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Regional Action Plan

Steps required for the further implementation of the regional component of the IWRM-based Basin Development Strategy in line with the MRC Strategic Plan 2011-15

**Approved by the MRC Joint Committee
on 25-26 April 2013**

Prepared by:

**Basin Development Plan Programme with the other
MRC Programmes**

May 2013

Document history

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1	0	Draft Regional Action Plan distributed to NMCs and MRC Programmes for consideration	8 February 2012	SP
2	0	Draft Final Regional Action Plan revised on basis of feedback received in Regional Workshop held 13 February 2012 and reissued for review at 2 nd Regional Workshop	1 October 2012	SP
2	1	Revised final draft Regional Action Plan taking into account feedback received from national consultation meetings and in 17 th BDP Coordination meeting on 13 November 2012, for consideration at 3 rd Regional Workshop on 13 December 2012	6 December 2012	AK
3	0	Regional Action Plan finalised based on feedback from 3 rd Regional Workshop on 13 December 2012, supplementary information relating to Cambodia NIP and additional reviews of PINs by MRC Programmes	4 April 2013	AK
3	1	Regional Action Plan finalised following presentation to and approval by the MRC Joint Committee	20 May 2013	AK

Preface

Noting that the IWRM-based Basin Development Strategy prescribes that the Regional Action Plan (RAP) is to be approved by the MRC Joint Committee¹, **this report has been placed for consideration and approval of the MRC Joint Committee.** In considering this report, the MRC Joint Committee finds that the RAP:

- ❑ *Confirms* that **achievement of the milestones** previously approved by the MRC Joint Committee and as given in Annex B of the MRC Strategic Plan (MRC-SP) will lead to **fulfilment of both the MRC-SP and the Basin Development Strategy**;
- ❑ *Provides* guidance to the MRC Programmes through Project Identification Notes (PINs) on how to align their work plans with the MRC-SP milestones in a manner that will ensure that **all Strategic Priorities and required Strategic Actions as set out in the BDS can be addressed**;
- ❑ *Promotes* greater **integration of national and regional efforts** by highlighting the relevance of projects put forward under the National Indicative Plans to MRC Programmes and encouraging dialogue to leverage mutual benefits;
- ❑ *Sets out* a practical basis for **monitoring and evaluating** progress towards achieving the MRC-SP milestones and implementation of the Basin Development Strategy;
- ❑ *Records* that **implementation of the RAP by the MRC Programmes is already underway** with approximately 50% of the MRC-SP milestones already being addressed;
- ❑ *Establishes* that, due to resource and/or funding constraints, the MRC Programmes nevertheless may **not be in a position to achieve all the MRC-SP milestones by 2015 and that some MRC-SP milestones require rescheduling as set out in this Plan**;
- ❑ *Presents* the opportunity **to streamline the MRC strategic planning** process for 2016-2020 in a manner that will bring increased efficiency, reduced duplication, greater harmonisation of national and regional planning, as well as simplify monitoring requirements and support decentralisation of core river basin management functions;
- ❑ *Proposes* that a **detailed note and action plan on the steps required to introduce a streamlined approach** be prepared for MRC Joint Committee's further consideration and endorsement; and
- ❑ *Recommends* that the period **2011-15 should be considered a transitional period** during which full alignment between MRC Programme activities and both the MRC-SP and the Basin Development Strategy will be progressively attained.

¹ The BDS prescribes that the NIPs are to be approved by the competent National Authority in each Member Country

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Executive summary

Background

The IWRM-based Basin Development Strategy (BDS) adopted by the MRC Council in January 2011 provides a shared understanding of the LMB countries of the opportunities and risks of further water resources development in the Mekong Basin. The BDS describes the agreed strategic priorities for basin development and basin management.

The BDS also defines a roadmap for its implementation. An early action in the roadmap is the preparation of a Basin Action Plan to ensure that the agreed basin-wide strategic priorities are effectively addressed in a coordinated way during the current five-year plan cycle. The Basin Action Plan (BAP) will comprise four National Indicative Plans (NIPs) together with a Regional Action Plan (RAP). In short, the RAP and NIPs show clearly the implementation of the BDS through on-going and planned projects at the regional and national levels.

The NIPs supplement the prevailing national planning processes by providing incremental actions necessary to implement the BDS within each country in order to capture the gains and minimisation of risks from regional cooperation. The NIPs have been prepared by each NMCS in consultation with line agencies, river basin committees and other organisations. The NIPs therefore reflect each country's perspectives on the issues most relevant to that country. An overview of the current draft NIPs are provided in Section 3.3 of this report.

