

Basin Action Plan

An Executive Synthesis to provide policy makers and the broader development community with a concise overview of the Basin Action Plan, comprising the Regional Action Plan and four National Indicative Plans



Mekong River Commission

Basin Action Plan

The MRC Basin Action Plan comprises six volumes as listed below.

Title	Prepared by
MRC Basin Action Plan – <i>Executive Synthesis</i>	MRC Basin Development Plan Programme
MRC Regional Action Plan	MRC Basin Development Plan Programme (<i>with all MRC Programmes</i>)
Cambodia – National Indicative Plan	Cambodia National Mekong Committee
Lao PDR – National Indicative Plan	Lao PDR National Mekong Committee
Thailand – National Indicative Plan	Thailand National Mekong Committee
Viet Nam – National Indicative Plan	Viet Nam National Mekong Committee

Executive summary

Purpose

In January 2011, the Mekong River Commission (MRC) Council of Ministers approved the IWRM-based Basin Development Strategy, which sets out the shared understandings of the opportunities and risks of the national plans for water resource development in the Lower Mekong Basin (LMB). The Strategy established a number of Strategic Priorities and related Strategic Actions to optimise development opportunities and minimise uncertainty and risks associated with them.

The Strategy called for a Basin Action Plan, comprising four National Indicative Plans and one Regional Action Plan, to set out how the Strategy should be implemented. These five plans have now been prepared.

The purpose of this Executive Synthesis (of the Basin Action Plan) is to provide policy makers and the broader development community with a concise overview of these plans. It highlights high-level actions and funding opportunities which are considered critical to their successful implementation.

Content

The Regional Action Plan and the four National Indicative Plans describe in total over 200 projects needed to implement the Basin Development Strategy. Most of these projects are enabling and non-structural projects. An overview of the scope of these projects is provided in the table at the end of this summary.

About half of the projects can be undertaken at the national level. Most of these will be implemented by national line agencies and river basin organisations. The other half of the projects needs to be implemented at the regional level with the cooperation of all MRC Member Countries. Most of these will be implemented by MRC Programmes and their national partners. In addition, eight bilateral projects have been put forward in the National Indicative Plans. At the end of 2012, half of the regional projects and a significant portion of the national projects had been taken up and are being implemented. The remaining projects face funding or capacity constraints.

This Executive Synthesis presents:

- ❑ **An overview of the four National Indicative Plans** which each sets out national perspectives on how each country intends to supplement its prevailing national processes to leverage the opportunities presented by the Basin Development Strategy, and realise the benefits of cooperation with the other MRC Member Countries in basin management and development (see Chapter3);
- ❑ **An overview of the Regional Action Plan** which demonstrates how the MRC Programmes are progressively aligning their activities in meeting the agreed milestones of the MRC Strategic Plan 2011-2015 (and hence with the requirements

of the Basin Development Strategy), and which highlights the potential for increased cooperation between regional and national level activities (see Chapter 3);

- ❑ **A summary of investment opportunities** at both national and regional levels to address funding gaps in the above plans through the **Associated Project Budget** and other mechanisms (see Chapter 4). The opportunities are listed in Appendix A and B; and
- ❑ **A plan to strengthen and streamline MRC strategic planning and monitoring and evaluation (M&E) processes** in readiness for the next planning cycle for 2016-20, recognising the complexity and limitations of the current strategic planning framework (see Chapter 5).

Outcomes

Implementation of the Basin Action Plan will bring widespread benefits to the MRC and its Member Countries (see Chapter 6). These will include:

- ❑ **Assurance that all Strategic Priorities for basin development and management are being addressed** in a comprehensive and integrated manner (see Appendix C);
- ❑ The **reduction of critical knowledge gaps** that constrain the development potential of the basin and the consequential economic, social, and environmental benefits that transboundary cooperation can bring to each country;
- ❑ **Increased harmonisation of national and regional planning** in a manner that better reflects national issues, concerns and priorities and more effectively supports the implementation of projects of basin-wide significance as well as cross-border ones involving two or more countries;
- ❑ Much **improved and simplified MRC strategic planning and M&E processes** that will not only better capture the gains to be derived from regional cooperation, but will also lead to greater efficiency, effectiveness and transparency of MRC operations; and
- ❑ **Support for ongoing decentralisation of MRC activities** and the move to core functions by providing a structured platform by which to determine which strategic actions for river basin management should be undertaken at regional and national levels.

Actions

The Basin Action Plan calls for cooperation from all parties concerned, including MRC's Development Partners, in order to realise the substantial gains above. Key actions in this regard have been identified (see Chapter 7) and are summarised below:

- ❑ **Securing supplementary funding** for unfunded projects in the National Indicative Plans and the Regional Action Plan, taking note of the listings provided in this report (Appendix A and B);
- ❑ **Taking up the proposed Council Study** in a manner complementary to the Basin Action Plan to address remaining priority knowledge not covered by the Basin Action Plan;

- ❑ **Establishment of a unified set of basin development and management indicators** to be reported upon in the State of Basin Report and to guide assessments underpinning update of the Basin Development Strategy;
- ❑ **Establishing a Task Force to guide the streamlining of MRC Strategic Planning for 2016-20**, including a dialogue with Development Partners to agree arrangements for future funding cycles, review and definition of the associated project budget concept, dialogue with countries to refresh guidance for updating the NIPs (including M&E) and advance preparation of templates for key planning documents; and
- ❑ **Elaboration of the processes for monitoring and evaluation** with templates for implementing the new M&E system and Terms of Reference for the external reviews.

Basin Action Plan

Summary of numbers of NIP projects and RAP components (MRC-SP milestones) addressing the Strategic Priorities of the Basin Development Strategy

		National Indicative Plans				Regional Action Plan															
		Cambodia	Lao PDR	Thailand	Viet Nam	ALL	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MWRMP	NAP	WMP	
Strategic Priorities for Basin Development																					
421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin		3					2									1	1			
422000	Expand and intensify irrigated agriculture for food security and poverty alleviation	9	5		2		3			1			1								
423000	Improve sustainability of hydropower development																				
	<i>(a) Move towards sustainable development of hydropower on tributaries</i>	5	6		3						1						6				
	<i>(b) Address the uncertainty and risk of possible mainstream dams</i>	1	4		4						1						3	1	1		
	<i>(c) Assess power options, including alternatives to mainstream hydropower</i>				1												1				
424000	Acquisition of essential knowledge to address uncertainties and minimise risk	2	5		6						2		1			1					
425000	Options for sharing the potential benefits and costs of development opportunities	1	1		2			1									1				
426000	Climate change adaptation	5	6		5				4		2										
427000	Integration of basin development planning considerations into national systems	1			1			3				1									
Strategic Priorities for Basin Management																					
431000	Establish basin visions and management strategies for water-related sectors	5	10		4						4	2	2							14	
432000	Strengthen national level water resources management processes	1	4		1		1							1		1		1			
433000	Strengthen basin management processes	2	9	3	17	1	1	4			4	1		1	1	4	1	2	3	1	
434000	Development of environmental and social objectives and baseline indicators							1													
435000	Implement a targeted IWRM capacity building programme	2	8		1									10					2		
440000	Studies and Guidelines	6	5		6			1	1		2	2					1	4			
Monitoring, Evaluation and Reporting																					
530000	Monitoring, evaluation and reporting		1				1	5				2									

Contents

Executive summary

Abbreviations and acronyms

1	Introduction	1
	1.1 <i>Objectives of the Basin Action Plan</i>	1
	1.2 <i>Scope of the Basin Action Plan</i>	1
	1.3 <i>Process for preparing the Basin Action Plan</i>	2
2	The MRC's strategy framework	3
	2.1 <i>The IWRM-based Basin Development Strategy</i>	3
	2.2 <i>The MRC Strategic Plan</i>	4
	2.3 <i>The role of the Basin Action Plan</i>	5
3	Implementation of the regional and national activities	7
	3.1 <i>Overview of the National Indicative Plans</i>	7
	3.2 <i>Summary of the Regional Action Plan</i>	13
	3.3 <i>Opportunities to leverage synergies between national and regional activities</i>	16
4	Funding opportunities and associated budgets	19
	4.1 <i>National activities</i>	19
	4.2 <i>Regional activities</i>	22
	4.3 <i>Associated project budgets</i>	23
5	Streamlining MRC planning and monitoring processes	26
	5.1 <i>The need for a streamlined approach</i>	26
	5.2 <i>An overview of the new streamlined approach</i>	28
	5.3 <i>Preparatory steps for introducing a streamlined approach</i>	31
	5.4 <i>Implications for funding cycles</i>	35
6	Expected outcomes of the Basin Action Plan	36
	6.1 <i>Implementation of the MRC's Basin Development Strategy</i>	36
	6.2 <i>Practical implementation of IWRM</i>	36
	6.3 <i>Reducing knowledge gaps</i>	37
	6.4 <i>Harmonisation of regional and national level planning</i>	37
	6.5 <i>Practical support to decentralisation and core function development</i>	38
	6.6 <i>Improved MRC Programme planning</i>	39
	6.7 <i>Opportunity to improve the MRC M&E system</i>	39
7	Implementation schedule	40

Appendices		44
Appendix A	Investment portfolio of unfunded NIP projects	46
Appendix B	Schedule of MRC Strategic Plan milestones (“RAP projects”) allocated to MRC Programmes	56
Appendix C	Strategic Priorities and Strategic Actions addressed under the Basin Action Plan at national and regional levels	64
Appendix D	Maps	68

Tables

Table 1	Summary of NIP project numbers and value	7
Table 2	Summary of NIP investment costs by category	19
Table 3	Summary of unfunded Cambodia NIP projects	20
Table 4	Summary of unfunded Lao PDR NIP projects	21
Table 5	Summary of unfunded Thailand NIP projects	21
Table 6	Summary of unfunded Viet Nam NIP projects	22

Figures

Figure 1	Results chain for the MRC Strategic Plan 2011-15	5
Figure 2	Emphasis on structural, non-structural and enabling projects	11
Figure 3	Breakdown of number of enabling projects in each country	11
Figure 4	Breakdown of NIP projects by category of implementation arrangement	12
Figure 5	Emphasis of NIP projects (in numbers) on addressing the Strategic Priorities of the Basin Development Strategy	13
Figure 6	Distribution of MRC Strategic Plan milestones amongst MRC Programmes	14
Figure 7	Number of NIP projects relevant to each MRC Programme	16
Figure 8	Breakdown of NIP projects in relation to basin-scale focus	17
Figure 9	Proposed concept for defining content of Associated Project Budget	25
Figure 10	Current MRC planning and monitoring framework	26
Figure 11	Proposed rationalisation of MRC planning and monitoring framework	27
Figure 12	Integration of national and regional activities	28
Figure 13	Proposed monitoring framework under future Strategic Plans	29
Figure 14	Timetable for streamlined MRC strategic planning process	31
Figure 15	Hierarchy of basin management indicators	32
Figure 16	Role of decentralisation guidance in determining the Basin Action Plan 2016-20	33
Figure 17	Harmonisation of regional and national planning	38
Figure 18	Implementation schedule for the Basin Action Plan	42

Abbreviations and acronyms

AIP	: Agriculture and Irrigation Programme (of the MRC)
BAP	: Basin Action Plan
BDP	: Basin Development Plan
BDP2	: BDP Programme, phase 2 (2006 –10)
BDS	: (IWRM-based) Basin Development Strategy
CCAI	: Climate Change and Adaptation Initiative (of the MRC)
CNMC	: Cambodia National Mekong Committee
DMP	: Drought Management Programme (of the MRC)
EP	: Environment Programme (of the MRC)
ES	: Executive Synthesis (of the Basin Action Plan)
FMMP	: Flood Mitigation and Management Programme (of the MRC)
FP	: Fisheries Programme (of the MRC)
HRS	: Human Resource Section (of the MRCS)
ICBP	: Integrated Capacity Building Programme (of the MRC)
ICCS	: International Cooperation and Communication Section (of the MRCS)
IKMP	: Information and Knowledge Management Programme (of the MRC)
IMS	: Implementation Monitoring System (for Actions required under the Basin Development Strategy)
IWRM	: Integrated Water Resources Management
ISH	: Initiative for Sustainable Hydropower (of the MRC)
JC	: Joint Committee (of the MRC)
LA	: Line Agency
LMB	: Lower Mekong Basin
LNMC	: Lao National Mekong Committee
M&E	: Monitoring and Evaluation
MDG	: Millennium Development Goals
MIWRMP	: Mekong Integrated Water Resources Management Project (of the MRC)
MRC	: Mekong River Commission
MRCS	: Mekong River Commission Secretariat
MRC-SP	: MRC Strategic Plan
NESDP	: National Economic and Social Development Plan (of Thailand)
NIP	: National Indicative Plan (C-NIP: Cambodia, L-NIP: Lao PDR, T-NIP: Thailand, V-NIP Viet Nam)
NIPIC	: National Indicative Plan Implementation Committee (of Lao PDR)
NMC	: National Mekong Committee
NMCS	: National Mekong Committee Secretariat
NP	: Navigation Programme (of the MRC)
NSDP	: National Strategic Development Plan (of Cambodia)
PIN	: Project Identification Note
PMS	: Performance Management System
PNPCA	: Procedures for Notification, Prior Consultation and Agreement
PMFM	: Procedures for Maintenance of Flow on the Mainstream
PWUM	: Procedures for Water Use Monitoring
RAP	: Regional Action Plan
RBC	: River Basin Committee
RBO	: River Basin Organization
SAWG	: Sub-area Working Group
SEDP	: Seventh Five-year Plan (2011-15) of Lao PDR
TCU	: Technical Coordination Unit (of the MRCS)
TNMC	: Thai National Mekong Committee
UMB	: Upper Mekong Basin
VNMC	: Viet Nam National Mekong Committee

1 Introduction

1.1 Objectives of the Basin Action Plan

The MRC Council adopted the **IWRM-based Basin Development Strategy (BDS)** in January 2011. This landmark document provides for the first time a shared understanding of the LMB countries of the opportunities and risks of further water resources development in the Mekong Basin. The Basin Development Strategy outlines the development opportunities (e.g. irrigated agriculture, hydropower, fisheries, navigation, tourism, watershed management, etc) and describes strategic priorities for basin development and basin management, specifically in order to move identified development opportunities to implementation.

The Basin Development Strategy also provides a roadmap setting out priority actions, timeframes and outcomes for its implementation. An early action in the roadmap is the preparation of a **Basin Action Plan** the objectives of which are to:

- ❑ Ensure that the agreed basin-wide strategic priorities are effectively addressed by a coordinated set of activities undertaken by the MRC Programmes and national counterpart agencies; and
- ❑ Identify where activities are presently unfunded and to promote these for support from MRC's Development Partners.

In addition, and drawing upon the experience gained during its preparation, the Basin Action Plan **sets out a process to strengthen and streamline the MRC's strategic planning processes** for the next MRC plan cycle 2016-20 (see box).

Benefits to MRC of streamlined planning

- ❑ Greater integration and efficiency of regional and national activities and more closely aligned to national issues and concerns;
- ❑ A strengthened capacity to address transboundary issues and development opportunities involving two countries or more;
- ❑ A simplified and more transparent M&E system leading to greater accountability of actions taken and their impacts on realising the development objectives for the LMB; and
- ❑ A structured approach to support the decentralisation and riparianisation of regional activities and the move towards establishment of core functions.

1.2 Scope of the Basin Action Plan

In accordance with the Basin Development Strategy, the Basin Action Plan comprises a **Regional Action Plan (RAP)**, for implementation by MRC Programmes, and four **National Indicative Plans (NIPs)** prepared by each country. **This Executive Synthesis** of the Basin Action Plan has been prepared to provide policy makers and the broader development community with a concise overview of these plans. The report also highlights high-level actions and funding opportunities which are considered critical to their successful implementation.

Preparation of the NIPs has been led by the National Mekong Committees (NMCs) in consultation with concerned line agencies and river basin organisations (RBOs) and committees (RBCs). The NIPs are intended to supplement prevailing national planning processes by providing incremental actions necessary to implement the Basin Development Strategy within each country. The NIPs will also inform future updates of the Basin Development Strategy, creating a “loop of ownership” between MRC and its Member Countries.

The RAP provides the necessary guidance to progressively align the existing and planned activities of the MRC programmes with the Strategic Priorities of the Basin Development Strategy to ensure a comprehensive response at the regional level to these priorities. The RAP also highlights the relevance of national activities in the NIPs to each MRC Programme to enable both MRC Programmes and countries to leverage the potential synergies that exist between planned regional and national activities. The RAP is being implemented principally by the MRC Programmes within the framework of the MRC Strategic Plan for 2011-2015.

In addition to presenting an overview of the RAP and the four NIPs, this Executive Synthesis report addresses the overarching challenges faced by MRC in ensuring effective implementation of all five plans in an integrated manner and in taking steps towards improving and harmonising the basin management planning and delivery processes in the next plan cycle (2016-2020).

1.3 Process for preparing the Basin Action Plan

Since the adoption of the Strategy, MRC's Basin Development Plan (BDP) Programme has been supporting the preparation of the Basin Action Plan, benefitting from guidance provided by the 33rd, 34th, 35th and 36th JC Meetings and the 18th Council Meeting.

Guidelines were developed by BDP for the coordinated preparation of the RAP and NIPs¹. A regional consultation workshop on 29 September 2011 with representatives of MRC Programmes, National Mekong Committees, line agencies and RBOs discussed and agreed on a common approach, principles, guidelines and outlines for the coordinated preparation of the RAP and the four NIPs.

Subsequent regional workshops involving key MRC and national stakeholders have been held in February and December 2012 to consider drafts of the RAP and NIPs and the emerging linkages between the RAP and the NIPs. Each National Mekong Committee has separately held various national consultations with line agencies and other important stakeholders during the preparation of each NIP. An outline of the Executive Synthesis was presented and discussed at the December 2012 regional consultation workshop, during which key issues to be addressed by the Basin Action Plan were considered and valuable feedback provided.

In addition, internal discussions have also taken place between MRC's BDP, Technical Coordination Unit (TCU) and International Coordination and Communication Section (ICCS) on developing a common approach to monitoring progress of implementing the RAP (through the milestones of the MRC Strategic Plan) and between BDP and TCU, and with the MRC Programmes on alignment of their annual work plans with MRC Strategic Plan and the Basin Development Strategy².

¹ Guidelines for Action Planning to implement the IWRM-based Basin Development Strategy, BDP, September 2011

² In doing so, all MRC Programmes have reviewed the milestones allocated to them under Annex B of the MRC Strategic Plan 2011-15 and updates of these are provided in the Regional Action Plan. These milestones correlate with the actions required to address the Strategic Priorities of the Basin Development Strategy (see Section 2.2) and achieving them thus leads to implementation of the Basin Development Strategy.

2 The MRC's strategy framework

The overall aims, objectives and operational rules of the MRC are defined by the 1995 Mekong Agreement, which are supplemented by MRC's five sets of Procedures and accompanying Technical Guidelines. Within this framework, the activities of the MRC are determined on a five-year cycle in accordance with two overarching strategies, being the IWRM-based Basin Development Strategy and the MRC Strategic Plan. This Chapter highlights the main features of these two strategies and, within this context, describes the role of the Basin Action Plan.

2.1 The IWRM-based Basin Development Strategy

The requirement for a Basin Development Plan is stipulated in the 1995 Mekong Agreement. Under MRC's Basin Development Plan Programme, the concept of a rolling plan has been developed to provide an integrated basin perspective through participatory planning amongst the four Member Countries. The rolling plan, which is to be updated every five years, currently comprises two main elements³:

- **Basin-wide Development Scenarios**, intended to provide the information that Governments and other stakeholders need to develop a common understanding of the most acceptable balance between resource development and resource protection within the LMB, and which underpins the formulation of the IWRM-based Basin Development Strategy; and
- **IWRM-based Basin Development Strategy**, which provides a shared vision and strategy of how the water and related resources in the LMB could be developed in a sustainable manner for economic growth and poverty reduction, and a coherent and consistent IWRM planning framework that brings basin perspectives into the national planning process, and vice versa.

The current Basin Development Strategy sets out a vision for guiding and developing the basin's water-related resources within acceptable bounds (as determined by compliance with the relevant MRC Procedures and an appreciation amongst stakeholders of potential transboundary impacts arising from the assessed scenarios). The Strategy was developed in parallel to the scenario assessment and draws heavily upon the findings in the assessment report⁴.

