"> The implementation of SP 2021–2025 is progressing and on track. The disbursement rate as of 2023 is 91% for the amount of USD 15,518,666 (USD 11,113,843 of the basket fund and USD 4,404,823 from the earmarked fund) of the total updated budget of USD 17,131,536 for MWP 2023. 		
 Partially Achieved	5.2.1	The extent to which there is a common understanding of the institutional options for managing the entire Mekong River Basin.
	Target	Basin countries have similar views regarding institutional basin management options, including the role of the MRC and MLC Water.
<ul style="list-style-type: none"> Member Countries have agreed that the MRC's institutional options will focus on preparing it for self-financing in 2030. This has been integrated into the Mid-Term Review and ODP TOR, approved by the JC in November 2023. The MRC is recruiting consultants to conduct the Mid-Term Review in early 2024. 		
 Partially Achieved	5.2.2	The extent to which significant joint infrastructure and national projects of basin-wide significance and associated measures are prepared.
	Target	Preparation of 1 joint investment project and 2 national projects of basin-wide significance.
<ul style="list-style-type: none"> A high-level discussion paper on proposed joint investment projects and national projects of basin-wide significance with options for cost and benefit sharing based on PRP results is targeted to be achieved by 2024, as defined in the approved BDS 2021-2030 and MRC SP 2021-2025. Following the acceptance of the MRC Joint Committee for the voluntary application of the TbEIA Guidelines by member countries, Lao PDR invited potentially affected countries Cambodia and Viet Nam to an early consultation meeting on the development of the Sekong HPP on 10 March 2023. 		
 Partially Achieved	5.2.3	The degree to which the new and existing MOUs are implemented.
	Target	All MOUs are implemented or amended.
<ul style="list-style-type: none"> MOUs with partners, such as K-water, KDI, MiRC, ASEAN, and others, are being implemented in 2023 through ongoing joint activities and exchanges. New MOUs with AIT, SEI, and Indonesia have been agreed. 		
 Partially Achieved	5.2.4	The status of the establishment and operations of the proposed joint basin expert groups.
	Target	One Joint Basin Expert Group established and operational.
<ul style="list-style-type: none"> It was trialled for implementation during the joint study with China and was successful. The establishment of the Joint Basin Expert Group is part of the ODP and MTR. 		

Status	Output Indicator
<p>● Partially Achieved</p>	<p>5.2.5 The degree to which key concerns of basin communities are being heard and addressed through a basin-wide stakeholder platform, operating with consistent recording, reporting, and impact-tracking procedures.</p>
	<p>Target All key MRC SP deliverables take into account stakeholder's concerns and inputs.</p>
<ul style="list-style-type: none"> ■ Technical review reports of Sanakham HPP, SHDS, JEM, and other products, such as the Joint Study's First Phase and the TRR of the Sanakham, have reflected the stakeholders' inputs. The 13th Regional Stakeholder Forum also presented an opportunity for stakeholders to voice their opinions on the activities of the MRC, including the Joint Study, Draft State of Basin Report 2023, and Proactive Regional Planning. 	



Pathway to Change for Cooperation Dimension

Strengthen cooperation among all basin countries and stakeholders



Contribution to SDGs for Cooperation Dimension

SDGs

Targets



6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.



17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the SDGs, including through North-South, South-South and triangular cooperation.

17.14 Enhance policy coherence for sustainable development.

Lastly, the MRC's fifth strategic priority is the **Cooperation Dimension**, which strives to "strengthen cooperation among all Basin countries and stakeholders." In 2023, the MRC made significant strides towards strengthening cooperation and water diplomacy among the four Member Countries, its dialogue partners, its Development Partners, and a wide range of stakeholders. This effort aligns with the MRC's mission and contributes towards *SDG 6: Clean Water and Sanitation* and the broader *SDG 17: Partnerships for the Goals*.

A lot was achieved in 2023 under this dimension. Lao PDR and Thailand made an agreement to harmonise navigation and pollution rules on a shared transboundary stretch of the Mekong. This agreement signifies a significant step towards regional cooperation and sustainable management of the river's resources. Another historic achievement was completing the first phase of the Joint Study on the Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin with the MLC and China. After many sessions - technical, modelling, exchange of visits, informal talks - we are on our way to a common understanding of the situation and, more importantly, the recommendations on adapting to the changing flow regime.