The RAP is intended to address the transboundary components of the BDS in a manner that complements the NIPs, thereby addressing knowledge gaps, reducing uncertainties and risks and promoting a strengthened approach to integrated water resources management at all levels within the Basin. The RAP is to be implemented by the MRC Programmes within the framework of the MRC Strategic Plan for 2011-2015 (MRC-SP).

Purpose of the Regional Action Plan

The objective of this RAP is therefore to set out the actions required to implement the regional component of the Basin Action Plan through the MRC Programmes and in line with the MRC-SP. **The three main purposes of the RAP** are to:

- ❑ Facilitate the progressive alignment of the MRC Programmes' activities with the MRC-SP milestones allocated to each Programme in response to meeting the requirements of the BDS;
- ❑ 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-SP and thus those of the BDS also.

In addition, in the course of preparing the RAP, opportunities have been identified to further improve and streamline the MRC's strategic planning processes in future planning cycles in a manner that will promote greater harmonisation of regional and national planning.

Preparation process

In accordance with the BDS, coordination of preparation of the Basin Action Plan (and its sub-component the RAP) was assigned to the MRC's Basin Development Plan (BDP) Programme. In this regard, BDP has benefited from guidance provided by the 33rd, 34th and 35th JC Meeting and the 19th Council Meeting. At the 35th JC Meeting an amendment was agreed to the timetable for preparing the Basin Action Plan (see Table 1 in Section 1.2 of this report).

Guidelines were developed by BDP for the coordinated preparation of the RAP and NIPs². A regional consultation workshop was held in September 2011, attended by MRC Programmes, NMCSs, line agencies and River Basin Committees, on the basis of which a common approach was agreed. The RAP and NIPs largely comply with these Guidelines and the agreed approach.

A draft RAP was prepared and discussed in a second regional consultation workshop in February 2012 with the Member Countries and MRC Programmes. National consultations were also held on both the RAP and NIPs. Comments received from this workshop (see Section 1.3 of this report), together with further comments provided in the 17th BDP Coordination Meeting in November 2012 and the third regional consultation workshop held in December 2012, were addressed in finalising the RAP. At the December 2012 workshop, participants were satisfied that the RAP could be finalized without a need for another consultative meeting.

Internal discussions have taken place between BDP and MRC Programmes to review the guidance for MRC Programmes as presented in the RAP's Project Identification Notes (PINs). Their comments and feedback have been incorporated in this report. BDP has also discussed with TCU and ICCS a common approach to monitoring progress in achieving the MRC-SP milestones (see Chapter 4 of this report).

Appreciation of the importance of National Indicative Plans

As envisaged in the BDS, a key component of the RAP is to foster linkages between MRC Programme activities and projects being taken up nationally under the NIPs. Although the nature of the projects identified in each NIP vary considerably between countries, it is evident that they reflect each country's perspective on the water management issues raised in the BDS that are not only of greatest national concern but also which offer opportunities to benefit from cooperation with other countries.

Assessments of the potential linkages between NIP projects and MRC Programme activities set out in this RAP have been made and are presented in Appendix D. As illustrated overleaf, all MRC Programmes have NIP projects relevant to them. Publication of the NIPs offers MRC

² Guidelines for Action Planning to implement the IWRM-based Basin Development Strategy, BDP, September 2011

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													
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									

Programmes a better insight into country priorities and the opportunity to leverage synergies with national projects. These demonstrate both the breadth of sectoral interests in the NIPs as well as the significance of the MRC Programmes' agenda to national issues.

The 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 States. **This increased knowledge at national level undoubtedly will bring national and regional planning closer together, paving the way to updating the BDS in the next and subsequent cycles.** In turn this will lead to greater focus at the regional level on national issues and concerns and thus more effectively promote the opportunities for beneficial and sustainable development through transboundary cooperation.

Implementation of the Regional Action Plan

The RAP is founded on a detailed analysis of the BDS and MRC-SP to establish the basis for implementing the RAP through the MRC-SP. This confirmed that the 110 technical milestones in Annex B of the MRC-SP can be aligned with the 15 Strategic Priorities and 64 related Strategic Actions of the BDS (see Appendix A of this report). The responsibilities for achieving these milestones among the MRC Programmes have been approved by the MRC Joint Committee in 2011. These are tabulated in Appendix B of this report and are summarised in Section 3.2.