The Basin Development Strategy aims to contribute to a wider adaptive planning process that links regional and national planning for sustainable development and management of the LMB. In addition to defining the scope of **development opportunities** within the basin, the Basin Development Strategy sets out agreement between the four MRC Member Countries on:

³ A third element, the Project Portfolio, is being prepared by BDP and is expected to include NIP projects etc.

⁴ Assessment of Basin-wide Development Scenarios, final main report published by MRC in April 2011 and accompanied by five supporting volumes of technical annexes

- **Strategic Priorities** – key issues that the Basin development Strategy requires to be addressed, generally over the next 5 years, to promote effective and sustainable management and development of the basin - these are described in Sections 4.2-4.4 of the Basin Development Strategy. There are 7 priorities for basin development, 6 for basin management plus monitoring and evaluation requirements (see box); and
- **Strategic Actions** – actions identified from the relevant text in the Basin Development Strategy as being those necessary to undertake in order to address the issues raised as Strategic Priorities. Generally these actions are *non-structural* and *enabling* in nature. A total of 64 strategic actions have been identified.

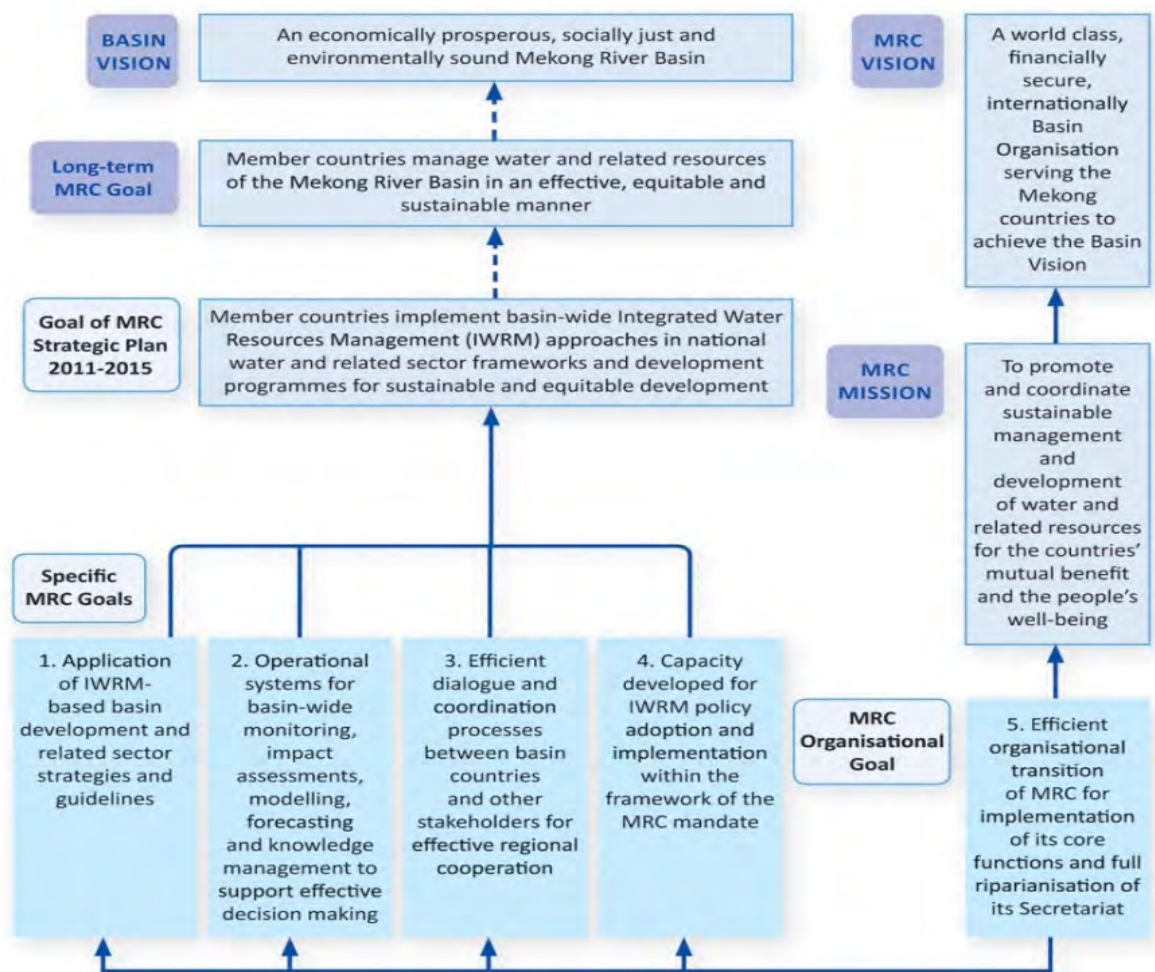
Main categories of Strategic Priorities		No. of identified strategic actions
510000	Preparation of Basin Action Plan	1
Strategic Priorities for Basin Development		
421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	4
422000	Expand and intensify irrigated agriculture for food security and poverty alleviation	5
423000	Improve sustainability of hydropower development	
423100	(a) Move towards sustainable development of hydropower on tributaries	5
423200	(b) Address the uncertainty and risk of possible mainstream dams	5
423300	(c) Assess power options, including alternatives to mainstream hydropower	1
424000	Acquisition of essential knowledge to address uncertainties and minimise risk	4
425000	Options for sharing the potential benefits and costs of development opportunities	1
426000	Climate change adaptation	3
427000	Integration of basin development planning considerations into national systems	3
Strategic Priorities for Basin Management		
431000	Establish basin visions and management strategies for water-related sectors	7
432000	Strengthen national level water resources management processes	3
433000	Strengthen basin management processes	8
434000	Development of environmental and social objectives and baseline indicators	1
435000	Implement a targeted IWRM capacity building programme	1
440000	Studies and Guidelines	9
Monitoring, Evaluation and Reporting		
530000	Monitoring, evaluation and reporting	3

2.2 The MRC Strategic Plan

Whilst the Basin Development Strategy primarily addresses the opportunities and issues related to basin development and management, the MRC Strategic Plan in principle sets out the manner by which the MRC as an institution will respond to these, taking into account the wishes of the Member Countries regarding the roles of the MRC Secretariat and MRC Programmes. Thus, the MRC Strategic Plan is focused on providing direction to the MRC Secretariat and MRC Programmes (and related projects) over a five year period.

The MRC Strategic Plan, which was prepared in parallel to the Basin Development Strategy, sets out four Specific Goals for basin development and management alongside one further MRC Organisational Goal (relating to efficient transition of the MRC organisation towards its core functions and full riparianisation of the Secretariat), see Figure 1.

Figure 1 Results chain for the MRC Strategic Plan 2011-15



The underlying outcomes and activities of the MRC Programmes associated with these four specific goals broadly match those required to address the Strategic Priorities within the Basin Development Strategy.

However, the greatest congruence of the two documents has been found to be between (i) 110 of the 129 milestones set for each MRC Programme in Appendix B of the MRC Strategic Plan and (ii) the Strategic Actions within the Basin Development Strategy (the remaining MRC Strategic Plan milestones relate to internal institutional reforms).

2.3 The role of the Basin Action Plan

In accordance with the Basin Development Strategy, the primary role of the Basin Action Plan is to ensure that the Strategic Priorities (and related Strategic Actions) are effectively addressed by the MRC Programmes and/or by activities taken up in each country. This role needs to be viewed within the context of the MRC's broader strategic aims of:

- ❑ Retaining focus on **MRC's vision** to develop an economically prosperous, socially just and environmentally sound Mekong River Basin and **MRC's mission** to promote and

coordinate sustainable management and development of the water and water-related resources of the Mekong Basin for the countries' mutual benefit and the people's well-being;

- ❑ Applying the principles of IWRM and **strengthening the linkages between regional and national activities** to ensure that the benefits of cooperation identified through basin-wide perspectives at regional level not only reflect national priorities but are being taken up at country level; and
- ❑ Reducing dependency upon third party funding through **progressive decentralisation of MRC's activities** to national organisations, so that by 2030 only those core functions which are collectively agreed are retained at regional level (and which are affordable to the countries).

The Basin Action Plan seeks to fulfil this role by providing a comprehensive set of projects at both regional and national level as set out in the RAP and four NIPs. These five documents, together with the key management actions that arise, are summarised for policy makers in the remainder of this document, which:

- ❑ Overviews the country perspectives and plans in response to the Basin Development Strategy as presented in their National Indicative Plans (Chapter 3);
- ❑ Summarises the guidance provided under the Regional Action Plan to MRC Programmes to align their activities with MRC's strategic priorities and to leverage the potential synergies with activities listed in the NIPs above (also Chapter 3);
- ❑ Identifies investment opportunities for Development Partners to support implementation of unfunded activities at regional and national level (Chapter 4);
- ❑ Sets out the manner by which the MRC strategic planning and monitoring processes may be strengthened and streamlined for the 2016-20 cycle (Chapter 5);
- ❑ Summarises the expected outcomes and added value to be gained from implementation of the Basin Action Plan to the benefit of all parties concerned (Chapter 6); and
- ❑ Provides an implementation schedule for key actions required at basin level (Chapter 7)

3 Implementation of the regional and national activities

The Basin Action Plan is to be implemented through the four National Indicative Plans and the Regional Action Plan. This Chapter summarises the main components of each of these and the principal projects (as summarised in Appendix C which lists how the Strategic Priorities and Strategic Actions of the Basin Development Strategy are being addressed under the Basin Action Plan). The overviews presented underscore the potential to leverage opportunities to coordinate activities at and between regional and national levels, which each MRC Programme is expected to take advantage of.

3.1 Overview of the National Indicative Plans

3.1.1 Objectives and purpose of the National Indicative Plans

The National Indicative Plans (NIPs) form an integral part of the Basin Action Plan. They have been prepared in each country under the coordination of the respective National Mekong Committee following guidelines prepared by BDP and endorsed by the Member Countries. NIP projects are generally described using Project Identification Notes, similar to those found in the RAP. Each NIP has been the subject of extensive consultation with line agencies, RBOs and other key stakeholders within the concerned country.

The NIPs seek to incorporate the Basin Development Strategy's basin perspectives into national planning, decision-making and governance processes, integrating to the extent possible with five-year socio-economic and sector planning and annual work planning of relevant national agencies. In doing so, each NIP seeks to capture the benefits envisaged under the 1995 Mekong Agreement that will flow from regional cooperation and collaborative effort by optimising national and transboundary development opportunities and minimising harmful impacts.

As illustrated in Table 1, the four NIPs together include 119 projects with an estimated total value of US\$920 million.

Numerically, 94% of NIP projects fall into the non-structural and enabling categories although, by value, structural projects represent 27% of the total cost. By nature, the incremental actions differ from country to country with different focus areas and priorities, reflecting the situation and concerns in each country. These perspectives may be summarised and compared as follows.

Table 1 Summary of NIP project numbers and value

All in US\$ millions	No. of projects	Total cost	Average cost
Cambodia	28	540.67	19.31
Lao PDR	43	369.15	8.58
Thailand	3	1.08	0.36
Viet Nam	45	9.49	0.21
All projects	119	920.40	7.73

3.1.2 *Cambodia*

The main development goal of the Cambodia NIP is the reduction of vulnerability of people and water related resource systems due to intensive natural and human-made changes in the Mekong Basin through proper coordination and integration of effort in promoting development opportunities and benefit and risk sharing.

Within its five programmatic themes, Cambodia has identified 28 projects worth \$540 million. Of these projects, some 82% by value are associated with ongoing and pipeline projects for agriculture and livelihood development and water resources management, climate change adaptation and disaster risk reduction.

Outcomes of the Cambodia NIP

- ❑ Irrigated agriculture for food security and poverty alleviation expanded and intensified
- ❑ Sustainable hydropower development and other water resources uses improved through promoting integrated uses of water and its related resources
- ❑ Uncertainty and risks of climate change and other development are addressed
- ❑ Essential knowledge, tools and guidelines are developed and used to address uncertainty and minimize risks of the identified development opportunities"
- ❑ Critical sub-basin management objectives and strategies established, and the national and basin water resources management processes, including targeted IWRM capacity building program strengthened.

The unfunded projects cover both enabling and non-structural activities such as capacity building, inter-ministerial and cross-sector coordination mechanisms, and studies and planning to address key knowledge gaps, protect natural resources, and improve water management. About 15% of the proposed projects in Tonle Sap, Sekong, Sesan and Srepok river basins and the Mekong Delta in Cambodia are of bilateral and/or basin-wide significance. Studies and the preparation of guidelines will be mainly implemented through government agencies through inter-ministerial partnership arrangements at both national and sub-national levels.

3.1.3 *Lao PDR*

The ultimate goal of the Government of Lao PDR is to emerge from Least Developed Country status by the year 2020. Towards this goal, the 7th Five-year Plan (SEDP 2011-2015) sets out a roadmap to maintain economic growth, achieve the Millennium Development Goals (MDGs), and ensure sustainable development, political stability, equity and social order.

In their NIP, Lao PDR has identified 43 projects with a total cost of US\$369 million. Some 39% by value are funded and ongoing. A large proportion of these projects in financial terms is associated with non-structural measures to strengthen forestry and natural resource management, and upgrade the hydromet monitoring systems. Enabling projects represent 10% of the total value and are primarily directed at capacity building to facilitate sustainable hydropower development and improved catchment management practices.

Focus areas of Lao PDR NIP

- ❑ Sustainable agriculture and fisheries development for food security and poverty reduction
- ❑ Energy and sustainable hydropower development
- ❑ Natural resource management, particularly water resources management
- ❑ Climate change adaptation and mitigation
- ❑ Human resource development for natural resources management
- ❑ Research and development

About 70% of the projects are judged to be of basin-wide significance. This reflects the importance attached by Lao PDR to sustainable catchment management related to the forestry, agriculture and hydropower sectors. Lao PDR anticipates implementing these projects principally through its government departments and agencies.

3.1.4 *Thailand*

The Thailand NIP, focusing on sub-area activities, is set in the context of the 11th National Economic and Social Development Plan (NESDP) that promotes natural resources and environment sustainability, including strengthening of RBCs and Sub-area Working Groups (SAWGs) on basin planning.

Focus of Thailand NIP

- ❑ Capacity building to RBC and network;
- ❑ Database management for basin development; and
- ❑ Promote river basin organization network and information dissemination.

Although a different approach to those of other countries, the strengthening of RBCs within their part of the LMB together with their database management systems will directly support decentralization of the MRC core functions as well as water resources management in Thailand.

Three projects worth just over \$1.0 million are included to achieve their aims and the intention is to implement these projects in collaboration with MRC Secretariat. Although the smallest by far in investment terms of the four NIPs, these projects are clearly important and will support coordination of MRC Programmes at the national level, help strengthen the relationship between national and regional level planning, and contribute to improving implementation of the MRC Procedures such as the PDIES.

3.1.5 *Viet Nam*

The purpose of the Viet Nam NIP is to strengthen IWRM in the Mekong Delta and in the Central Highlands (Se San and Srepok river basins, see Appendix D) aimed at promoting economic and social development and environmental protection, and at the same time to create scientific and legal basis for the cooperation in the MRC to successfully implement the Basin Development Strategy. In doing so, the NIP seeks to define the crucial issues that Viet Nam needs to address to coordinate and support the implementation of national strategies and policies as well as MRC strategic actions, and supplement knowledge for updating the Basin Development Strategy.

Viet Nam has identified 45 projects with a total investment of \$9.5 million required. Nearly all of these projects, which cover both the Delta and Highlands regions, are enabling projects. These projects have been identified to address key knowledge gaps and planning issues and to strengthen water management and related procedures. Some projects are already ongoing, whilst others still need to have secured funding.

Focus areas of the Viet Nam NIP

A. Mekong Delta

- ❑ Address the integration and harmonization of national planning process into/with the IWRM-based Basin Development Strategy and Strengthen national water resources management process.
- ❑ Development of vision for the Mekong Delta in the context of integrated water resources management; Updating sector management strategies (irrigation, agriculture, navigation etc); Development of environmental, economic and social objectives to be considered as base line for monitoring water resources development in the Mekong Delta.
- ❑ Address opportunities and consequences of on-going development including development in Upper Mekong Basin aimed at enhancing the sustainability of development projects in the Basin
- ❑ Improvement of water use efficiency for irrigated agriculture to serve for national food security and poverty alleviation policy.
- ❑ Assessment of uncertainties and risks caused by developments and climate change.

B. Se San and Srepok River Basins, Central Highland of Viet Nam

- ❑ Integration and harmonization of the national planning process in the Se San, Srepok sub-basins with the MRC Strategy and strengthening water resources management process in these sub-basins.
- ❑ Enhancement of the sustainability of tributaries' hydropower development through mitigation of negative impacts of the construction and operation of hydropower dams in the Se San and Srepok river basins to downstream, including Cambodia territory and mainstream flow change and address the issues of cost and benefit sharing between the sectors and sub-basin's countries.
- ❑ Assessment of potential impacts of climate change to water and related resources and socio-economic conditions in the sub-basin of the Se San and Srepok, Central Highland of Viet Nam

C. Capacity Building

- ❑ Improvement of knowledge and raise awareness to meet requirements on the implementation of the IWRM-based Basin Development Strategy

Many of Viet Nam's projects are outward facing and are designed to address basin-scale issues that may affect Viet Nam. Viet Nam sees also the need to seek cross-border cooperation in determining with Cambodia a strategy for shared flood plain management in the Mekong Delta and better management of the Sekong-Sesan-Srepok basin that is shared between Lao PDR, Cambodia and Viet Nam (see Appendix D).

Viet Nam will implement its projects through a wide variety of agencies and institutes at their disposal, reflecting the breadth of their institutional capacity.

3.1.6 *In summary*

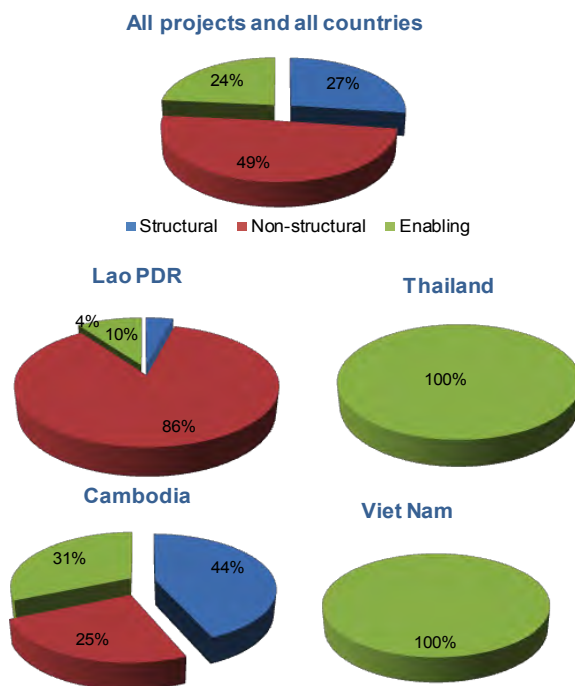
The projects identified in each NIP vary considerably between countries, reflecting national interests and each country's perspective on the water management issues raised in the Basin Development Strategy. The publication of the NIPs now also offers MRC Programmes a better insight into country priorities and the opportunity to leverage synergies between regional and national activities as MRC Programmes progressively adjust their activity plans.

In the following sections the NIPs are further analysed in terms of type of project, implementation arrangements and strategic focus of the projects (Section 3.1.6, 3.1.7 and 3.1.8) and their relevance to MRC Programmes in terms of sectoral scope and basin-wide and transboundary significance (Section 3.3.1, 3.3.2 and 3.3.3).

3.1.7 *Emphasis on structural, non-structural and enabling projects*

The breakdown of these different types of projects contained in each NIP by proportion of investment cost in each Plan is illustrated in Figure 2.

Figure 2 Emphasis on structural, non-structural and enabling projects



Structural projects are those related to physical interventions such as construction of dams, irrigation facilities, flood embankments and the like which directly impact on river flows. Non-structural projects are non-physical investments such as monitoring systems, buildings and similar facilities which have little or no impact on river flows. Enabling projects are those associated with developing human resource and organisational capacity, addressing policy, regulatory and procedural issues, studies and research etc which contribute to better management of the resource system.

As may be seen from Figure 2, both Thailand and Viet Nam have prioritised enabling projects in their response to the Basin Development Strategy, whereas Lao PDR has given greater emphasis in financial terms to non-structural measures

(principally to address flood/drought management and related monitoring systems).