The 4th MRC Summit resulted in the Vientiane Declaration affirming the Mekong leader's commitment at the highest level to innovation and cooperation for a water-secure and sustainable Mekong. The 13th RSF provided a platform for multi-stakeholders for updates and discussions on water-resource developments, focusing

on transparency, trust, and proactive regional planning. The MRC continued its efforts to maintain relationships by building trust with existing partners, reaching out to new partners, and continuing the implementation of the 5-year Gender Action Plan (GAP).

Overall, the MRC's efforts in 2023 exemplify its commitment to the SDGs' overarching goal of ending poverty, protecting the planet, and ensuring peace and prosperity for all by 2030. By balancing social, economic, and environmental sustainability, the MRC works towards the principle of "leaving no one behind," demonstrating the integral role of cooperation and partnerships in achieving sustainable development in the Mekong River Basin.





FINANCIAL SUMMARY

**Financial Status from
January to December 2023**

Introduction

This financial report provides information on the MRC's financial activities from 1 January 2023 to 31 December 2023.

At the **beginning of 2023, the opening fund balance was recorded at USD 16,445,945**, which included USD 6,033,041 for the Basket Fund (BF); USD 5,256,633 for the Earmarked Fund (EF); USD 28,315 for the European Union (EU) Fund; and USD 5,127,956 for the Administrative Reserve Fund (ARF), a restricted fund.

Total **income received from January to December 2023 was USD 10,750,262**; as a result, after deduction of **USD 15,518,666 (expenditure)** and **USD 58,086** (returned the remaining fund balance to DPs under EF), the **total fund balance as of 31 December 2023 was USD 11,619,455, including the Administrative Reserve Fund (ARF)**.

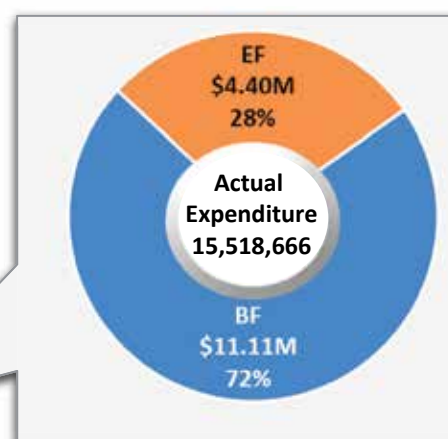
The total income of USD 10,750,262 in 2023 consisted of USD 9,168,677 for the Basket Fund (BF), USD 1,301,063 for the Earmarked Fund (EF), and USD 280,522 for the Administrative Reserve Fund (ARF).

Total expenditure from January to December 2023 was USD 15,518,666, including USD 11,113,843 from the BF and USD 4,404,823 from the EF. This resulted in an actual disbursement rate of 91% of the total updated budget of USD 17,131,536 for MWP 2023. See detailed information in **Table 7** and **Figure 7**.

Table 7. MRC Overall Funding Status

MRCS Overall Fund Status	Consolidated Funds	Fund Status by each Fund			
		BF	EF	EU	ARF
(+) Carried forward fund 2022	16,445,945	6,033,041	5,256,633	28,315	5,127,956
(+) Income (Fund transfer, Interest and others) 2023	10,750,262	9,168,677	1,301,063	-	280,522
Total funds as of 31 December 2023	27,196,207	15,201,718	6,557,696	28,315	5,408,478
(-) Actual Expenditures as of 31 December 2023	15,518,666	11,113,843	4,404,823	-	-
Fund balances (Total funds-Actual expenses)	11,677,541	4,087,875	2,152,873	28,315	5,408,478
(+/-) Internal transferred fund (Borrowed funds from BF)	-	-	-	-	-
(+/-) Return remaining fund balances to DPs under EF	(58,086)	-	(58,086)	-	-
Fund balances by the end of the year	11,619,455	4,087,875	2,094,787	28,315	5,408,478

Opening Fund Balance	USD 16,445,945
Fund Received in 2023	USD 10,750,262
Total Fund Balances	* USD 27,196,207
* Including ARF of USD 5, 408,478	
Revised MWP 2023 budget	USD 17,131,536 ¹
Expenditure in 2023	USD 15,518,666
Overall Disbursement Rate	91%

**Figure 7. Overall MRC Financial status from Jan to Dec 2023**

Total Income from January to December 2023

The MRC Secretariat receives incomes from three primary sources: (i) contributions from the Member Countries, (ii) contributions from Development Partners, and (iii) other incomes, including interest revenue, management, and admin fee (MAF) charged to earmarked contributions and sales of publication.

From January to December 2023, the MRC received an overall income of **USD 10,750,262**, which was 99% of the projected income (USD 10,904,028) in 2023.