In response to feedback on the draft RAP, the RAP has been structured in a manner that provides guidance to each MRC Programme on how to align their work with the MRC's strategies for 2011-15. This is done through Project Identification Notes (PIN), one prepared for each Programme. **The PINs (see Appendix C) provide the means by which all MRC Programmes can align their work plans with the MRC-SP and BDS** in a coordinated and comprehensive manner. Each PIN follows a common format (see box) and is supplemented by a listing of the BDS Strategic Priorities and Strategic Actions related to those MRC-SP milestones allocated to that Programme (see Appendix B of the MRC-SP). Each PIN also lists those projects in the NIPs considered relevant to that Programme. **As illustrated in the Basin Action Plan chart, implementation of the PINs will ensure that all BDS Strategic Priorities can be addressed.**

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 Programme has reviewed their PIN and in most cases have proposed updated milestones, which are set out in their PIN and summarised in Section 3.2 of this report. **Implementation of the RAP is therefore underway. From discussions held with MRC Programmes, it is clear that approximately 50% of the activities required to meet the MRC-SP milestones are already being taken up.** In some instances further adjustment to MRC Programme plans are nevertheless needed. However, most Programmes report that they cannot address one or more of the MRC-SP milestones in this planning cycle due to funding and/or resource capacity constraints. Many programmes have outputs and activities from their separately-developed programme documents tied to funding agreements that are in addition to those in the MRC-SP and BDS. . This is why the next three years is considered a transitional period, and if the new

strategic planning approach is adopted, a fuller alignment of MRC strategic plan and programme work will be achieved for 2016-2020.

Outcomes from the RAP and NIP process

Practical implementation of IWRM

The preparation of the NIPs has stimulated engagement of line agencies, river basin committees and other organisations in the planning process. The process of preparing both the NIPs and RAP in parallel 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). Implementation of many NIP activities has already started in some Member Countries. Other NIP projects are budgeted and responsibilities assigned to appropriate line agencies, RBOs/RBCs and other entities to align with their annual work planning.

Harmonisation of regional and national level planning

The NIPs provide each country's perspectives of the issues that each considers important at national level in the light of the BDS to capture the gains of regional cooperation envisaged under Article 1 of the 1995 Mekong Agreement. The NIPs also provide an opportunity for country perspectives to be reflected in the work of the MRC, which will undoubtedly influence the updates of the BDS and next MRC-SP, thus creating the *circle of ownership* of the planning and management processes that the BDS aspires to.

Article 1 Areas of Cooperation

To cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin including, but not limited to irrigation, hydro-power, navigation, flood control, fisheries, timber floating, recreation and tourism, in a manner to optimize the multiple-use and mutual benefits of all riparians and to minimize the harmful effects that might result from natural occurrences and man-made activities.

From the 1995 Agreement on the cooperation for the sustainable development of the Mekong River Basin

The NIPs also provide a two-way linkage between national and basin planning that can bring national and regional planning more closely together through institutionalising the basin-wide planning process at the national level and by establishing linkages with national planning agencies that can be used to decentralise certain basin planning activities now being undertaken by the MRC.

The RAP contributes to the integration of regional and national level planning by highlighting the relevance of planned measures under each NIP to each MRC Programme's activities and by encouraging both the MRC Programmes and NMCs to leverage the potential synergies to the benefit of both regional and national efforts (see Basin Action Plan chart on page iv). 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 harmonisation of transboundary development including bilateral initiatives.

Reduction of knowledge gaps

Based on the scenario assessments previously undertaken, the BDS 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

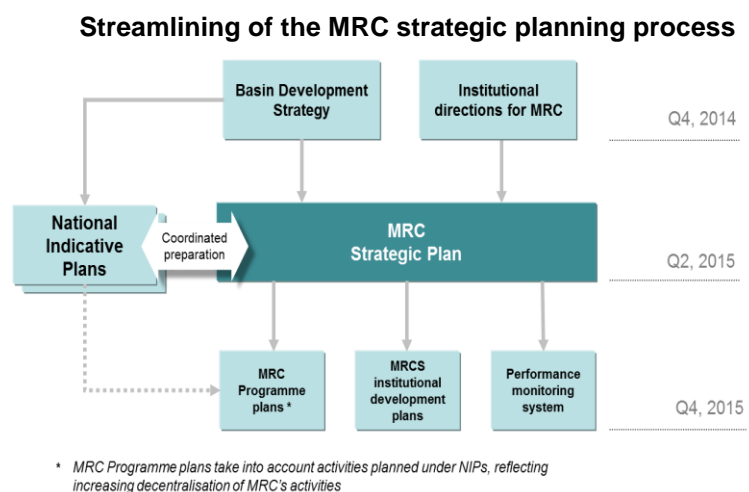
demonstrably constrain the development potential of the basin and addressing them is seen as critical to enabling the MRC to fully undertaking its mission *to promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being.*