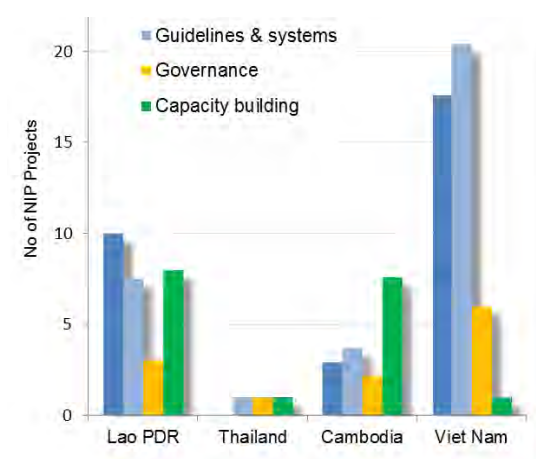
In contrast, Cambodia presents a relatively even spread between the types of intervention. Its structural projects are mainly related to agricultural development.

A closer examination of enabling projects in each country, as illustrated in Figure 3, reveals that whilst all countries clearly see the need for studies, guidelines and systems, both Lao PDR and Cambodia also view capacity building as important and substantial components of their NIPs.

3.1.8 *Different implementation arrangements*

Four generic types of implementation arrangements can be found in the NIPs. These are implementation of projects by the National Mekong Committee, by a Ministry/line agency, by a RBO or RBC and alternatively by a research institute or similar organisation. The breakdown of

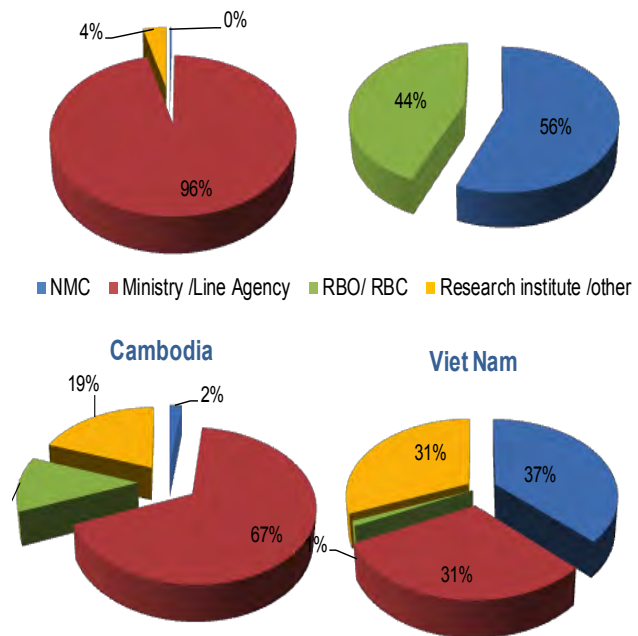
Figure 3 Breakdown of number of enabling projects in each country



these arrangements for NIP implementation by value of projects in each category is illustrated in Figure 4.

Whereas in Thailand the focus is on implementation through either the National Mekong Committee or RBOs, reflecting the priorities Thailand attaches to RBOs, in Lao PDR the emphasis is on taking up projects through the more traditional means of using government agencies. Cambodia, on the other hand, whilst implementing NIP projects primarily through the line agencies, also seeks to engage with other entities as well, including RBOs and research organisations. Viet Nam intends to implement its projects through a mix primarily of National Mekong Committee, institutes and Ministry/line agency, reflecting the somewhat different institutional set-up in Viet Nam compared to the other three countries.

Figure 4 Breakdown of NIP projects by category of implementation arrangement



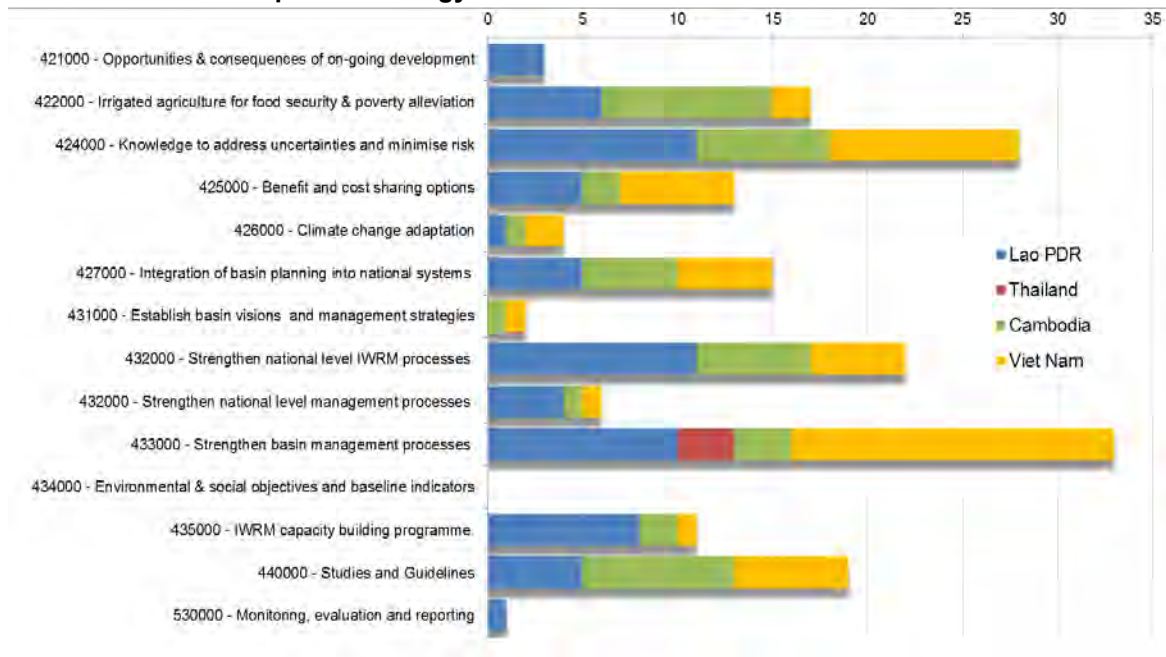
3.1.9 Strategic focus of the NIPs

Although the projects identified in each NIP vary considerably between countries, they reflect each country's perspective on the development opportunities and water management issues raised in the Basin Development Strategy, as well as their relative institutional capacities. Their focus not only reflects the major concerns of each country, but also the opportunities each sees to benefit from cooperation with other countries.

Figure 5 below demonstrates how well the NIP projects address the Strategic Priorities of the Basin development Strategy. It can be seen that the greatest emphasis is on strengthening basin management and national level IWRM processes, addressing knowledge gaps, studies and guidelines, together with addressing food security and poverty alleviation.

Thus, implementation of each NIP will not only contribute to improved water management within each country but will also help build an enhanced appreciation of basin-scale issues of transboundary significance to all Member Countries. This increased knowledge at national level undoubtedly will pave the way to updating the Basin Development Strategy in the next and subsequent cycles in a manner that ensures both greater focus on national issues and concerns as well as promoting the opportunities for beneficial and sustainable development through transboundary cooperation.

Figure 5 Emphasis of NIP projects (in numbers) on addressing the Strategic Priorities of the Basin Development Strategy



The publication of the NIPs now also offers MRC Programmes a better insight into country priorities and the opportunity to leverage synergies between regional and national activities as MRC Programmes progressively adjust their activity plans.

As discussed further in Section 5.3.6, in the next cycle for 2016-20 it is anticipated that the NIPs will become more similar in the scale of projects they include, whilst preserving national perspectives on their content.

3.2 Summary of the Regional Action Plan

3.2.1 Objective and purpose of the RAP

The objective of the Regional Action Plan (RAP) is to set out the actions required to implement the regional component of the Basin Action Plan. The RAP is to be implemented by the MRC Programmes within the framework of the MRC Strategic Plan for 2011-2015 (MRC-SP).

The MRC Strategic Plan was developed and approved in parallel to the Basin Development Strategy and provides a framework within which the MRC Programmes are to operate. The MRC Strategic Plan establishes milestones for each MRC Programme to achieve (see Appendix B). However, whilst there is reasonable congruence between these milestones and the Strategic Actions of the Basin Development Strategy, few MRC Programmes were aligned with the milestones. This is because their programme documents and funding arrangements were mostly agreed in advance of the MRC Strategic Plan.

The three main purposes of the RAP are therefore to:

- ❑ Facilitate the progressive alignment of the MRC Programmes’ activities with the MRC Strategic Plan milestones allocated to each Programme in a manner consistent with the requirements of the Basin Development Strategy;
- ❑ Enable the MRC Programmes (and individual countries) to appreciate and develop the potential synergies with the NIPs; and
- ❑ Provide the basis for coordinated monitoring of progress of MRC Programme activities towards achieving strategic objectives of the MRC Strategic Plan and thus those of the Basin Development Strategy also.

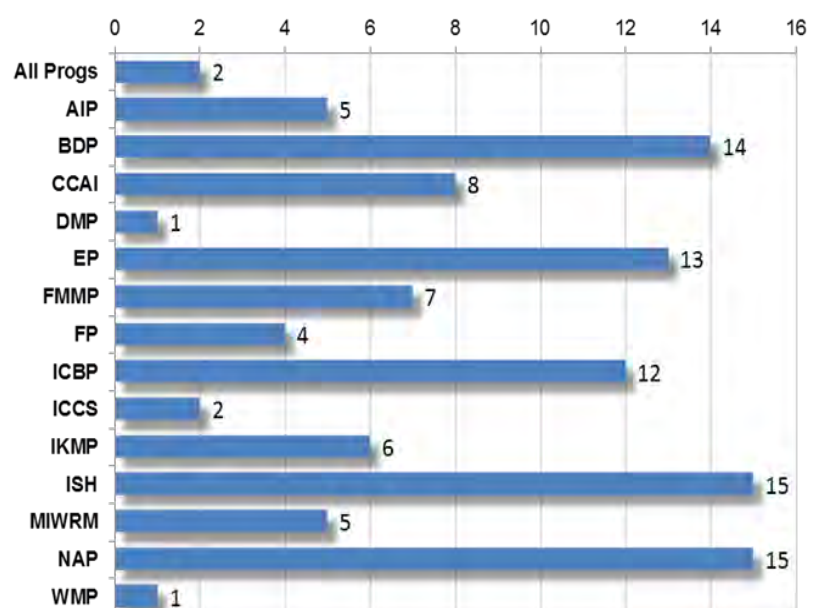
In addition, opportunities have been identified to further improve and streamline the MRC’s strategic planning processes in future planning cycles. These opportunities, which are described in Chapter 5, will do away with the need for a further Regional Action Plan (which is an interim measure to post-align the priorities of the Basin Development Strategy, MRC Strategic Plan and individual Programme plans). The role of the RAP would be taken over by a modified form of the MRC Strategic Plan.

3.2.2 *Actions required of MRC Programme under the RAP*

As stated, the RAP is founded on a detailed analysis of the Basin Development Strategy and MRC Strategic Plan to establish the basis for implementing the RAP through the MRC Strategic Plan. This confirms that the 110 technical milestones in Annex B of the MRC Strategic Plan can be aligned with the 64 Strategic Actions required under the Basin Development Strategy to address the 15 Strategic Priorities. The responsibility for achieving these milestones has been distributed among the MRC Programmes by the MRC Strategic Plan (see Figure 6).

The RAP has been structured to provide guidance to each MRC Programme on how to align their work plans with the milestones of the MRC Strategic Plan in the context of addressing the Strategic Priorities of the Basin Development Strategy. This guidance is provided by means of Project Identification Notes (PINs), one for each MRC Programme.

Figure 6 Distribution of MRC Strategic Plan milestones amongst MRC Programmes



Format of Project Identification Notes

- Responsible (lead) entity
- Other entities involved
- Principal beneficiaries
- Aims and objectives
- Relevant Strategic Priorities
- Key outputs and milestone dates
- Linkages to other Projects
- Outline description
- Principal risks and means of mitigating risks
- Additional funding required

Each PIN follows a common format (see box) and is supplemented by a listing of the Strategic Priorities and Strategic Actions in the Basin Development Strategy related to the allocated MRC Strategic Plan milestones. Each PIN also lists those NIP projects considered relevant to the Programme with the aim that the **MRC Programmes will look to develop synergies between their own work and the current and planned activities under the NIPs.**

Each Programme has reviewed their PIN and in most cases have proposed updated milestones, which are set out in the RAP. Most Programmes report that they cannot address one or more of the MRC Strategic Plan milestones in this planning cycle due to funding and/or resource capacity constraints specific to each Programme. The funding gaps are highlighted and further discussed in Section 4.2.1 of this report.

Implementation of the RAP is already underway. From discussions held with MRC Programmes, it is clear that approximately 50% of the activities required to meet the MRC Strategic Plan milestones are already being taken up.

In some instances further adjustment to MRC Programme plans are nevertheless needed. This is because most MRC Programmes are typically designed and Programme Documents approved in advance of the completion of the MRC Strategic Plan; they are also implementing activities and achieving outputs that are not prioritized in the MRC Strategic Plan (and thus the Basin Development Strategy). This situation leads to differing priorities in the work planning of the MRC Programmes and sub-optimal results.

Thus, given the constraints of the existing MRC Programmes' funding agreements, **the period 2011-15 should therefore be considered as a transitional one with the intent that full alignment is achieved for the 2016-20 period.** The proposal for streamlining strategic planning in the MRC will address this issue.

3.2.3 *Monitoring and evaluation of the RAP*

Since implementation of the RAP will be undertaken within the framework of the MRC Strategic Plan, it follows that **the monitoring and evaluation system for the RAP should be consistent with that adopted by MRC for the MRC Strategic Plan.**

To this end, three levels of monitoring are proposed to monitor: (i) progress towards achievement of MRC Strategic Plan milestones (and thus progress towards implementation of both the MRC Strategic Plan and the Basin Development Strategy), (ii) the effectiveness of outcomes resulting from attainment of milestones, and (iii) the degree to which MRC's strategic environmental, social and economic goals are being attained. These requirements are further elaborated in Chapter 5.

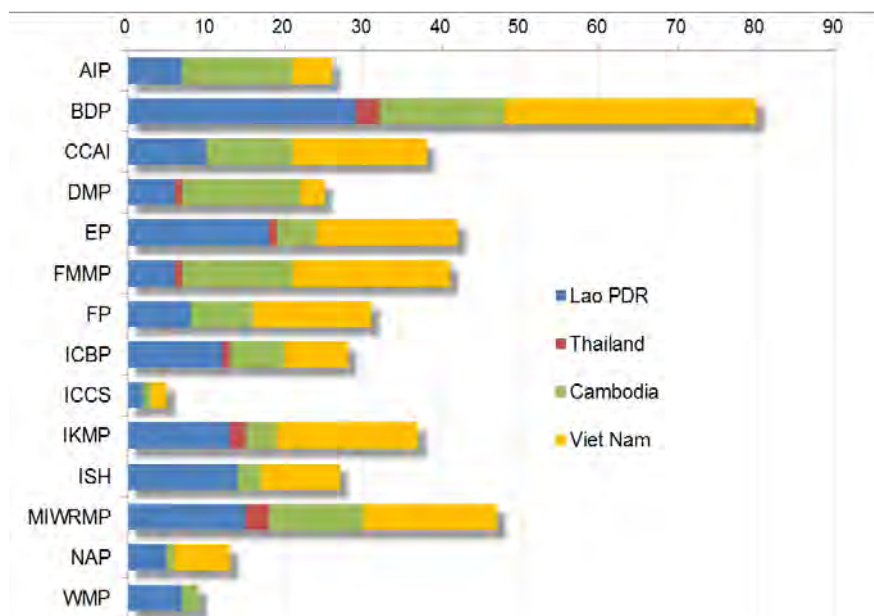
3.3 Opportunities to leverage synergies between national and regional activities

3.3.1 *Potential for cooperation*

As emphasised above, the concurrent production of the NIPs and the RAP presents opportunities to leverage synergies between regional and national level activities.

Assessments are presented in the RAP of which NIP projects in each country are of potential relevance to each MRC Programme. These assessments are also highlighted in each MRC Programme’s PIN for ease of reference. The assessments are summarised in Figure 7, which shows the percentage of NIP projects relevant to each Programme.

Figure 7 Number of NIP projects relevant to each MRC Programme

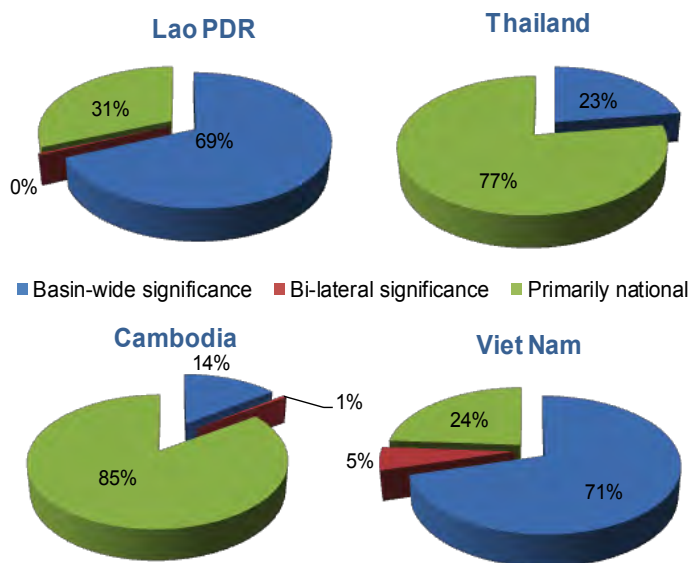


The results shown in Figure 7 demonstrate the breadth of sectoral interests in the NIPs as well as the significance of the MRC Programme agenda to national issues. Development planning, capacity building, climate change, environment, flood management, and knowledge management are the most common themes to be found within the NIPs and all MRC Programmes have NIP projects relevant to them.

3.3.2 *Basin-wide significance*

An assessment has also been made of the focus of the NIP projects and whether they are directed towards addressing essentially national issues, bi-lateral issues or basin-wide issues. The results are presented in Figure 8, expressed as a proportion of the value of projects in each category in each country.

Figure 8 Breakdown of NIP projects in relation to basin-scale focus



“Primarily national” projects are those which are directed towards development within a country which, whilst leveraging development opportunities in various sectors and contributing overall to basin-wide sustainable development and management, have little direct impact on other countries.

Over a third of all projects (46) are judged to be of basin-wide significance in so far as they are directed at either investigating potential transboundary impacts or directed towards reducing

knowledge gaps and better management of assets which may have transboundary impacts (eg improving catchment management, capture fisheries, hydropower planning, cost-benefit sharing, impacts of upstream developments, etc).

All of these projects are of relevance to greater or lesser degree to understanding basin-scale issues and, through this, reducing knowledge gaps and enhancing overall the scope to expanding the Development Opportunity Space referred to in the Basin Development Strategy. MRC Programmes operating in the transboundary dimension will benefit from the knowledge and insights from these national projects of basin-wide significance.

3.3.3 *Projects with bilateral significance*

It is also worth noting that **eight bilateral projects** have been put forward by different countries in their NIPs (see box overleaf), associated principally with the Cambodian-Viet Nam flood plains and the shared 3-S Basin. These projects are directed at either investigating potential transboundary impacts or directed towards reducing knowledge gaps and better management of assets which may have transboundary impacts.

These projects represent a particularly significant category wherein development opportunities can be realised only through direct cooperation between countries. Given the regional interests in both these areas, it is evident that these should be viewed as **priority areas for MRC Programmes to align themselves with national activities.** Other recent examples (but not included in the BAP) include also cross-border navigation agreements and, of course, power sharing agreements related to hydropower development.

In many respects these bilateral initiatives represent a significant step forward in development cooperation. In the particular case of management of the Cambodia-Viet Nam flood plains, the development of a specific long term flood plain management strategy is also a key component of the Regional Action Plan.

Clearly in this case, there needs to be dialogue in the nearest future between the concerned MRC Programmes and the countries concerned to ensure that there is a coordinated effort to address this pressing issue.

3.3.4 *Looking towards the next planning cycle for 2016-20*

In a broader context, it seems that **projects of basin-wide significance** can generally be characterised as national projects with potential transboundary impacts, both positive and/or negative. A deep understanding of the nature of these impacts is required to support basin-scale development planning (the means to expand the Development

Opportunity Space to mutual benefit of all countries) and the related PNPCA process. The current Basin Development Strategy focuses on a number of important knowledge gaps and decision-support processes that will strengthen overall management of the basin. At issue here is maximising the opportunities presented by the RAP and NIPs to share the acquired knowledge and coordinate activities to render knowledge acquisition as effective and efficient as possible.