Break-down of incomes by funds

Incomes for the Basket Fund (BF): The MRC received USD 9,168,677, or 104 % of the BF income projection (USD 8,784,8590) in 2023. Total income of BF included USD 4,857,496 from the MCs, USD 3,903,163 from DPs, and USD 408,018 from Management and Administration Fee (MAF) and other sources of income.

Incomes for the Earmarked Fund (EF): The MRC received USD 1,301,063, or 74 % of the projected EF incomes (USD 1,763,295) in 2023.

Incomes for the Administration Reserve Fund (ARF): The ARF incomes of USD 280,522 came from two sources: (i) USD 150,232 from the 3% of MCs contribution in 2023, and (ii) USD 130,290 from the accumulated banking interests of fixed-term deposits and the sale of MRC publications under ARF.

Total Expenditures from January to December 2023

The **total expenditure** from January to December 2023 was recorded at USD 15,518,666, accounting for 91% of the actual disbursement rate of the updated budget (USD 17,131,536). This expenditure is based on cash accounting, excluding outstanding obligations and cash advances.

In comparison to the expenditures of 2022, the overall MRC expenditures in 2023 saw a surge of 29%, marking a more substantial increase than the previous year. The increase was primarily due to the increased frequency of national and regional meetings and workshops, the 4th MRC Summit and associated events, the procurement of IT equipment for and construction of 11 new hydrometeorological stations under CRMN, and acquisition of new Discharge and Sediment Monitoring Measurement (DSMP) equipment. More detail is elaborated in the Break-Down Expenditures by Categories.

Break-Down Expenditures by Funds

Expenditures for the Basket Fund: In 2023, the MRC expended USD 11,113,843, which constituted 90% of the BF, amounting to USD 12,401,497 (as detailed in **Table 8**). Notably, the BF expenditures in 2023 indicated a 28% increase compared to those in 2022 (**Table 9**) for the number of national and regional meetings and workshops, the 4th MRC Summit, and its associated events, including the International Conference, exhibition, and the University Competition.

Expenditures for the Earmarked Fund: In 2023, the EF expenditures amounted to USD 4,404,823, representing 93% of the total EF budget of USD 4,730,039, as illustrated in (**Table 8**). The EF expenditures in 2023 saw a substantial increase of 45% compared to those in 2022 (**Table 9**). This surge was primarily due to the construction of 11 new hydrometeorological stations and procurement of new IT equipment for the CRMN, and the acquisition of new DSMP equipment for MCs under the Japan EF. It is important to note that the Japan fund is set to close in mid-2024. These efforts were undertaken based on the agreed Project Implementation Plan.

Expenditures for the EU: The EU funding was completed and closed in 2022.

Table 8. The 2023 Expenditures by Funds and Disbursement Rates

Funds	MWP Budget 2023 (1)	Actual Expenditure (2)	Actual Disbursement (3)=(2)/(1)	Obligated contract (4)	Total (5)=(2)+(4)	Disbursement Commitment Rate (%) (6)=(5)/(1)
BF	12,401,497	11,113,843	90%	154,056	11,267,899	91%
EF	4,730,039	4,404,823	93%	121,897	4,526,720	96%
	17,131,536	15,518,666	91%	275,953	15,794,619	92%

Table 9. Comparison by Fund Types for the Expenditures in 2023 and 2022

Expenditure 2023 VS 2022 by Funds				
FUND	Actual Expenditure 2023 (i)	Actual Expenditure 2022 (ii)	Variance (2023 VS 2022) (iii)=(i)-(ii)	% ▲▼ (2023 VS 2022) (iv)=[(i)/(ii)-1]
Basket Fund (BF)	11,113,843	8,712,093	2,401,750	28% ▲
Earmarked Fund (EF)	4,404,823	3,045,880	1,358,943	45% ▲
European Commission Fund (EU)	-	279,274	(279,274)	(100%) ▼
Administration Reserve Fund (ARF)	-	578	(578)	(100%) ▼
	15,518,666	12,037,825	3,480,841	29% ▲

In 2023, the MRC obligated contracts valued at USD 275,953 (**Table 8**). Taking into account these obligated contracts, the overall disbursement commitment rates for 2023 were 92%, equivalent to USD 15,794,619, against the updated budget of USD 17,131,536, as shown in (**Table 8**).

Break-Down Expenditures by Outputs

In 2023, the MRC carried out various activities and tasks under the MRC SP, contributing to 23 BDS outputs, including fixed costs. Most of these outputs reported a higher expenditure rate, as shown in (**Table 10**).