On the other hand, **bilateral projects** (involving two or more countries) represent specific development opportunities that can only be realised through transboundary cooperation at project level. At issue here is the role of the MRC in such projects. From past experience it would seem that countries welcome MRC Secretariat as a partner in such projects when it is perceived that the MRC Secretariat can add value. MRC Secretariat's assets in this regard are first and foremost its position of neutrality, positioning the institution to seek equitable solutions in the interests of all concerned countries. MRC Secretariat traditionally had good access also to development funds to address transboundary development issues in a manner that would be less easy for individual countries to mobilise. Thirdly, MRC Secretariat has by nature access to multi-disciplinary skills and experience related to transboundary development.

As progress is made towards making ready for the next planning cycle, MRC needs to build consensus between the regional and national levels as to the manner in which the two levels should cooperate in the future. Such considerations can be addressed through further defining the basis for decentralisation and the nature of core functions for the MRC. This should include achieving clarity on the role of the regional level both in the management of projects of basin-wide significance and also in bilateral projects.

Bilateral projects within NIPs

Cambodia

- Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented
- Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas

Lao PDR

- Project 3.4: Strengthening of Sekong River basin management
- Project 5.1: Establishment of Lao National Mekong Basin Information System

Viet Nam - Mekong Delta

- FA.2.1 Development of vision for the Mekong Delta in the context of IWRM and environmental, economic and social objectives to support the monitoring development projects
- FA.3.3 Effective implementation of the Navigation Agreement between Viet Nam and Cambodia in the context of upstream development and climate change
- FA.4.4 Integrated flood plain management for Viet Nam and Cambodia

Viet Nam - Se San & Srepok

- FA.6.7 Development a suitable mechanism for cooperation with Cambodia to successfully implement the IWRM-based Basin Development Strategy

4 Funding opportunities and associated budgets

The Basin Action Plan sets out an ambitious agenda at national and regional levels by which to address the Strategic Priorities of the Basin Development Strategy. Whilst a significant proportion of the required projects are already being implemented, many of the activities at national level have yet to secure funding. It is also anticipated that at regional level some additional funding will also be required, albeit proportionally less than at national level. This Chapter reviews the opportunities for further investment by Development Partners and considers the implications for MRC's associated project budgets.

4.1 National activities

The National Indicative Plans (NIPs) collectively set out a total of US\$920 million of projects in response to the Basin Development Strategy. In the cases of both Lao PDR and Cambodia, a significant proportion of their projects are already funded and ongoing. Thailand is seeking some support from MRC for its projects and Viet Nam is making arrangements for its projects. The indicative costs by category of project are illustrated in Table 2 together with the amounts funded and unfunded.

Table 2 Summary of NIP investment costs by category

Country	Total costs			Structural		Non-structural				Enabling			
	Total	Funded	Unfunded	Agriculture	Hydropower	Navigation	Flood & drought management	Fisheries	Other	Studies	Guidelines & systems	Governance	Capacity building
Lao PDR	369.2	143.9	225.3	0.0	15.0	2.7	147.1	1.5	167.2	6.4	5.8	1.5	22.0
Thailand	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.5
Cambodia	540.7	441.6	99.1	235.2	0.0	0.9	82.9	0.1	51.5	20.7	36.2	23.9	89.3
Viet Nam	9.5	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	5.3	3.7	0.4	0.1
Totals	920.4	585.4	335.0	235.2	15.0	3.6	230.0	1.6	218.7	32.4	45.9	26.1	111.8
Funded	585.4	585.4		184.9	0.0	2.1	115.8	0.0	138.9	19.6	22.4	22.8	79.0
Unfunded	335.0		335.0	50.3	15.0	1.5	114.2	1.6	79.8	12.9	23.6	3.2	32.8

The following summarises the investment opportunities in each country. Full listings of the projects included in the information below are provided in Appendix A and further details of the aims, objectives and cost estimates are contained within the Project Identification Notes included within each National Indicative Plan.

4.1.1 Cambodia

The Cambodia NIP has a total of 28 projects of which half (14) are unfunded. The unfunded projects are associated with each of the five main outcomes that are expected to be achieved through implementation of the NIP. The estimated total cost of the unfunded Cambodia NIP projects is US\$ 98 million as summarised in Table 3 below.

Table 3 Summary of unfunded Cambodia NIP projects

See Appendix A for the full project list

Cambodia	Sub-totals
Outcome 1: Irrigated agriculture for food security and poverty alleviation expanded and intensified	80,347,770
Outcome 2: Sustainable hydropower development and other water resources uses improved through promoting integrated uses of water and its related resources	5,095,060
Outcome 3: Uncertainty and risks of climate change and other development are addressed	4,323,000
Outcome 4: Essential knowledge, tools and guidelines are developed and used to address uncertainty and minimize risks of the identified development opportunities	4,031,000
Outcome 5: Critical Sub-Basin management objectives and strategies established, and the national and basin water resources management processes including targeted IWRM capacity building program strengthened.	4,622,510
Estimated totals for Cambodia	98,419,340

As with the Lao NIP, investment requirements are dominated by a relatively small number of projects, in this case being the four structural projects in the agriculture sector under Outcome 1.

According to the Cambodia NIP, analysis of the aid disbursement and National Strategic Development Plan (NSDP) resource allocation for 2010 shows gaps between the NSDP and aid disbursement for key agricultural and water/environmental sectors. Harmonization of various funding sources (national budget, official development assistance, and foreign direct investment) for development programmes in line with NSDP requires a long-term commitment and efforts.

4.1.2 Lao PDR

The Lao PDR NIP has a total of 43 projects of which 26 are as yet unfunded. The unfunded projects are within each of the six Focus Areas that make up the NIP and their estimated total cost is US\$225 million as summarised in Table 4. Technical and financial assistance from development partners and international organisations will be required to fund these projects.

It may be noted that two of the unfunded Lao PDR NIP projects (Project 3.3 on Strengthening the management of the conservation and protection forest areas programme and Project 5.9 on Hydro-meteorology network enhancement) together represent 83% of the funding required and that the remaining 24 projects average approximately US\$ 1.6 million each.

Table 4 Summary of unfunded Lao PDR NIP projects*See Appendix A for the full project list*

Lao PDR	Sub-totals
Focus Area 1. Sustainable agriculture and fisheries development for food security and poverty reduction	3,950,000
Focus Area 2. Energy and sustainable hydropower development	15,500,000
Focus Area 3. Natural resource management, particularly water resources management	81,850,000
Focus Area 4. Climate change adaptation and mitigation	590,000
Focus Area 5. Human resource development for natural resources management	115,400,000
Focus Area 6. Research and development	8,000,000
Estimated totals for Lao PDR	225,290,000

4.1.3 Thailand

As previously noted, Thailand has put forward three projects, together estimated to cost just over US\$ 1.0 million. These are shown in Table 5 below. The funding of these projects will be in addition to the river basin annual budget. The Thai National Mekong Committee will seek funding assistance from various MRC Programmes and expect also that line agencies will be able to provide support for routine works related to MRC river basin management core functions.

Table 5 Summary of unfunded Thailand NIP projects*See Appendix A for the full project list*

Thailand	Sub-totals
PIN T-001 Capacity Building to RBC and Network	475,000
PIN T-002 Database Management for Basin Development	245,000
PIN T-003 Promote River Basin Organization Network and Information Dissemination	360,000
Estimated totals for Thailand	1,080,000

4.1.4 Viet Nam

Viet Nam has put forward a total of 45 projects in their NIP in nine Focus Areas. These projects together have been estimated to cost US\$ 9.4 million as illustrated in below.

According to the Viet Nam NIP, funding of these projects will be provided from the national budget (for the Ministries' Programmes and the Viet Nam National Mekong Committee, VNMC), and from MRC Programmes funded by the Development Partners and other international initiatives. Viet Nam notes also that consideration and approval of budget for the NIP projects during 2012-2015 need to take into account the MRC decentralisation policy as this will affect some core function activities of river basin management of the MRC, as well as the level of commitment from the MRC countries.

Table 6 Summary of unfunded Viet Nam NIP projects*See Appendix A for the full project list*

Viet Nam	Sub-totals
A. Mekong Delta	
Focus Area 1. Integration and strengthening of national planning and management processes with Basin Development Strategy	470,000
Focus Area 2. Development of vision, updated sector management strategies and environmental, economic and social objectives for base line for monitoring	1,040,000
Focus Area 3: Address opportunities and consequences of on-going development to enhance sustainability of development projects	3,383,000
Focus Area 4. Improvement of water use efficiency for irrigated agriculture to serve for national food security and poverty alleviation policy	700,000
Focus Area 5. Assessment of uncertainties and risks caused by developments and climate change	1,005,000
B. Se San and Srepok River Basins, Central Highland of Viet Nam	
Focus area 6. Integration and strengthening of planning and management processes for Se San, Srepok sub-basins with Basin Development Strategy	1,380,000
Focus Area 7: Enhancement of the sustainability of tributaries' hydropower development through mitigation of negative impacts and cost and benefit sharing	730,000
Focus Area 8. Assessment of potential impacts of climate change to water and related resources and socio-economic conditions in Se San and Srepok sub-basin	275,000
C. Capacity Building	
Focus Area 9: Improvement of knowledge and raise awareness to meet requirements on the implementation of the IWRM-based Basin Development Strategy	510,000
Estimated totals for Viet Nam	9,493,000

The NIP also notes that there may be a need also to seek funds from external sources, but that this needs to be carefully considered in order to avoid any overlaps and risks of generating different sets of recommendations on the same issues. VNMC Secretariat will review the activities to be implemented through the national budget in its plan for 2012-2013 in order to integrate some of these activities into the NIP. In addition, VNMC will hold dialogue with MRC Programmes, including the bilateral international cooperation projects (for example the World Bank-funded Mekong IWRM project) to seek support for some of the activities included in the NIP.

4.2 Regional activities

4.2.1 Funding gap identification

Whilst indications are that over half of the required activities at regional level are already being taken up, there is also emerging evidence of funding gaps in the MRC Programme plans. An important early action under the RAP is for each MRC Programme to review whether it has any funding gaps with regard to achieving the milestones of the MRC Strategic Plan within the established timeframes. Some Programmes have already commenced this (as recorded in their PINs in the RAP). However, it remains essential that these reviews are completed as soon as possible.

In some instances these funding gaps may be possible to overcome through re-arrangement of activities within their agreed Programme Documents. Where this is not possible and where this leads to important knowledge gaps not being addressed, it is important that these gaps should be communicated to the Technical Coordination Unit (TCU) and to those who will coordinate the design of the Council approved *Council Study*.

4.2.2 *Council Study*

A concept note for a “***Study on sustainable management and development of the Mekong river including impacts by mainstream hydropower projects***” (referred to hereafter as the *Council Study*) has been recently approved by the MRC Member Countries at the 19th Meeting of the Council in January 2013.

The concept note has identified three key objectives and seven main outputs for the study, central to which is addressing knowledge gaps critical to making wise decisions on the basin-wide development and management of the Mekong River system. These knowledge gaps include both the availability of essential baseline data as well as understanding the impact relationships between changes in climate, flow regimes and water quality on environmental, social and economic conditions within the basin. The results will enrich the MRC knowledge base and enhance the BDP process.

The Basin Development Strategy has already identified and prioritised key knowledge gaps affecting the MRC’s capacity to undertake basin-scale strategic planning (Chapter 4 of the Basin Development Strategy), and addressing these identified gaps thus forms a critical part of the Regional Action Plan. However, it is evident that not all gaps can be filled under current MRC Programme plans and that new activities will need to be taken up to ensure that all gaps identified in the Basin Development Strategy are addressed.

Clearly there is significant potential for the *Council Study* to complement the Regional Action Plan by ensuring that all important information needs and knowledge gaps identified in the Basin Development Strategy are addressed in a timely manner.

This does not mean necessarily that the *Council Study* is limited to doing just this. However, sensibly, the detailed design of the *Council Study* should build upon what has gone before, rather than start afresh. Given the need to update the Basin Development Strategy in 2014, it will be important nevertheless that complementary activities under the *Council Study* are appropriately prioritised to address in timely fashion the key issues that will shape the updated Basin Development Strategy.

The concept note envisages that the study would commence in February 2013 with interim results reported in mid-2014 and mid-2015. The *Council Study* itself is expected to be completed by the end of 2015 and any residual or newly emerging knowledge gaps will need to be brought into the MRC’s plans for 2016-20.

4.3 Associated project budgets

The MRC Strategic Plan describes the source of MRC funding under three main categories, as follows:

- ❑ The **Corporate Services budget** (Secretariat, administration and management functions) is funded primarily by a mix of Member State contributions and fees levied on development partner funded programmes managed by the MRC Secretariat;
- ❑ The **Work Programme budget** covers principally the MRC Programme activities and core river basin management functions undertaken by government agencies, the former funded mainly by the Development Partners and the latter by individual countries; and
- ❑ A third category, now termed simply as the **Associated Project Budget**, comprises investment support leveraged by the MRC from the Development Partners (including bilateral technical assistance) direct to the Member Countries.

Examples of projects currently contributing to the Associated Project Budget potentially include the national component of the MIWRMP and the USAID-funded training support to scenario-based planning under BDP at national level.

Nevertheless, the Associated Project Budget is currently difficult to fully quantify as the concept of what is *leveraged* as a result of the regional framework of cooperation provided by the MRC is only very loosely defined. Furthermore, since the funds generally do not pass through the MRC Secretariat, the Associated Project Budget is also difficult to monitor. The streamlined strategic planning process offers a way by which to address these two issues.

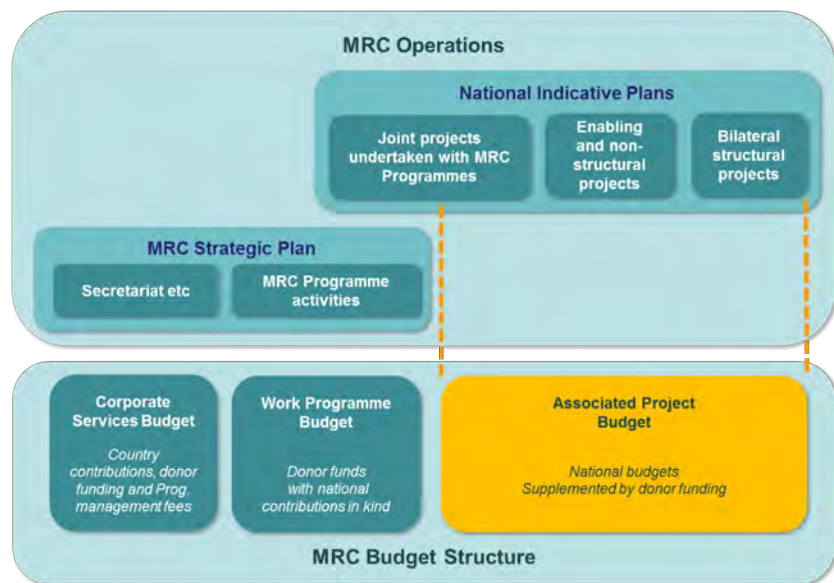
Under the streamlined approach described in Chapter 5, the Basin Development Strategy will define the incremental basin management actions required of the MRC and its Member Countries to realise the benefits of regional cooperation over and above that which each country could achieve in the absence of such cooperation. There are three fundamental ways of taking up these Strategic Actions by the countries and/or by the MRC Programmes. These are:

- ❑ Countries adopt the action and undertake it with their own funding or with direct funding support from Development Partners - Associated Project Budget;
- ❑ MRC Programmes adopt the action and undertake with donor funding - Work Programme Budget; and
- ❑ Countries adopt the action with MRC Programme support (ie partial funding of the action by MRC Secretariat) – mix of Associated Project and Work Programme Budgets.

These concepts are illustrated in Figure 9 below. Since all of these activities will form part of the updated NIPs and the MRC Programme activities, **under the streamlined approach those activities funded under the Associated Project Budget will be automatically quantified as part of the updated Basin Action Plan** and monitored through MRC's M&E system.

At issue is whether, in addition to the above, there are other investments that can be considered to have been *leveraged* by the MRC. If it is accepted that the NIP updates should be confined to enabling and non-structural river basin management activities (see Section 5.3.6), then there remains scope to consider adding to the Associated Project Budget structural projects that have been leveraged through cross-border cooperation. These would correspond to projects of bilateral significance (see Section 3.3.3 above) in which MRC Programmes have been directly involved in their planning.

Figure 9 Proposed concept for defining content of Associated Project Budget



As part of the preparations for the next planning cycle, MRC will consider how best to define the projects that should be included under the Associated Project Budget and, once agreed, ensure that steps are taken in the next Basin Action Plan to quantify these and put monitoring processes in place.

5 Streamlining MRC planning and monitoring processes

For the current strategic planning cycle for 2011-15 (which took place during 2009-10), the Basin Development Strategy and the MRC Strategic Plan were developed in parallel. Whilst a broad consistency has been achieved, this has resulted nevertheless in a highly complex array and duplication of goals, outcomes, outputs and activities. Furthermore and for historical reasons, the MRC Programmes are at different stages of their Programme cycles. As a result, their activities and outputs are not necessarily fully aligned with either MRC Strategic Plan or Basin Development Strategy, necessitating a separate Regional Action Plan to assist them in progressively (post)adjusting their work plans to match MRC's strategic requirements during the current planning cycle.

A need to streamline the MRC's strategic planning processes has come.

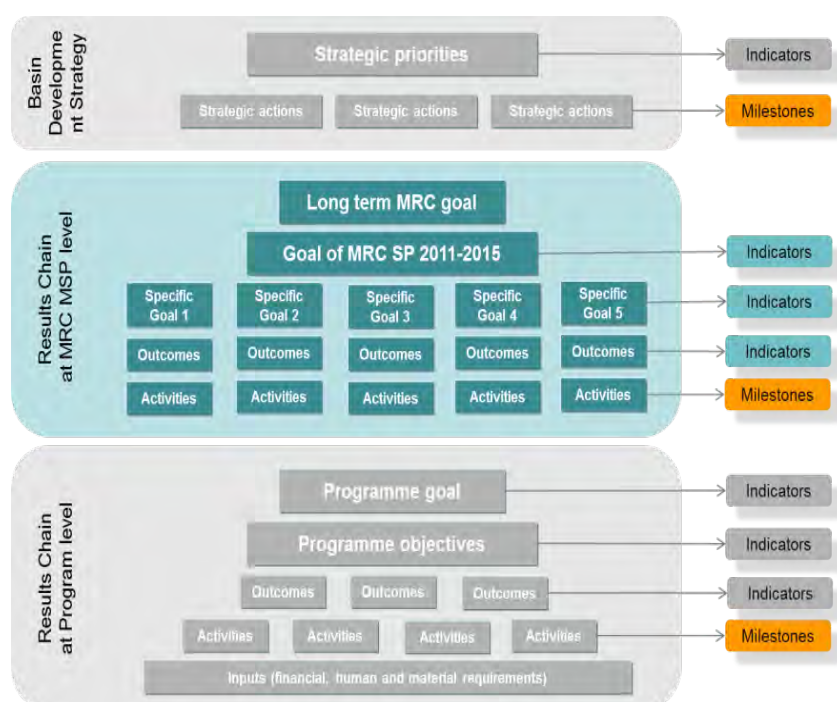
5.1 The need for a streamlined approach

In the previous cycle of MRC strategic planning (which took place during 2009-10), the Basin Development Strategy and the MRC Strategic Plan were developed in parallel. Whilst a broad consistency has been achieved, this has resulted nevertheless in a highly complex array of goals, objectives, outcomes, outputs and activities which are neither easy to coordinate nor to monitor, as illustrated in Figure 10.

In addition, the MRC Programmes are at different stages of their Programme cycles and, for historical reasons, their activities and outputs are not necessarily fully aligned with either the latest MRC Strategic Plan or with the Basin Development Strategy, leading to differing priorities in their work planning.

Thus, currently there are 15 different planning processes in place (13 MRC Programmes, the Basin development

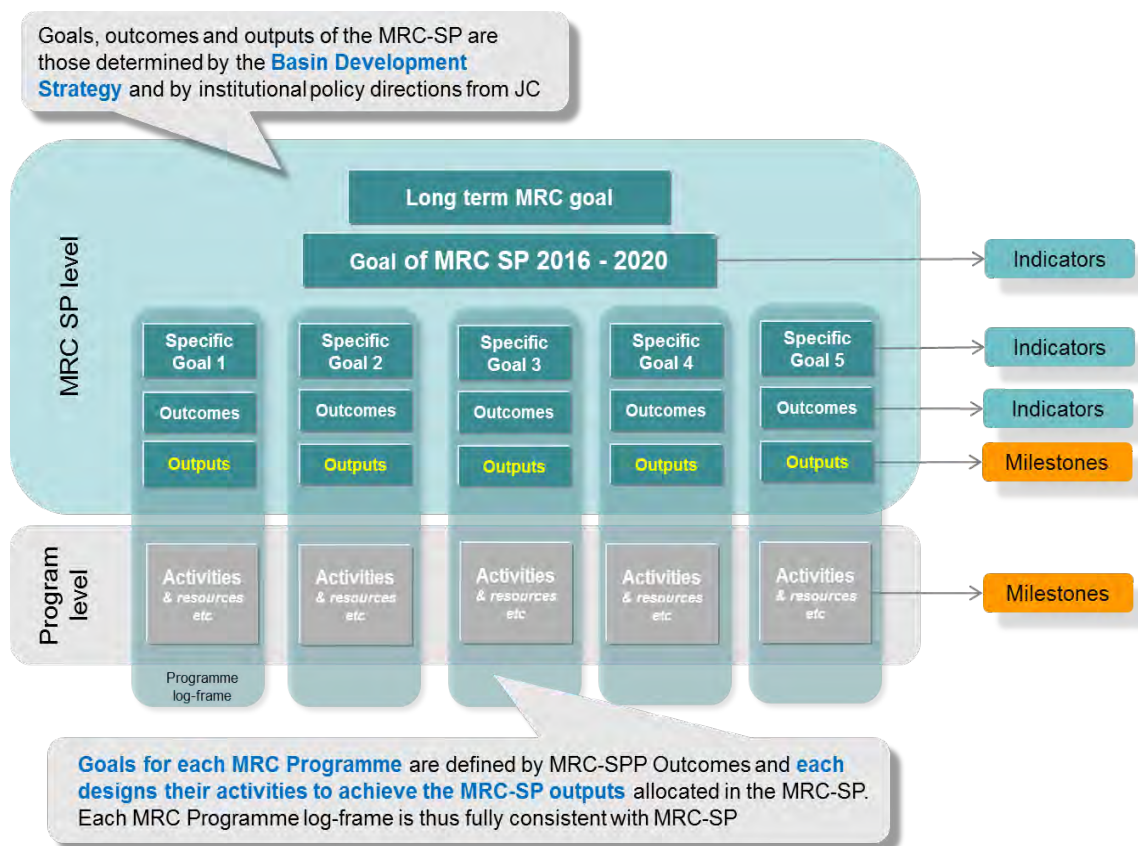
Figure 10 Current MRC planning and monitoring framework



Strategy and the MRC Strategic Plan). Together they include as many as 2,000 indicators for monitoring progress and results, which makes it extremely difficult to develop a practical MRC-wide monitoring system.

It is now widely recognised that there is a need to streamline the MRC’s strategic planning processes and harmonise these with the design of MRC Programme activities. A future scenario for a much simplified approach is illustrated in Figure 11 that could be applied for the 2016-20 plans⁵.

Figure 11 Proposed rationalisation of MRC planning and monitoring framework



As proposed, the goals, outcomes and required outputs related to basin development and management of the MRC Strategic Plan would be set, on the basis of technical considerations, by the Basin Development Strategy, together with policy directions on organisation changes provided by the Joint Committee. MRC Programmes would then be designed to address these same goals, outcomes and outputs as established under the MRC Strategic Plan. In this way, the overall planning process and monitoring requirements would be much simplified and would lead to greater efficiency and ease of coordination.

The proposed planning approach will reduce the number of M&E indicators from as many 2,000 to less than 200.

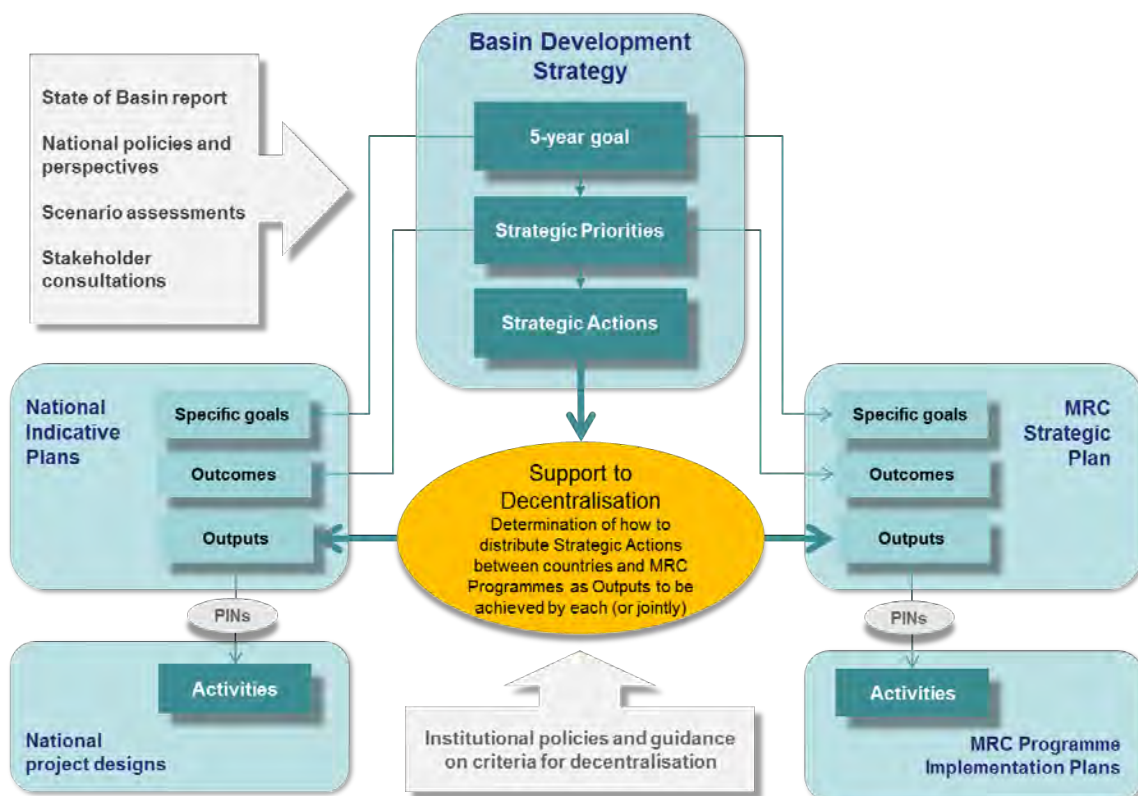
⁵ The proposed approach is equally valid in case the MRC would replace its current 13 Programmes with the needed number of functional units that cover the defined core river basin management functions.

5.2 An overview of the new streamlined approach

5.2.1 Integration of national and regional basin management activities

In addition to simplifying planning of regional activities, the new approach to MRC’s strategic planning has been developed to bring greater harmonisation of national and regional implementation of the Basin Development Strategy for the next cycle 2016-20, as illustrated in Figure 12. The main elements of this approach are as follows.

Figure 12 Integration of national and regional activities



Drawing on evidence from a refreshed State of the Basin Report, new national policies and perspectives, additional scenario assessments, and widespread consultations, the current Basin Development Strategy will be updated by the Countries together with the MRC Programmes to provide a mutually agreed set of required strategic goals for basin development and management over the ensuing 5-year period (2016-20) and beyond. The format of the Basin Development Strategy will be somewhat modified such that Strategic Priorities and Strategic Actions are expressed as desired “Outcomes” and required “Outputs” for the MRC as a whole to achieve during the next 5-year period.

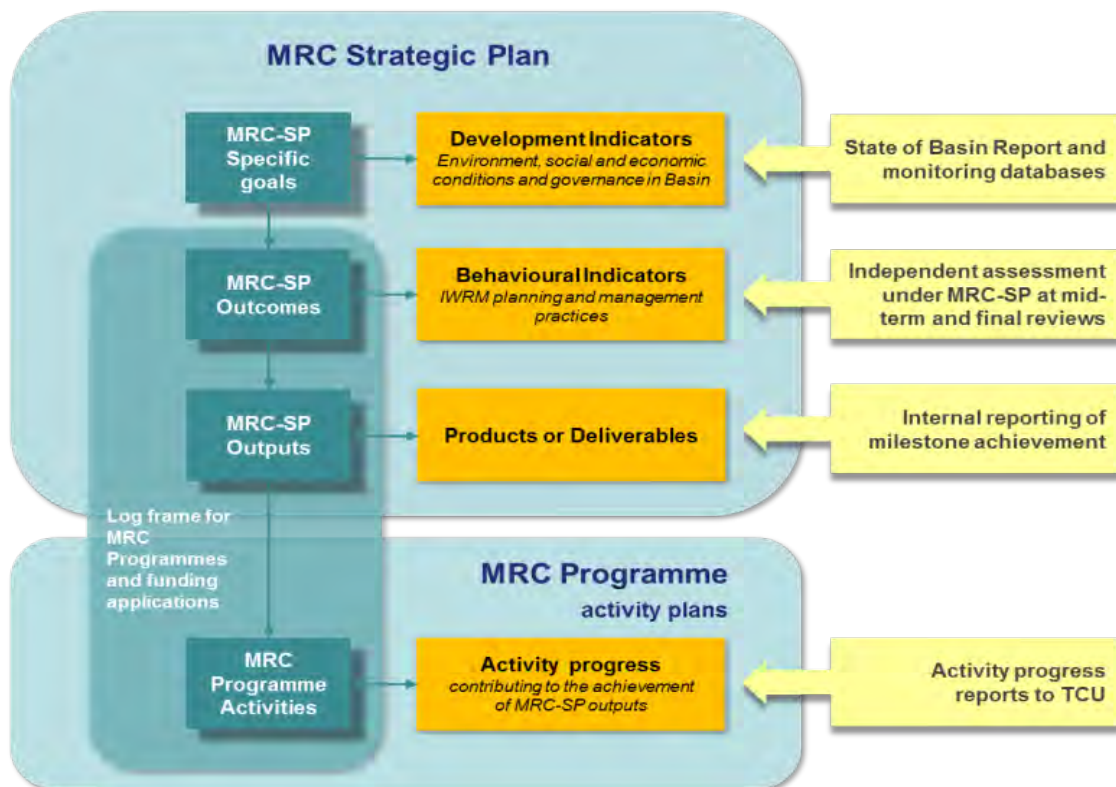
These Outputs will then be distributed between the MRC Programmes and the countries for implementation in support of the ongoing decentralisation of core river basin management functions (currently led by MRC’s International Coordination and Communication Section). The outputs will be formulated as products (such as studies, databases, strategies) which will further simplify monitoring their achievement.

The National Indicative Plans and the MRC Strategic Plan will then be prepared and Project Identification Notes will be annexed to both to give appropriate guidance for national project design and for MRC Programme activity planning. **The MRC monitoring system and funding applications can then be developed within a consistent set of goals, outcomes and outputs reflecting the country objectives for basin development and management.**

5.2.2 *A more practical and effective MRC M&E system*

The streamlined process will lead to a coherent and much simplified set of plans for the MRC Secretariat to monitor, since there will be only one set of goals, outcomes, outputs and activities to deal with in future. In turn, this will promote a greater degree of integration of effort across the MRC, consistent with overall strategic aims and Member Countries' requirements. The principles of the required M&E system are illustrated in Figure 13.

Figure 13 Proposed monitoring framework under future Strategic Plans



The MRC Strategic Plan will set out the specific goals relating to improved social, environmental and economic conditions and governance within the basin as established under the Basin Development Strategy. These should be monitored by the periodically updated State of the Basin (SoB) Report. Future SoB reports will need to be presented therefore in a more structured form and report on an agreed set of management and development indicators.

At the next level down, desired Outcomes are more difficult to monitor as they relate to institutional and behavioural change. As a consequence, they should be monitored by conducting external surveys, mid-term reviews, and/or assessments to measure whether the Outcomes have achieved the desired results amongst relevant stakeholders.

Monitoring of the delivery of Outputs and the progress of Activities can then be accomplished by internal recording of progress towards achievement of milestones (for Outputs set by the MRC Strategic Plan and for Activities set by the MRC Programmes in their work plans).

These measures will greatly reduce the amount of effort required to monitor implementation of both the MRC Strategic Plan and MRC Programme activities. At the same time, the revised approach would lead to greater transparency and accountability within the organisation. Further details of the new approach to M&E can be found in the RAP.

Benefits to be gained from a streamlined approach are many and include:

- ❑ MRC Programmes work plans would be fully consistent with MRC strategic requirements, leading to better coordination, greater delivery efficiency and increased transparency and accountability within the MRC;
- ❑ The decentralisation of MRC activities would become an integral part of the MRC strategic planning process leading to greater clarity and integration of efforts at regional and national levels;
- ❑ The moves towards riparianisation and MRC core functions would similarly be reinforced in a structured manner consistent with MRC's strategic institutional aims;
- ❑ Monitoring and evaluation of MRC activities would become much simpler to undertake and therefore much more effective as a result of there being a single set of goals, desired outcomes and outputs for the MRC Programmes (combined with national efforts) to deliver; and
- ❑ The overall level of 5-yearly effort to generate the MRC's strategic and planning documents would be much reduced by avoiding duplication of effort, leading to greater efficiencies and greater focus on the technical delivery of regional support to the countries.

5.2.3 *Monitoring and evaluation of NIPs in future MRC planning cycles*

In the current cycle, as described in Chapter 3, the NIPs represent each country's individual response to the opportunities presented by the Basin Development Strategy to strengthen ***national*** management, planning and development processes within a framework of regional cooperation.

Under the streamlining proposals, the NIPs will need to include a commitment to undertaking specific Outputs prescribed by the updated Basin Development Strategy which, in accordance with the terms of the as-yet-to-be-agreed decentralisation policy, will be vested in national institutions rather at regional level. The nature of these decentralised activities will necessarily remain of ***basin-wide significance*** and therefore of interest to all countries.

Thus those elements of future NIPs relating to decentralised regional activities will need to be considered as part of the overall framework of basin-wide river basin management functions and therefore be brought into the overall M&E system of MRC activities as described in Section

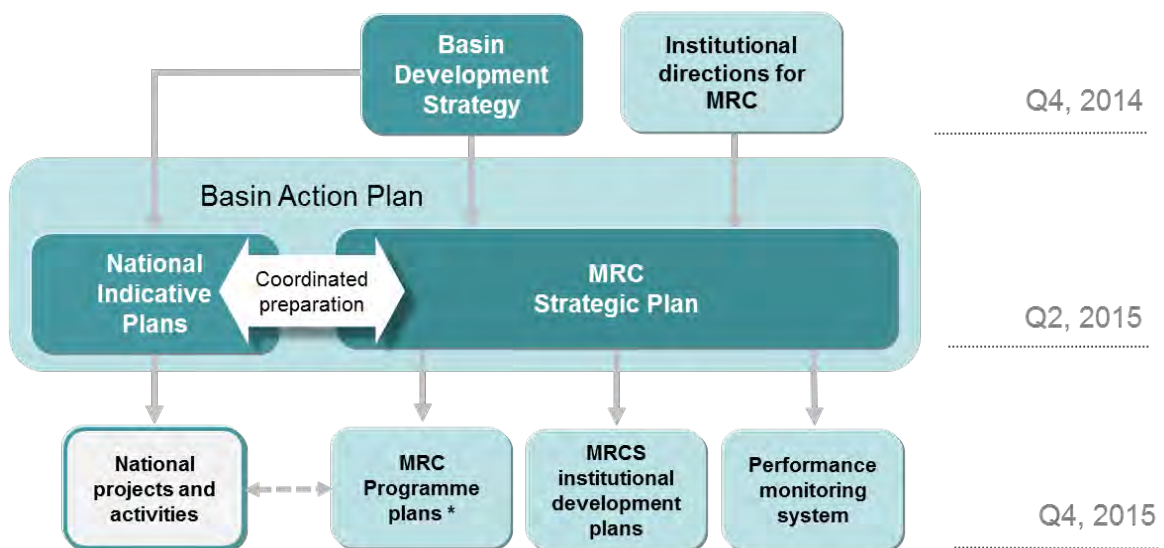
5.2.2⁶. In the run up to planning the next 2016-20 cycle further consideration will be needed of how to organise MRC monitoring of these distributed activities.

5.3 Preparatory steps for introducing a streamlined approach

5.3.1 *Adjusted time schedule*

In order to arrive at a new set of activity plans in time for the 2016-20 period, it will be necessary to advance the updating of the Basin Development Strategy by one year (see Figure 14). This will require also that the State of Basin report is similarly advanced to provide a platform for strategy review. The BDP Programme already anticipates these requirements and is adjusting its work plans accordingly.

Figure 14 Timetable for streamlined MRC strategic planning process



* MRC Programmes or river basin management units - their plans take into account activities planned under NIPs, reflecting increasing decentralisation of MRC's activities

Given the greater efficiencies made possible by the streamlined approach, it is anticipated that the updating of NIPs and the preparation of the MRC Strategic Plan could be achieved over a six month period and that detailed activity planning by the MRC Programmes could be completed thereafter within a further six months.

⁶ Whether future NIPs should be limited to decentralised regional activities or continue to include other national activities related to strengthening national management systems and leveraging opportunities arising from the Development Opportunity Space is a matter for further consideration. Decisions on this will be influenced by the manner in which the Basin Development Strategy is updated and how Outcomes and Outputs under the updated Basin Development Strategy are described. In principle, the updated Basin Development Strategy may adopt a broader approach than the current one, both in sectoral and institutional terms, and embrace what needs to be achieved at both regional and national levels within the five-year period to realise the collective aims of the MRC. In this latter instance, the NIPs may beneficially be focussed on each country's commitment to this collective effort and leave projects of national (rather than those of basin-wide) significance to be planned, notified and implemented through the normal national processes in accordance with the MRC agreement and procedures. These are matters that will need to be considered in the preparatory steps for detailed strategic planning for the 2016-20 cycle.

5.3.2 Updating the State of Basin reporting

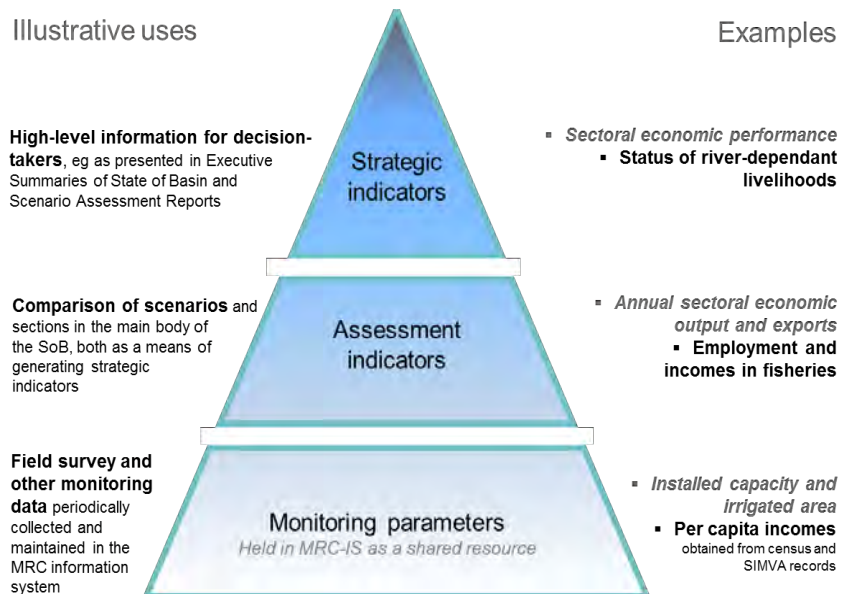
Under the streamlined approach, the State of Basin (SoB) report will become a key instrument embedded within the strategic planning process. To this end, the SoB will be updated by aligning its content with a unified set of management indicators, agreed by the countries as reflecting their collective social, environmental and economic aims and concerns associated with cooperation in basin development and management and consistent with IWRM principles.

Management indicators are required to provide Member Countries with a measure of the extent to which the MRC is achieving their high level policy aims. In principle, they need to reflect those conditions which each Member Country considers are important to determining whether the ambitions of the Member Country are being realised. Furthermore, it follows that those same indicators should provide a basis for each Member Country to judge whether a particular basin development and management strategy best meets their individual and collective aspirations.