However, Output 5.1.1, titled “Implementation of the MRC Procedures Enhanced,” was the only output with expenditures falling below 60% of its updated budget of USD 341,464. This discrepancy underscores the need for improved planning and execution in future endeavours.

Table 10. Actual Expenditures versus Budgets by Outputs

Items	Outputs	MWP Budget 2023 (1)	Actual Expenditure up-to-date by Funds		Total Expenditure (6)=(2)+(3)+(4)+(5)	Remaining Budget (7)=(1)-(6)	Expenditure/ Budget (%) (8)=(6)/(1)
			BF (2)	EF (3)			
1	5.2.4 Joint Basin Expert Groups	20,000	20,000	-	20,000	-	100%
2	4.1.3 Compatible Decision Support Systems in line with	1,261,666	1,071,901	189,196	1,261,097	569	100%
3	4.2.1 Coordinated water infrastructure operations for multiple	130,000	118,378	11,500	129,878	122	100%
4	2.1.4 Gender and vulnerability aspects of basin water, food	75,275	-	74,826	74,826	449	99%
5	1.1.1 Guidance for water flow and quality management	344,088	233,024	104,942	337,966	6,122	98%
6	5.1.2 Organisational development of the Mekong River	2,253,605	2,033,311	176,205	2,209,516	44,089	98%
7	2.1.3 Risks to capture fisheries productivity and diversity	100,168	-	97,490	97,490	2,678	97%
8	4.1.1 A core river monitoring network for the mainstream and	3,227,268	815,658	2,286,510	3,102,168	125,100	96%
9	3.2.1 Investment and associated measures in irrigated	278,019	19,462	246,340	265,802	12,217	96%
10	5.2.3 Mekong water-related cooperation mechanisms and	395,525	351,756	25,000	376,756	18,769	95%
11	4.1.4 Integrated basin-wide flood and drought forecasting and	700,384	110,334	552,451	662,785	37,599	95%
12	4.1.5 Joint State of Basin Report and Basin Development	214,200	201,345	-	201,345	12,855	94%
13	3.2.3 Investment and associated measures in basin navigation	68,920	-	63,861	63,861	5,059	93%
14	3.2.2 Sustainable hydropower development strategy and	32,000	29,021	-	29,021	2,979	91%
15	3.2.5 Investment and associated measures to adapt to	115,400	104,180	-	104,180	11,220	90%
16	1.1.2 Guidance and measures for impact mitigation of water	271,050	244,552	-	244,552	26,498	90%
17	5.2.5 Harmonised basin-wide stakeholder platform	430,371	243,947	134,789	378,736	51,635	88%
18	1.3.1 Limits of acceptable change for key river and connected	95,836	-	83,927	83,927	11,909	88%
19	4.1.2 Integrated data and information systems for more	257,153	184,753	32,929	217,682	39,471	85%
20	3.1.1 The Basin Development Plan and associated national	483,791	393,979	-	393,979	89,812	81%
21	4.2.2 Climate change adaptation, flood and drought	529,908	121,865	288,092	409,957	119,951	77%
22	5.1.1 Implementation of the MRC Procedures enhanced	341,464	178,792	-	178,792	162,672	52%
23	F.1 Fixed Cost	5,505,444	4,637,585	36,765	4,674,350	831,094	85%
		17,131,536	11,113,843	4,404,823	15,518,666	1,612,870	91%

Internal Controls and Auditing Activities

Over the years, the MRC Secretariat has consistently upheld its internal control mechanisms and adhered to its regulations and financing agreements with DPs. The notable achievements for the year 2023 are as follows:

- Successfully organised four Audit Committee (AC) meetings aimed at strengthening the MRC's operations and internal control mechanism.
- Completion of the MRC internal auditing and production of the PFAC mechanism, HR, Procurement, Risk, Information technology and Fixed Asset management reports for 2022-2023.
- The external audit report for 2023 is ongoing. The External Auditor completed the mission and is working on the analysis and reporting. These audit results will be published on the MRC website and shared with Development Partners in May 2024.
- Successfully organised four national training workshops on Procurement and Fixed Asset Management policies and guidelines for the four National Mekong Committees (NMCSs).
- Successfully organised four national training workshops on Fraud Prevention and Anti-Corruption (FPAC) for the four NMCSs.
- The Internal Audit Chapter (version 3) has been recently approved by the Audit Committee, emphasising our commitment to transparency and accountability. Additionally, the fourth version of the Audit Committee Charter will soon be presented to the Joint Committee for review and approval, highlighting our ongoing efforts to strengthen governance practices.



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