Thus, it is appropriate for MRC purposes that management indicators are seen as the foundation to both monitoring relevant conditions within the basin as well as to underpinning assessment of alternative basin development and management strategies. This normally requires a hierarchy of indicators linked

ultimately to that which can be directly measured, as illustrated in the adjacent Figure 15. The assessment framework which has been developed during the recent scenario and other assessments provides a good starting point for designing a monitoring system to provide the necessary assurance to all stakeholders in the Basin Development and Management Strategy.

Figure 15 Hierarchy of basin management indicators



Activities are already being taken up under the RAP by BDP, EP, ISH and others to establish a consistent set of management indicators in support of both the SoB and assessment of basin-wide scenarios.

5.3.3 Updating the Basin Development Strategy

The Basin Development Strategy was drafted to cover a five year timeframe. It is increasingly evident that the basic elements of the Strategy will remain relevant for longer than this period. Updating the Basin Development Strategy will involve incorporating modifications to reflect

feedback from the initial implementation and the studies undertaken to fill knowledge gaps, new development pressures, the results of further scenario analysis, and strengthened or new institutional mechanisms to support basin planning. The updated Strategy would also broaden planning cooperation beyond the water sector in line with aspirations for regional integration.

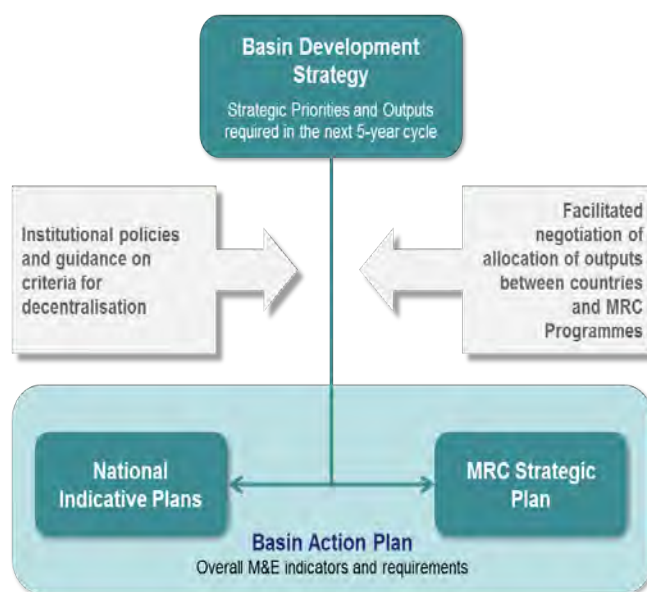
Updating the Basin Development Strategy will be coordinated by the BDP Programme and will draw on the extensive lessons drawn from the previous strategy preparation under BDP2. Important considerations will include drawing together the perspectives presented in the current National Indicative Plans, synthesising the findings from the updated State of Basin Report and determining, in consultation with the countries and MRC Programmes, the key issues which should both be taken up in the scenario assessments and be reflected in the Strategic Priorities (desired Outcomes) that subsequently emerge.

In addition, it will be important to amend the presentation of the updated Basin Development Strategy so that it is set out in a manner that clearly expresses the Strategy in terms of a 5-year goal, desired outcomes and required outputs. BDP will need to develop a template for this in consultation with its stakeholders.

5.3.4 *Guidance on decentralisation and negotiation of allocation of regional and national outputs*

The decentralisation of activities from regional to national level remains a key aim in the organisational development of the MRC, alongside the progressive move of the MRC Secretariat to core functions, the full riparianisation of staff and reducing Development Partner funding.

Figure 16 Role of decentralisation guidance in determining the Basin Action Plan 2016-20



The strategic planning process for 2016-20 described above will provide a good opportunity to decentralise certain strategically significant activities in a structured and rational manner (Figure 16). As evident in the current National Indicative Plans, countries are demonstrating a willingness to take on a wide range of studies and other activities that are of clear basin-wide significance and/or are directly related to transboundary cooperation between two or more countries. These initiatives are of course on top of the extensive monitoring programmes undertaken by each country in support of basin-wide data sharing under PDIES.

By linking the decentralisation programme to the determination of which strategic actions should be undertaken at regional or national levels or jointly, a rational process may be

developed to ensure that country aspirations to take on a greater share of the MRC's activities can be achieved in transparent and structured manner.

This process will require a negotiation between countries as to what is mutually acceptable and affordable and will have inevitable bearing on funding arrangements (see Section 5.4 below). These negotiations can be facilitated if, in advance, a clear process is defined together with criteria that will guide choices. To this end, MRCS is developing the necessary guidelines in consultation with the countries and other concerned parties.

5.3.5 *Preparing the MRC Strategic Plan for 2016-20*

Preparation of the next MRC Strategic Plan for 2016-20 will be founded on the outputs allocated to regional responsibility in the negotiations above. The MRC Strategic Plan in this form will obviate the need for a separate RAP.

The format of the MRC Strategic Plan document will necessarily change to reflect the goals, outcomes and outputs determined above by the Basin Development Strategy. Annex B of the current MRC Strategic Plan may be conveniently replaced by use of the PIN pro forma developed for the current RAP as a means of providing guidance on the activities that each MRC Programme would plan and implement.

The MRC Strategic Plan in its revised format would also establish the basis for the M&E programme for regional activities.

5.3.6 *Refreshing National Indicative Plans*

The current National Indicative Plans have been developed following guidelines developed by BDP in the light of the road map requirements set out in the Basin Development Strategy. As illustrated in Chapter 3, the NIPs offer each country's perspective on the incremental actions that each can take to draw benefit from the Basin Development Strategy and, by extension, the benefits to be derived from cooperation under the 1995 Agreement.

Under the streamlined planning process, the nature of the NIPs may require some adjustment to better reflect the outcome of the distribution of desired outcomes and required outputs between regional and national levels.

It is appropriate that a dialogue is commenced well in advance of updating the NIPs to determine what changes may be useful to incorporate in the way the NIPs are presented. Considerations should include:

- ❑ A key driver in NIP formulation will be the distribution of required outputs, which are currently "enabling" and/or in a few cases "non-structural" in nature; should the NIPs be focussed solely on such *management*-related activities, or should they also include plans to take up (structural) *development* opportunities as well? Perhaps the latter are better included under PNPCA and PDIES and recorded within BDP's proposed Project Master Database?
- ❑ Within the concept of decentralisation of regional activities, it is appropriate to consider the shared responsibilities for taking up required outputs of basin-wide and/or

transboundary significance; it may follow that the MRC's monitoring and evaluation system should be similarly extended to cover the NIPs as well (as they will form part of the overall river basin management functions).

5.4 Implications for funding cycles

The current MRC Strategic Plan recognises the need to harmonise development partner funding cycles with those of the MRC and proposes that the MRC Strategic Plan 2016-20 should be finalised a year in advance of the start of new MRC Programme phases (and related funding agreements). The MRC Strategic Plan indicates that this *would improve the integration of programme design towards overall organisational goals and contribute to aid alignment*. The streamlining plans take this concept further by proposing that the updating of the Basin Development Strategy should precede the next MRC Strategic Plan, which in turn would, as above, precede MRC Programme activity planning.

Given the necessity of a range of preparatory work prior to updating the Basin Development Strategy (of which development of basin development and management indicators, updating the SoB and addressing a number of important knowledge gaps are seen as key), the timetable set out in Figure 14 for preparation of refreshed and aligned MRC Programme plans by the end of 2015 may be viewed as an ambitious but achievable target.

A key issue therefore will be obtaining the cooperation of MRC's Development Partners to both agree to the revised approach to MRC Programme planning and to adjust their funding arrangements in a manner that ensures a smooth transition from their current funding cycles to ones consistent with the MRC strategic planning cycle. Dialogue with donors on this should commence as soon as possible.

6 Expected outcomes of the Basin Action Plan

This Basin Action Plan may be seen as the end point of a lengthy and extensive dialogue between the MRC, its Member Countries and the wider stakeholder community about how best to realise the aims and objectives of the MRC through a set of concrete actions. Starting with the technical discussions underpinning the agreement of the landmark Basin Development Strategy, the MRC has progressed and developed plans at both national and regional levels to address the Strategic Priorities established under the Basin Development Strategy. In doing so, opportunities to strengthen and improve the MRC's strategic planning processes have been identified.

This Basin Action Plan sets out the key strategic actions for MRC as a whole to address during the current 2011-15 planning cycle in order to capture the gains from this extensive dialogue. This Chapter summarises the outcomes that can be expected from implementing the Basin Action Plan.

6.1 Implementation of the MRC's Basin Development Strategy

The Basin Development Strategy has set out a total of 15 Strategic Priorities and within these stipulated 64 Strategic Actions as being required to address these Strategic Priorities.

The National Indicative Plans (NIPs) and the Regional Action Plan (RAP) have each been developed in a manner that fully reflects these priorities. The NIPs may be seen as a reflection of country perspectives on those issues that are of most important to each country. The RAP has been formulated in a way to ensure that all Strategic Priorities and Strategic Actions can be addressed in a transparent manner and which can be conveniently monitored within the framework of the MRC Strategic Plan.

Whilst it is noted that about 50% of regional activities are already being taken up, it is recognised that nevertheless not all MRC Programmes are fully aligned at present with the MRC's Strategic Priorities. Therefore 2011-15 should be seen as a transitional period during which the necessary alignment is progressively achieved.

6.2 Practical implementation of IWRM

The parallel NIP preparation process has been at the heart of the implementation of IWRM at the national level (communication and information sharing between sectors and sub-basins) and at the transboundary level (adaptation of national plans and processes).

The preparation of the NIPs has stimulated engagement of line agencies, river basin committees and other organisations in the planning process. The implementation of many NIP activities has already started in some Member Countries and others are budgeted and responsibilities assigned to appropriate line agencies, RBOs, and other entities to align with their annual work planning.

6.3 Reducing knowledge gaps

The Basin Development Strategy has identified and prioritised key knowledge gaps affecting the MRC's capacity to undertake basin-scale planning for development and management of the Mekong River system. These knowledge gaps demonstrably constrain the development potential of the basin.

Implementation of the Basin Action Plan (including the NIPs) will address many of these key knowledge gaps, which will enrich the next update of the Basin Development Strategy and enable the MRC to better undertake its mission to promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being.

Nevertheless not all knowledge gaps can be filled with current MRC Programme resources. The Basin Action Plan thus highlights the opportunity to take up additional activities through the proposed *Council Study* to address this.

6.4 Harmonisation of regional and national level planning

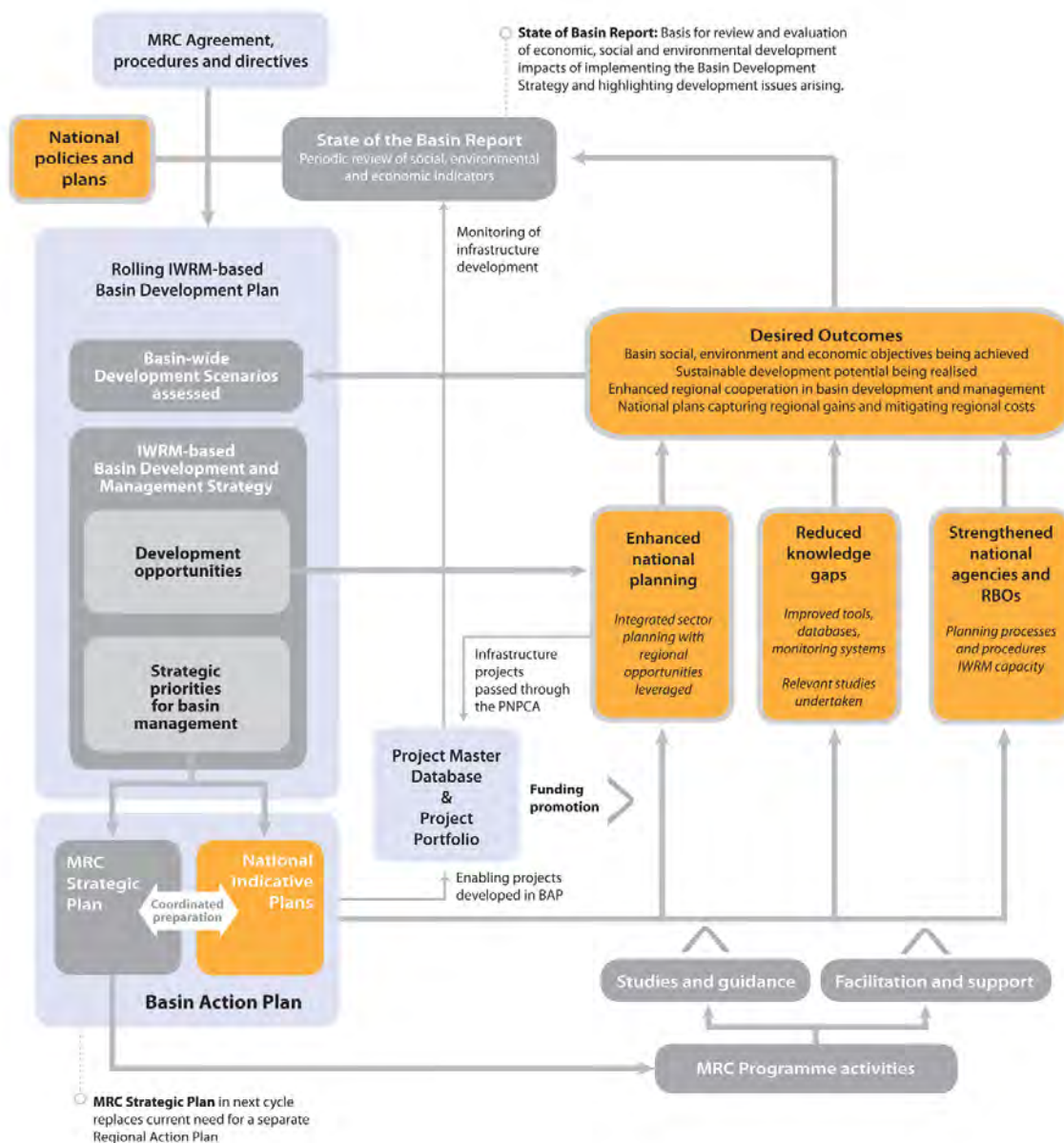
A key aim of the Basin Development Strategy is to further strengthen the linkages between regional and national level IWRM planning. The Basin Action Plan contributes to this by highlighting the relevance of planned measures under each National Indicative Plan to each MRC Programme's activities and by encouraging the MRC Programmes to leverage the potential synergies to the benefit of both regional and national efforts. Potential synergies include not only strengthening the linkages between the different levels of water management planning but also, importantly, in identifying and leveraging opportunities for transboundary development, including bilateral initiatives.

Harmonisation of regional and national level planning will be strengthened further by the NIPs informing future updates of the Basin Development Strategy, thus creating the circle of ownership of the planning and management processes that the Basin Development Strategy aspires to. In turn, MRC Secretariat will need to adapt its own response to country needs to ensure that these needs (as described in the NIPs) are fully reflected in the activities of the MRC Programmes.

Nevertheless, the considerable complexity of the current MRC's strategic planning processes makes it difficult to achieve this harmonisation. The Basin Action Plan sets out steps to streamline these processes in readiness for planning for the 2016-20 cycle. These steps will lead to a refreshed and shared understanding of not only the strategic planning process itself but also of its place in the wider context of integrated water resource management at all levels within the basin, as illustrated in Figure 17.

The benefits to be gained from adopting such an approach are considerable, and will lead to a greater responsiveness of the MRC to Member Countries' concerns and overall a more efficient, effective and transparent MRC organisation.

Figure 17 Harmonisation of regional and national planning



6.5 Practical support to decentralisation and core function development

The Basin Action Plan recognises decentralisation of MRC activities as being an integral part of the strategic planning process. In doing so the Basin Action Plan provides a structured platform by which to determine which strategic actions (defined as outputs) for river basin management should be undertaken at regional level and which at national level. Thus, the proposed planning process will reinforce the ongoing decentralisation of core river basin management functions (currently led by MRC’s International Coordination and Communication Section).

This will lead to considerable rationalisation of which outputs MRC Programmes are allocated so that they may focus more on activities which are truly of transboundary significance. At the same time, activities which are primarily of national relevance can be transferred to national activities under the National Indicative Plans. Where needed during the 2016-20 cycle, MRC Programmes can still support national activities of basin-wide significance, but not necessarily lead them.

6.6 Improved MRC Programme planning

Under the streamlined approach, MRC Programme planning will be considerably simplified. Outputs for each Programme⁷ will be determined on the basis of the Strategic Priorities (Outcomes) and Strategic Actions (Outputs) established in the update of the Basin Development Strategy (to which the MRC Programmes will be contributing their technical insights).

These outputs will be allocated under the MRC Strategic Plan to each Programme along with the required milestone dates and key performance indicators. MRC Programmes will then be required only to develop costed activity plans to deliver the allocated outputs and address the desired outcomes. This will greatly reduce the planning workload for not only the MRC Programmes but also for those who are required to oversee and coordinate Programme planning and implementation. This rationalisation of MRC Programme activities will also ensure that their activities fully reflect national perspectives on what should be undertaken at regional level within the context of a fully integrated plan.

Furthermore, Development Partners wishing to fund MRC Programme activities will be assured that the planned activities are fully consistent with MRC strategic requirements, themselves based on country requirements.

6.7 Opportunity to improve the MRC M&E system

The Basin Action Plan will lead to a much simplified and more transparent monitoring and evaluation system. Instead of 15 different processes or systems (one for each MRC Programme, one for the MRC Strategic Plan and one for the Basin development Strategy), with as many as 2,000 indicators, a single unified system will be created covering all MRC activities, perhaps involving no more than 200 indicators.

The unified system will track activity progress, delivery of required outputs, the effectiveness of those outputs in achieving desired outcomes and the overall impact of these outcomes of the MRC on social, environmental and economic conditions and governance within the basin.

The new system will not only create substantial efficiencies but will also, for the first time, provide an evidence-based approach to measuring MRC performance.

⁷ Or each of the needed number of functional units when the MRC would reorganize the MRC Secretariat in accordance with the defined core river basin management functions

7 Implementation schedule

Implementation of the Basin Action Plan will be primarily through the four National Indicative Plans and the Regional Action Plan. This Chapter focuses on the implementation schedule for the key activities identified in this Basin Action Plan that overlay the actions set out in the NIPs and RAP and which will underpin the move towards a streamlined approach to MRC strategic planning and subsequent operations.

Project and Programme activities

Implementation of the NIP by each MRC Member Country and the RAP by each MRC Programme is ongoing. The key supplementary activities are:

- ❑ At country level – for each country to seek and secure funding for unfunded NIP project activities with support from MRC Secretariat in promoting these investments (using this Basin Action Plan); and
- ❑ At regional level – for MRC Programmes to identify funding gaps in order to meet their MRC Strategic Plan milestones and for MRC to take these into consideration when finalising the design of the *Council Study*

Updating the Basin Development Strategy

Whilst there are a wide range of actions to take in the preparation of the update of the Basin Development Strategy, the Basin Action plan highlights the necessity of:

- ❑ Identification and agreement of a set of management indicators for the State of the Basin Report to report on and for the assessment of scenarios and/or other development issues to be made against;
- ❑ Preparation of the State of the Basin Report to create a baseline for consideration of development issues which the Basin Development Strategy will need to address; and
- ❑ Design and implementation of an assessment process (scenarios, cost-benefit sharing, etc. and taking account of new information and conditions) to underpin the determination of the Basin Development Strategy.
- ❑ Development and discussion of a concept note that describes the process and outline for the updating and broadening of the IWRM-based Basin Development Strategy.

Basin Action Planning for 2016-20

In order for Basin Action Planning to run smoothly in 2016-20, it is necessary to undertake a number of key preparatory steps:

- ❑ Dialogue with Development Partners to agree arrangements for future funding cycles, together with such measures as may be required to ensure continuity of funding during the transitional period in the lead up to the new cycles;
- ❑ Review and definition of the associated project budget concept to guide funding and budgeting arrangements for future applicable projects; and
- ❑ Dialogue with countries to review lessons learnt from the current NIP preparation and implementation processes and to review and refresh guidance for refreshing the NIPs for 2016-20, including their M&E arrangements and whether to limit NIPs to enabling and non-structural projects.

The key steps following agreement of the updated Basin Development Strategy are the negotiation with countries of how to allocate the Basin Development Strategy outputs between the NIPs (national implementation) and MRC Strategic Plan (regional implementation), preparation of the MRC Strategic Plan, refreshment of the NIPs and preparation of MRC Programme activity plans and funding applications. Since all of these documents will take on a new form compared to the current cycle, MRC will need to prepare in advance templates for these.

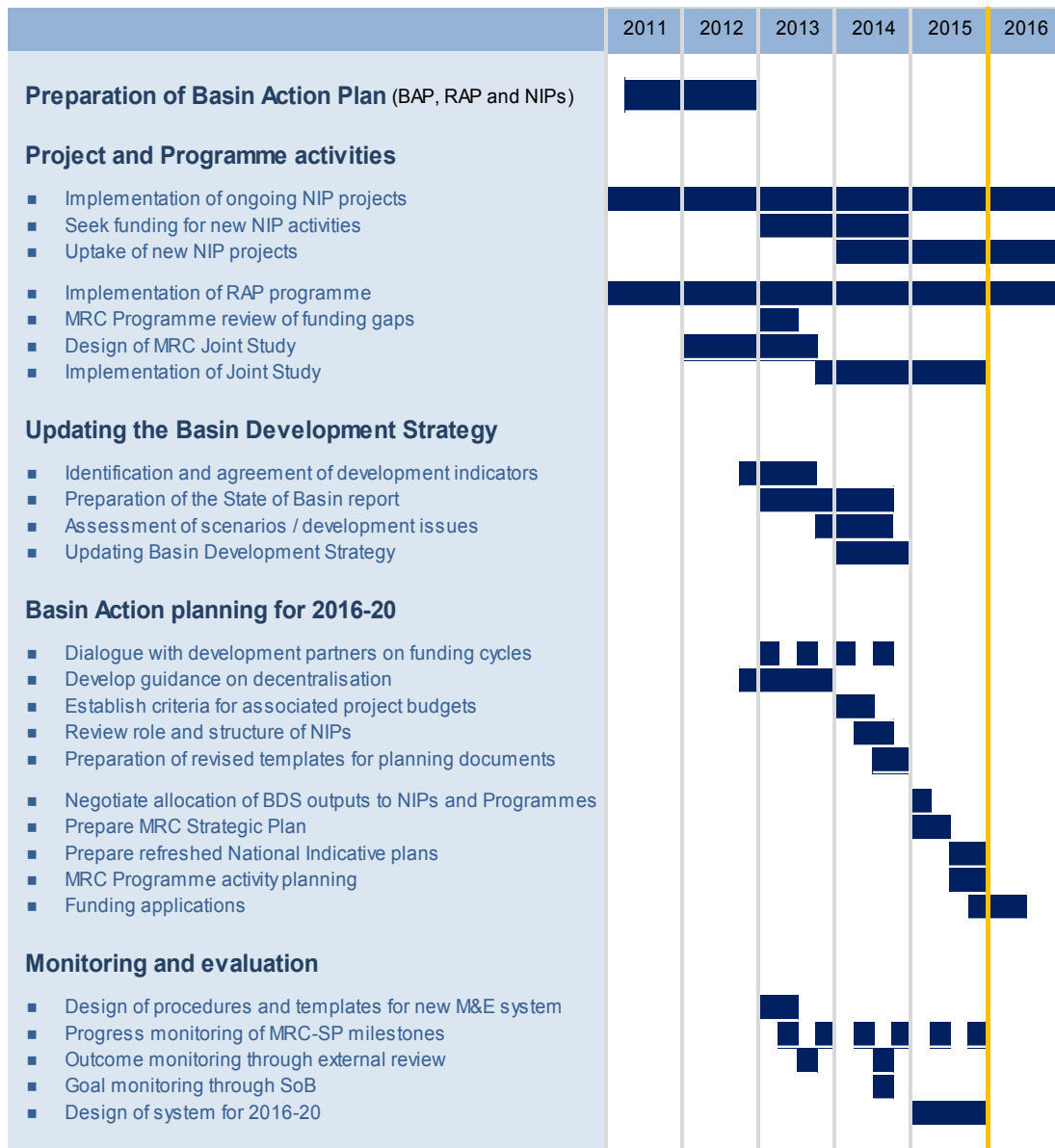
Monitoring and evaluation

The principles for monitoring and evaluation noted in this Basin Action Plan are further explained in the Regional Action Plan. These principles need to be elaborated by MRC into procedures and templates for implementing the new M&E system, with ToR developed for external reviews.

Implementation schedule

An implementation schedule of the key actions above is given in Figure 18.

Figure 18 Implementation schedule for the Basin Action Plan



Appendices

Appendix A Investment portfolio of unfunded NIP projects

All estimated costs in US dollars

Total**Sub-totals**

Cambodia

Outcome 1: Irrigated agriculture for food security and poverty alleviation expanded and intensified

Project 1.1: Improvement of agricultural productivity and diversification	21,640,510	
Project 1.2: Agricultural land classification and Soil Fertility Improvement in LMB	8,844,200	
Project 1.3: Integration of Environmentally Friendly Practices in Agriculture and Water Management	13,389,500	
Project 1.4: Improvement and development of irrigation and drainage systems	36,473,560	80,347,770

Outcome 2: Sustainable hydropower development and other water resources uses improved through promoting integrated uses of water and its related resources

Project 2.1: Capacity development in IWRM for Inter-Agency and cross-boundary coordination	743,915	
Project 2.2: Strengthening institutional and human capacity building in sustainable hydropower development at national, subnational, and community levels.	1,352,645	
Project 2.3: Integrated flood and droughts risk management planning strengthened	2,998,500	5,095,060

Outcome 3: Uncertainty and risks of climate change and other development are addressed

Project 3.1: Enhancing institutional capacity for sustainable hydropower development (SHD) and climate change adaptation	2,526,000	
Project 3.2: Assessing results of upstream and downstream development to support informed policy making processes	1,797,000	4,323,000

Outcome 4: Essential knowledge, tools and guidelines are developed and used to address uncertainty and minimize risks of the identified development opportunities

Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented	1,839,000	
Project 4.2: Development of Environmental and Socio-economic Baseline and development scenario impact assessment for Tonle Sap	1,262,000	
Project 4.3: Study of impact on Cambodian inland fishery and sediment transport in the Mekong Floodplain and Tonle Sap Great Lake	930,000	4,031,000

Outcome 5: Critical Sub-Basin management objectives and strategies established, and the national and basin water resources management processes including targeted IWRM capacity building program strengthened.

Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas	2,386,695	
Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	2,235,815	4,622,510

Estimated totals for Cambodia**98,419,340**

All estimated costs in US dollars

Total**Sub-totals**

Lao PDR

Focus Area 1. Sustainable agriculture and fisheries development for food security and poverty reduction

Priority projects

Project 1.1: Improvements to irrigated agriculture along the Mekong River to increase crop and livestock productivity	500,000	
Project 1.2: Develop national fisheries law, create awareness on the law and regulations, and develop a fisheries management strategy and plans for Lao PDR	450,000	
Project 1.3: Improve fisheries management system in reservoirs and irrigation systems	500,000	
Project 1.4: Promote the development of aquaculture in Lao PDR	1,500,000	
Project 1.5: Improvement of fisheries statistics in Lao PDR	1,000,000	3,950,000

Focus Area 2. Energy and Sustainable Hydropower Development

Priority projects

Project 2.1: Strengthening hydropower management system under the framework of the RBCs	500,000	
---	---------	--

New projects

Project 2.2: Promotion of small to mid-scale hydropower projects enhancing national energy security	15,000,000	15,500,000
---	------------	------------

Focus Area 3. Natural resource management, particularly water resources management

Priority projects

Project 3.1: Strengthening of water resource procedures and guidelines	350,000	
Project 3.2: Strengthening of Nam Ou River basin management	1,000,000	
Project 3.3: Strengthening the Management of the Conservation and Protection Forest Areas Programme	77,000,000	

Project New:

Project 3.4: Strengthening of Sekong River basin management	1,000,000	
Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	2,500,000	81,850,000

Focus Area 4. Climate change adaptation and mitigation

Priority projects

Project 4.1: Greater Mekong Subregion: Flood and Drought Management and Mitigation Project – Lao People's Democratic Republic	590,000	590,000
---	---------	---------

Focus Area 5. Human resource development for natural resources management

Priority projects

Project 5.1: Establishment of Lao National Mekong Basin Information System	500,000	
Project 5.2: Inventory of environmental hotspots in Lao PDR	1,000,000	
Project 5.3: Study on the social, economic and environmental benefits of hydropower development in Lao PDR	500,000	

<i>All estimated costs in US dollars</i>	Total	Sub-totals
Project 5.4: Installation of navigation aids and waterway distance posts along the Mekong river in the section from the Khone Falls, the Golden Triangle, and to Vientiane Capital of Lao PDR	500,000	
Project 5.5: Established search and rescue teams and stations, and build their capacity to take control and responsibility in the occurrence of an accident	300,000	
<i>New projects</i>		
Project 5.6: Study on ecosystem services of wetlands and biodiversity	200,000	
Project 5.7: Case study on impacts of climate change on agriculture	300,000	
Project 5.8: Collaborative Research Project on the Establishment of the Sustainable and Independent Farm Household Economy in the Rural Areas of Indo-China (Lao PDR)	500,000	
Project 5.9: Hydro-meteorology network enhancement	110,000,000	
Project 5.10: Riverbank protection master plan	400,000	
Project 5.11: River dredging impact assessment	500,000	
Project 5.12: Navigation channel improvement along the Mekong River in the section from Houayxai to Luang Prabang of Lao PDR	350,000	
Project 5.13: Updating chart datum of UHA 1996 of the Lower Mekong	350,000	115,400,000
<i>Focus Area 6. Research and development</i>		
<i>Priority projects</i>		
Project 6.1: Strengthening NUOL's Curriculums on IWRM, Meteorology and Hydrology, Environmental Economics, and Engineering and Toxicology	1,000,000	
Project 6.2: Gender mainstreaming in integrated water resources management and planning	500,000	
Project 6.3: Capacity building for Monitoring, Evaluation and Learning (MEL) related to PINs implementation	500,000	
<i>New projects</i>		
Project 6.4: Enhancing capacity building of MONRE staff on Agro–Climate Modelling and Application	5,000,000	
Project 6.5: Strengthening capacities in forest Information Management	1,000,000	8,000,000
Estimated totals for Lao PDR		225,290,000

All estimated costs in US dollars

	Total	Sub-totals
Thailand		
PIN T-001 Capacity Building to RBC and Network	475,000	
PIN T-002 Database Management for Basin Development	245,000	
PIN T-003 Promote River Basin Organization Network and Information Dissemination	360,000	1,080,000
Estimated totals for Thailand		1,080,000

All estimated costs in US dollars

Total**Sub-totals****Viet Nam****A. Mekong Delta***Focus Area 1. Integration and strengthening of national planning and management processes with Basin Development Strategy*

FA.1.1 Establishment process and procedures for integration of national and sector planning into the IWRM-based Basin Development Strategy of MRC.	70,000	
FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	100,000	
FA.1.3 Preparation of procedure for notification of water resources infrastructure projects development and operation in the Mekong Delta	50,000	
FA.1.4 Preparation of Guidelines for data and information sharing for the Mekong Delta	50,000	
FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	200,000	470,000

Focus Area 2. Development of vision, updated sector management strategies and environmental, economic and social objectives for base line for monitoring

FA.2.1 Development of vision for the Mekong Delta in the context of IWRM and environmental, economic and social objectives to support the monitoring development projects.	150,000	
FA.2.2 Updating the water resources development scenarios for the Mekong Delta to be used for reviewing and improving the basin development scenarios	90,000	
FA.2.3 Preparation of state of environment report for the Mekong Delta	150,000	
FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	500,000	
FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	150,000	1,040,000

Focus Area 3: Address opportunities and consequences of on-going development to enhance sustainability of development projects

FA.3.1 Assessment of the impacts of the operation of upstream dams, especially in extremely uncertainty operation in combination with the inter-basin and intra water diversion projects to the Mekong Delta including Cambodia territory and recommendation on mitigation measures.	75,000	
FA.3.2 To set forth measures to use new development opportunities for the Mekong Delta under the circumstance of increased dry season flow resulted from reasonable operation of the upstream dams as scientific bases to support for VNMC's negotiation in protecting dry season flow for the Mekong Delta.	75,000	
FA.3.3 Effective implementation of the Navigation Agreement between Viet Nam and Cambodia in the context of upstream development and climate change.	150,000	
FA.3.4 Based upon the scientific and realistic justifications to establish principles for defining the potential of agricultural development and preliminary principles for cost/benefit sharing amongst the water use sectors in the Mekong Delta.	150,000	
FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	2,933,000	3,383,000

<i>All estimated costs in US dollars</i>	Total	Sub-totals
<i>Focus Area 4. Improvement of water use efficiency for irrigated agriculture to serve for national food security and poverty alleviation policy</i>		
FA.4.1 Improvement of water use efficiency for irrigated agriculture and fishery development in the Mekong Delta.	200,000	
FA.4.2 Development of Strategy for drought management and water supply.	150,000	
FA.4.3 Diversification of agriculture production and rural development in the situation of upstream development, climate change and sea water rise.	130,000	
FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	70,000	
FA.4.5 Preliminary study for water allocation at the main canal intake to main stream of Mekong river and environmental flow for the Mekong Delta.	150,000	700,000
<i>Focus Area 5. Assessment of uncertainties and risks caused by developments and climate change</i>		
FA.5.1 Identification of uncertainties and risks related to mechanism of sediment transport and nutrient; and assessment of the impacts of upstream development to sediment and nutrient entering into the Mekong Delta.	75,000	
FA.5.2 Study of flood impacts to the quality and efficiency of fluvial land use in the Mekong Delta, Viet Nam.	80,000	
FA.5.3 Define the issues and analyse uncertainties and risks affecting to the fishery resources in the context of emerging development in the basin and its implication to the livelihood of people living in the Mekong	300,000	
FA.5.4 Assessment of tendency and change of biodiversity, environmental hotspots in the Mekong Delta and their impacts to the vulnerable communities.	300,000	
FA.5.5 Assessment and prediction of the immediate and long-term impact of climate change to the Mekong Delta under the condition and tendency of emerging development in the basin.	250,000	1,005,000
B. Se San and Srepok River Basins, Central Highland of Viet Nam		
<i>Focus area 6. Integration and strengthening of planning and management processes for Se San, Srepok sub-basins with Basin Development Strategy</i>		
FA.6.1 Development a vision for the sub-basins of Se San and Srepok in the context of IWRM together with environmental, economic and social objectives and State of sub-basins report to support the monitoring of developments and environmental impacts.	150,000	
FA.6.2 Preparation of the formulation of Integrated Water Resources Management Strategy taking into account of trans-boundary impacts.	150,000	
FA.6.3 Development of the procedures for integration and harmonization of sectors management strategies with the regional strategies with respective to the specific conditions of the two rivers.	50,000	
FA.6.4 Development of Procedures for notification of water and related resources infrastructure projects for VNMC aimed to support VNMC in solving trans-boundary impact issues and implementing the IWRM-based basin development Strategy.	30,000	
FA.6.5. Strengthening the operation of existing Srepok River Basin Council.	100,000	
FA.6.6 Initial Preparations for the establishment of Se San River Basin Organization.	50,000	
FA.6.7 Development a suitable mechanism for cooperation with Cambodia to successfully implement the IWRM-based Basin Development Strategy.	150,000	

<i>All estimated costs in US dollars</i>	Total	Sub-totals
FA.6.8 Development of technical guidelines for management of water quantity and quality, and prevention of water pollution for the two river sub-basins.	200,000	
FA.6.9 Upgrade and expand the network for monitoring water use, especially at the border areas and study to establish network for biodiversity and ecological monitoring for the sub-basins of Se San and Srepok.	500,000	1,380,000
<i>Focus Area 7: Enhancement of the sustainability of tributaries' hydropower development through mitigation of negative impacts and cost and benefit sharing</i>		
FA. 7.1 Assess the impacts of flow change caused by the development and operation of upstream hydropower dams to downstream and Cambodia territory; recommendations on mitigation measures.	100,000	
FA.7.2 Defining the potential of flow contribution and its impacts to the change of flow in the main stream of Mekong river	100,000	
FA.7.3 Conservation of ecological and environmental hotspots through solutions forwards the sustainability for the Se San and Srepok sub-basins.	300,000	
FA.7.4 Upgrade and preparation of the standards for sustainable hydropower development for the Se San and Srepok basin rivers.	30,000	
FA.7.5 Preparation of basic principles and options for cost and benefit sharing as one of important solutions for sustainable development and bases for promoting cooperation in the MRC.	200,000	730,000
<i>Focus Area 8. Assessment of potential impacts of climate change to water and related resources and socio-economic conditions in Se San and Srepok sub-basin</i>		
FA.8.1 Identification of the issues of climate change, build up approach and database to support the studies of measures to response to climate change in immediate and long term period.	100,000	
FA.8.2 Assess the potential impacts of climate change combined with the construction and operation of projects to the environment, socio-economics of the sub-basin of Se San and Srepok river, including Cambodia territory and integrate the issues of climate change in the sub-basin into the basin scenarios.	175,000	275,000
C. Capacity Building		
<i>Focus Area 9: Improvement of knowledge and raise awareness to meet requirements on the implementation of the IWRM-based Basin Development Strategy</i>		
FA.9.1 Formulate a Program for raising awareness of the IWRM-based Basin Development Strategy and how to implement it.	200,000	
FA.9.2 Prepare a strategy of VNMC for involving the participation of stakeholders and community in implementing the IWRM-based Basin Development Strategy and Mekong Agreement.	100,000	
FA.9.3 Improvement and upgrade of modelling tools for application in the assessment and monitoring of water utilization and support the application of DSF and implementing the MRC procedures.	60,000	
FA.9.4 Development of methodology and approach to study measures to response to climate change.	150,000	510,000
Estimated totals for Viet Nam		9,493,000

**Appendix B Schedule of MRC
Strategic Plan milestones
("RAP projects")
allocated to MRC
Programmes**

Schedule of milestones (“RAP projects”) allocated to each MRC Programme under the MRC Strategic Plan 2011-15

Updated milestones dates provided in bold

MRC Strategic Plan Ref	Description	Updated milestone date
<i>All Programmes – milestones to be met by every MRC Programme</i>		
ALL01	Sector reviews updated by sector programmes	By 2015
ALL02	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	By 2013
<i>Agriculture and Irrigation Programme</i>		
AIP01	Study report on groundwater development potential	2014
AIP02	Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	Pending
AIP03	Guidelines for improved irrigation management	Pending
AIP04	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis	2015
AIP05	Research and monitoring reports on agricultural groundwater use and changes in groundwater conditions in selected trans-boundary areas to establish pilot trans-boundary groundwater management system	2015
<i>Basin Development Programme</i>		
BDP01	Basin Action Plans approved for implementation	Dec-12
BDP02	Basin-wide objectives or “baseline indicators” covering economic, environmental and social factors developed	Jun-14
BDP03	Basin development strategy updated every 5 years to also include sub-basin water management issues	Nov-14
BDP04	A basin-wide management plan/strategy prepared	Nov-14
BDP05	National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy	Continuous
BDP06	Basin-wide and sector water resources management guidelines	2015
BDP07	Study report on management of risks of on-going and committed water resources development projects	Dec-13
BDP08	A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established	Oct-14
BDP09	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions	Feb-14
BDP10	A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational	Continuous
BDP11	A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRC Secretariat for monitoring and providing early advice on addressing transboundary risks associated with LMB water development	Dec-14
BDP12	Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream	Dec-13
BDP13	Strategy implementation monitoring system designed	Nov-12
BDP14	Strategy implementation monitoring system operational	Dec-12

MRC Strategic Plan Ref	Description	Updated milestone date
<i>Climate Change and Adaptation Initiative</i>		
CCAI01	Climate change adaptation studies of sub-basins to define climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	2014
CCAI02	Study report on the utilisation of inland transport toward a low-carbon and low-pollution future for transportation including options of improved fuel/energy efficiency of inland barges vessels	2015
CCAI03	Study report on the impacts of climate change on navigation and existing infrastructure	2015
CCAI04	Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn	1 st batch June 2013, 2 nd batch Dec 2014
CCAI05	A Climate Change Adaptation Strategy for the LMB prepared and approved	Jun-15
CCAI06 <i>Formerly EP05</i>	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	2013/updated 2014
CCAI07 <i>Formerly EP07</i>	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	2015
CCAI08 <i>Formerly EP15</i>	Monitoring and assessment programme developed to analyze implications of climate change on basin's long-term hydrology, agriculture, food security, ecological conditions and bio-diversity	2014
<i>Drought Management Project</i>		
DMP01	Drought mitigation strategies and mitigation options developed for rainfed areas	By 2013
<i>Environment Programme</i>		
EP01	Management plans for environmental hotspots impacted by changed flow regimes developed	2015
EP02	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	2013
EP03	Priority habitat areas and environmental hotspots identified, and management plans for those highly or moderately impacted by potential changes in flow conditions and the proposed LMB mainstream dams developed	2015
EP04	Environmental impact assessments undertaken for proposed regional navigation developments	Continuously
EP05	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	<i>Transferred to CCAI</i>
EP06	Climate change impact and vulnerability assessment tools developed for biophysical and social systems	<i>Is part of EP07</i>
EP07	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	<i>Transferred to CCAI</i>
EP08	Study report on biodiversity changes	2015
EP09	Guide to integrate climate change into SEA and EIA processes developed	2013
EP10	Study report on social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	2014
EP11	Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts	Continuously
EP13	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored	2015
EP14	Diagnostic study for toxic contaminants in the Mekong riverine environments	By 2012
EP15	Monitoring and assessment programme developed to analyse implications of climate change on basin's long-term hydrology, agriculture, food security, ecological conditions and bio-diversity	<i>Transferred to CCAI</i>

MRC Strategic Plan Ref	Description	Updated milestone date
EP16	Environmental Outlook published	2015
<i>Flood Management and Mitigation Programme</i>		
FMMP01	A regional IFRM strategy and implementation Roadmap prepared	2014
FMMP02	District or comparable level IFRM and Land-use Management Plans prepared for flood focal areas (one in each Member Country)	2015
FMMP03	Country specific roadmaps developed to formulate IFRM policies and strategies	2015
FMMP04	A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	2014
FMMP05	Study report on basin-wide and multi-sector study of long-term flood management options for the Mekong Delta to respond to growing pressures from land development, sea level rise, climate change, and upstream development plans	2015
FMMP06	Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared	Ongoing
FMMP07	Trans-boundary flood risk management tools developed	2014
<i>Fisheries Programme</i>		
FP01	Guidelines for fish-friendly development of irrigation schemes	2013
FP02	A comprehensive, basin-wide fish management strategy developed	2015
FP03	Study report on reduction of capture fisheries and its social implications	2013
FP04	Study report on classification of LMB habitats and their fish, threats and opportunities	2013
<i>Integrated Capacity Building Programme</i>		
ICBP01	Gender audits undertaken for all MRC programmes and major policy documents to ensure gender responsive approaches are mainstreamed	2013
ICBP02	Gender tools (gender analysis, gender statistic, gender budgeting, etc.) are applied in each stage of the project management cycle.	2013-2014
ICBP03	Gender responsive capacity of the NMCSs and targeted national agencies strengthened and gender tools are applied in the regular works of the prioritised national line agencies as identified by ICBP	2013-2015
ICBP05	An IWRM competency framework developed	May-12
ICBP06	IWRM training materials updated	2013
ICBP07	Leadership capacity development needs/gaps assessed	2012
ICBP08	Networks of capacity building institutions in the sub-region and region established	Continuously
ICBP09	Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity	2011 - 2013
ICBP10	Capacity development plans for the MRC Secretariat and targeted national agencies prepared	2011-2013
ICBP11	IWRM competency framework developed and applied for the MRC Secretariat and targeted national agencies	2012 onwards
ICBP12	MRC, MDBA, and AusAID Strategic Liaison Partnership established	2012 - 2016
ICBP13	Internships, professional work exchange opportunities, and provision of scholarship-related information updated	On-going
<i>International Cooperation and Communication Section</i>		
ICCS01	Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy	Continuously
ICCS02	MRC-wide stakeholder analysis and structured engagement process developed	2013

MRC Strategic Plan Ref	Description	Updated milestone date
<i>Information and Knowledge Management Programme</i>		
IKMP01	Groundwater inventories throughout the Basin including development and management plans prepared (or, Groundwater resource mapping and assessment of its potential use for agriculture and its impacts on river systems)	2015
IKMP02	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	Ongoing
IKMP02	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	Ongoing
IKMP03	Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures	2013
IKMP04	National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies	2015
IKMP05	Tools developed to analyse and assess impacts of water use in different sectors	2015
IKMP06	Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures	Ongoing
<i>Initiative on Sustainable Hydropower</i>		
ISH01	Ecologically sensitive sub-basins identified for limited development of hydropower on tributaries	2013
ISH02	Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams	2013/14
ISH03	Negative impact mitigation measures for tributary dams	2014
ISH04	Design guidance for mainstream dams	2013
ISH05	Study report on evaluated options of mainstream power development in context of national and regional power strategies	2013
ISH06	Guidelines on risk mitigation options for possible mainstream dams	2014
ISH07	Mainstream and tributary hydropower potential and alternative power options assessed and reported, including innovative hydropower schemes that do not affect connectivity in the lower basin	a)2014 b)2013
ISH08	Essential knowledge acquired to minimize uncertainty of possible mainstream dams	2014
ISH09	Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools	2013
ISH10	Guidance on Sustainable Management of Reservoir Watersheds prepared	2014
ISH11	Environmental baseline information improved for hydropower planning	2014/15
ISH12	Study report on a detailed modelling of flood-related impacts upstream of Kratie to understand the impacts of flow changes on different river reaches, and how mainstream dams will affect these	2015
ISH13	Benefit-sharing options for hydropower on tributaries evaluated and reported	2013
ISH14	Technical assistance provided to hydropower developers on safeguards and compliance monitoring	Ongoing
ISH15	Strengthened cooperation with China for coordinated operations of Lancang hydropower dams to secure benefits of increased dry season flow, address issue of sediment transport and provide early warning	2012-14
<i>Mekong IWRM Project (MIWRMP)</i>		
MIWRM01	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	2015

MRC Strategic Plan Ref	Description	Updated milestone date
MIWRM02	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	2016
MIWRM03	Strengthened implementation of MRC Procedures	Ongoing (2015)
MIWRM04	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	2013
MIWRM05	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	2011
<i>Navigation Programme</i>		
NAP01	Regional Master Plan for the overall navigation development in the LMB prepared	2014-2015
NAP02	Overall Strategy for incorporation of ship locks in planned mainstream dams , including standards for lock design and operations formulated	2013-2014
NAP03	Regional Feasibility Study for Mekong Waterway Improvement prepared	<i>Not in NAP programme</i>
NAP04	Operational rules, regulation, institutional and engineering standards (including waterway and vessel classification, safety construction, training syllabi, etc.) pertaining to navigation formulated, standardized and harmonized among all the Member Countries	2014
NAP05	Significance of the tributaries of the LMB for navigation identified	2015
NAP06	Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established	Ongoing
NAP07	Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups	2014-2015
NAP08	Trans-boundary environmental impact assessment of physical navigation improvement conducted	2015
NAP09	Risk analysis prepared leading to a scope for prevention and contingency of spills and navigation disasters, and management strategy for prevention, management and combating pollution from navigation developed	Ongoing
NAP10	Operational Automatic Identification System for the Mekong Delta in Viet Nam and Cambodia established and a communication system for navigation in Lao PDR and Thailand developed	2014- 2015
NAP11	Navigation-related database (River Information System, fairway information, voyage planning, cargo and passenger statistics, record of accidents, and proposed economic developments) established, and forecasting system of Low Water Alerts for navigation developed	2015
NAP12	Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism	2014
NAP13	Aids to navigation as per priority needs, including landing facilities for tourists installed	Ongoing + 2013
NAP15	Information on Navigation accidents published and disseminated to regional, dialogue and Development Partners	Ongoing + 2013
NAP16	Standards for waterway classifications developed	2014
<i>Water Management Programme</i>		
WMP01	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	To be updated

Appendix C Strategic Priorities and Strategic Actions addressed under the Basin Action Plan at national and regional levels

Basin Action Plan

Summary of NIP and RAP components addressing the Strategic Priorities and related Strategic Actions of the Basin Development Strategy

		National Indicative Plans <i>National project reference numbers</i>				Regional Action Plan <i>MRC Strategic Plan milestone reference numbers</i>															
		Cambodia	Lao PDR	Thailand	Viet Nam	ALL	AIP	BDP	CCA	DMP	EP	FMP	FP	ICBP	ICCS	IKMP	ISH	MWRMP	NAP	WMP	
Strategic Priorities for Basin Development																					
421000 Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin																					
421001	Strengthen cooperation with China																	15			
421002	Enhance coordination among the LMB countries on the operation of tributary dams by improving the implementation of the MRC Procedures		2.1, 2.3, 2.5															02			
421003	Reach agreement to protect the baseline dry season flows on the Mekong mainstream							12													
421004	Management of risks of committed projects and mitigation measures							07													
422000 Expand and intensify irrigated agriculture for food security and poverty alleviation																					
422001	Drought mitigation strategies for rainfed areas	1.1, 1.2, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9	1.6, 5.8		4.2		01			01											
422003	Guidelines for fish-friendly development of irrigation schemes		1.2, 1.3		4.1								01								
422004	Guidelines for promoting integrated pest management (IPM)		1.1				02														
422005	Guidelines for improved irrigation management	1.3	5.8				03														
423000 Improve sustainability of hydropower development																					
<i>(a) Move towards sustainable development of hydropower on tributaries</i>																					
423101	Identification of ecologically sensitive sub-basins	5.1	5.2, 5.6															01,09			
423102	Multi-purpose evaluation of hydropower projects	2.2, 5.2	2.4, 2.5, 2.7		3.4													02			
423103	Negative impact mitigation measures for tributary dams		2.1															03,10			
423104	Management plans for affected environmental hot spots	4.1	5.2		5.4, 7.3					01											
423105	Evaluation of benefit-sharing options	2.1			3.4													13			
<i>(b) Address the uncertainty and risk of possible mainstream dams</i>																					
423201	Acquire essential knowledge to minimize uncertainty	3.2	3.3, 5.9		3.1													08			
423202	Identification of risk mitigation options	3.2	2.3		2.2													06			
423203	Strengthening PNPCA process		2.2		1.3													01			
423204	Design guidance for mainstream dams				7.4													04		02	
423205	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions									02											
<i>(c) Assess power options, including alternatives to mainstream hydropower</i>																					
423301	Evaluation of mainstream power development options in context of national and regional power strategies				3.2													05			
424000 Acquisition of essential knowledge to address uncertainties and minimise risk																					
424001	Sediment and nutrient trapping and their consequent risks		5.10, 5.11		3.5, 5.1													03			
424002	Reduction of capture fisheries and social implications		1.5, 5.6										03								
424003	Biodiversity changes									08											
424004	Social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	3.1, 4.2	5.3		2.1, 4.5, 6.1, 6.2					10											
425000 Options for sharing the potential benefits and costs of development opportunities																					
425001	Options for sharing the potential benefits and costs of development opportunities	2.1	5.3		3.4, 7.5		09											13			
426000 Climate change adaptation																					
426001	Assess impacts of climate change on water and related resources of LMB in medium to long term	3.1, 3.4, 3.6	5.7		5.5, 8.1			03		06											
426002	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB							02,05		07											
426003	Pilot schemes for climate change adaptation	1.10, 3.3	3.7, 4.2, 4.3, 4.4		4.3, 8.2, 9.4			04													
427000 Integration of basin development planning considerations into national systems																					
427001	Alignment of national water resources development planning and project identification	2.1			1.1		05														
427002	Addressing identified risks early in project identification and preparation						07				07										
427003	Maintain a register of existing, ongoing and planned water resources development and water-related projects at NMCSs and MRCS						11														

Summary of NIP and RAP components addressing the Strategic Priorities and related Strategic Actions of the Basin Development Strategy

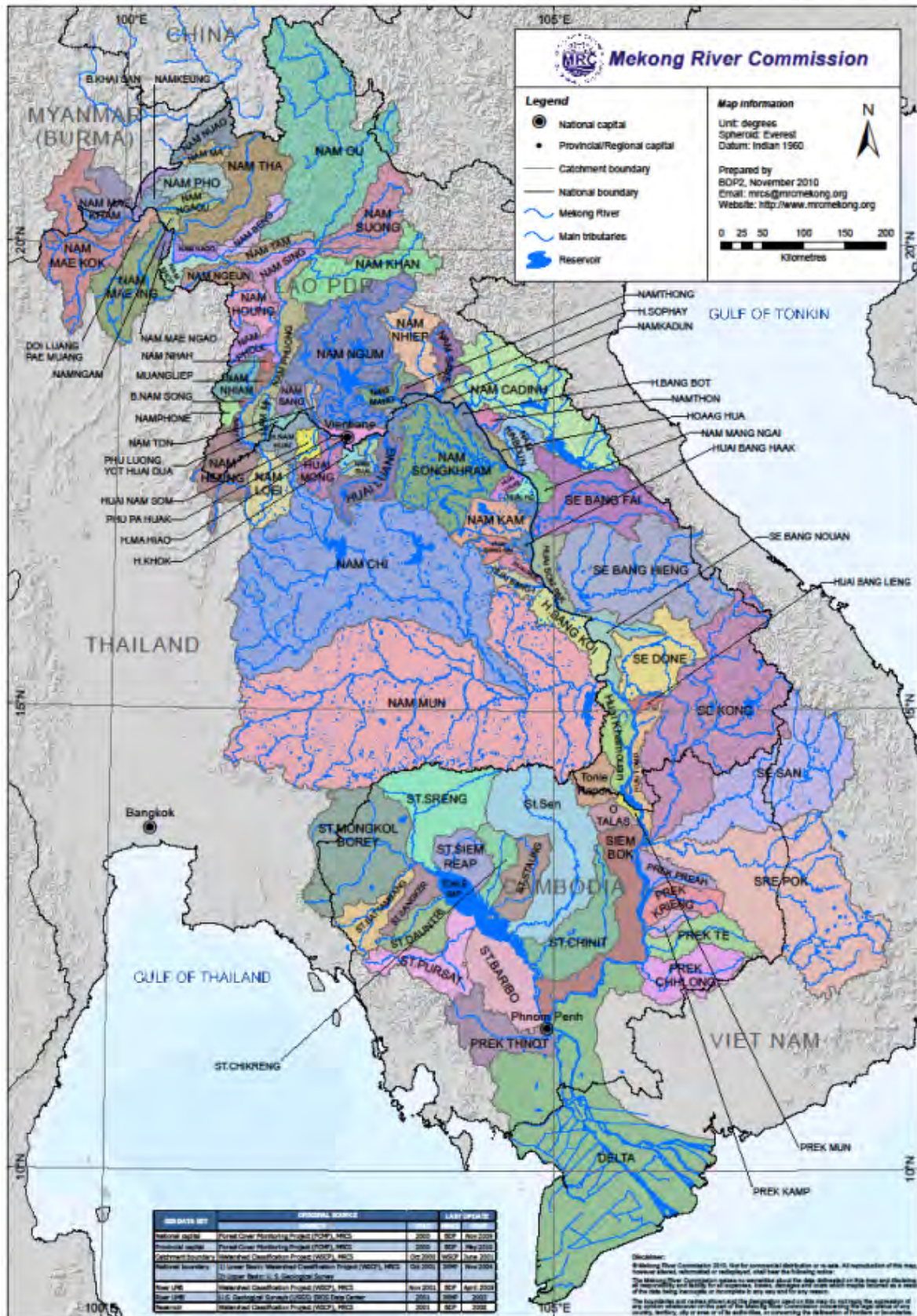
		National Indicative Plans National project reference numbers				Regional Action Plan MRC Strategic Plan milestone reference numbers															
		Cambodia	Lao PDR	Thailand	Viet Nam	ALL	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	IWRM	NAP	WMP	
Strategic Priorities for Basin Management																					
431000 Establish basin visions and management strategies for water-related sectors																					
431001	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	4.3	1.2, 1.3, 1.4		5.2						04		02,04							01, 05,07, 12,16	
431002	Navigation: Preparation of a master plan for regional waterborne transport and development of rural water transport				3.3						04									01,05, 07,12, 16	
431003	Navigation: Preparation of a master plan for navigation in Cambodia	2.5																		01	
431004	Navigation: Preparation of a navigation improvement plan		5.4, 5.5, 5.12, 5.13, 5.14																	03,04,06, 08,09, 13,14	
431005	Flood and drought risk management: Detailed analysis of flow and flood changes along the mainstem from northern Thailand to the Delta	2.3, 2.4	4.1		4.4, 4.5, 5.2							04									
431006	Wetland management: Monitoring of biodiversity loss in wetlands with ecologically important areas with high dependence of local population	4.3, 5.1	5.6								13										
431007	Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population		5.6								13	02									
432000 Strengthen national level water resources management processes																					
432001	Capacity building in surface water and groundwater monitoring		3.2, 3.4														02				
432002	Capacity building in water use permitting (of withdrawals and pollution discharges) and compliance assurance of permit conditions and regulations	3.4																04			
432003	Capacity building in water information system		5.1, 5.9		2.5		04						06								
433000 Strengthen basin management processes																					
433001	Strengthening implementation of MRC Procedures		2.6, 3.1		1.1, 1.3, 1.4, 1.5, 6.3, 6.4, 6.7														01,03		
433002	Development and promotion of harmonized methods and tools		3.3, 3.5, 5.9	002	9.3						06,14	06		01,02		02,05, 06			04,10, 11	01	
433003	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	3.4, 3.5					05	02			09									15	
433004	Strengthen State of Basin monitoring and reporting				2.3						16					04					
433005	Develop and implement a system of comprehensive monitoring of project development in the basin		3.5, 6.3		2.4, 6.9			10									11				
433006	Develop a network of national WRM agencies and RBOs	3.4	3.2, 3.4		1.2, 6.1, 6.5, 6.6, 6.7			08													
433007	Strengthen and support regional and national stakeholder participation		3.6	001, 003	9.2		02									01,02					
433008	Development of guidelines or mechanisms to facilitate early resolution of disputes							09													
434000 Development of environmental and social objectives and baseline indicators																					
434001	Facilitated development of agreed basin-wide objectives or "baseline indicators"							02													
435000 Implement a targeted IWRM capacity building programme																					
435001	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	4.4, 4.5	2.6, 2.7, 3.6, 6.1, 6.2, 6.3, 6.4, 6.5		9.1								03,05, 06,07,08, 09,10, 11,12,13					04,05			
440000 Studies and Guidelines																					
440001	Priority habitat areas and environmental hotspots: Identification and development of management plans for those highly or moderately impacted by potential changes in flow conditions and the proposed LMB mainstream dams	5.1, 5.2	5.2, 5.6								03										
440002	Mainstream dams: Mitigation of the impacts of converting much of the mainstream to a series of slow moving waters																	06,07			
440003	Power generation: Assessment of mainstream and tributary hydropower potential and alternative power options, including innovative hydropower schemes that do not affect connectivity in the lower basin																	12			
440004	Mainstream dams: Detailed modelling of flood-related impacts upstream of Kratie to understand the impacts of flow changes on different river reaches, and how mainstream dams will affect these				2.2, 7.2							01									
440005	Flood management in Delta: Basin-wide and multi-sector study of long-term flood management options for the Mekong Delta to respond to growing pressures from land development, sea level rise, climate change, and upstream development plans	2.3, 2.4										05									
440006	Climate change adaptation studies of sub-basins: Study of climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	3.1, 4.4	3.7		3.5, 7.1, 8.2			01													
440007	Climate change impact studies: Monitoring and assessment programme to analyze implications of climate change on basin's long-term hydrology, agriculture, food security, ecological conditions and bio-diversity	3.1	5.7								15										
440008	Groundwater: Inventory of groundwater throughout the Basin including development and management plans																01				
440009	Development of selected water resources management and sector guidelines	5.1	3.1		6.8			06											14		
Monitoring, Evaluation and Reporting																					
530000 Monitoring, evaluation and reporting																					
530001	Strategy implementation monitoring system design		6.3								01,13										
530002	Strategy implementation monitoring system										14										
530003	Basin development strategy updated						01		03,04			01,03									

Appendix D Maps

Mekong overview



Catchments





Mekong River Commission

Cambodia • Lao PDR • Thailand • Viet Nam

For more information, visit
www.mrcmekong.org

Office of the Secretariat in Phnom Penh (OSP)

576 National Road, #2, Chak Angre Krom,
P.O. Box 623, Phnom Penh, Cambodia
Tel: (855-23) 425 353.
Fax: (855-23) 425 363

Office of the Secretariat in Vientiane (OSV)

Office of the Chief Executive Officer
184 Fa Ngoum Road,
P.O. Box 6101, Vientiane, Lao PDR
Tel: (856-21) 263 263.
Fax: (856-21) 263 264