The RAP addresses these identified knowledge gaps by setting out the relevant requirements for each MRC Programme, with the aim of reducing risks and uncertainties of water-related development in the Mekong Basin. It is evident however that not all gaps can be filled under current MRC Programme plans and that additional activities will need to be taken up. **Clearly there is potential for the proposed *Joint Study* to address some important knowledge gaps not already covered under current and planned RAP activities.**

Streamlining of MRC strategic planning

During the course of preparing the RAP, it became increasingly evident that there is **considerable opportunity to streamline the MRC's strategic planning processes.** A full discussion of this is set out in Section 2.3 of the RAP, reflecting on the complexity of the current approach, the duplication of effort and the difficulties faced by MRC in developing an effective monitoring and evaluation system.

The discussion in Section 2.3 concludes that a much simpler and more effective approach could be adopted by MRC if the order in which the key strategic planning activities are undertaken is revised, as illustrated here. The main elements of this approach are as follows.



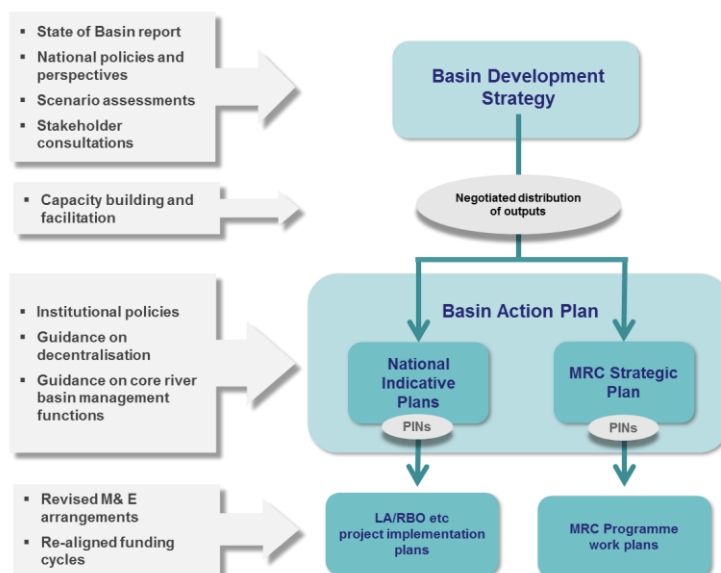
Step 1: The Basin Development Strategy is updated and institutional directions for the MRC Programmes are formulated. The format of the BDS would require some modification such that Strategic Priorities and Strategic Actions are expressed as desired “Outcomes” and required “Outputs” for the MRC to achieve during the ensuing 5-year period. The BDS would need to be completed a year earlier than anticipated. At the same time, institutional directions for the MRC would need to be formulated by MRC Joint Committee, including guidance on the approach to decentralisation.

Consultation and negotiations with the Member Countries would be needed at this time to determine which outputs should be addressed by MRC Programmes at regional level and which by countries at national level under the updated NIPs. This process would offer also a practical way to support the ongoing MRC decentralisation process.

Step 2: The desired outcomes and required outputs of the updated BDS related to basin development and management and allocated to MRC Programmes above would then be brought into the MRC Strategic Plan and indicators of success would be developed. The MRC Strategic Plan would then be completed by allocating those outputs to be undertaken at regional level to different MRC Programmes. At the same time, each country would update its NIP in the light of the updated BDS and the outcome of the negotiations over the distribution of BDS outputs.

Step 3: In line with the MRC Strategic Plan, each MRC Programme would then develop detailed work plans to deliver its allocated outputs in the context of the desired outcomes. Similarly, MRCS would develop its detailed plans for its institutional development, ensuring as necessary that these are reflected in MRC Programme plans. Finally in Step 3, the MRC monitoring system would be put in place to measure progress towards outputs, the effectiveness of outcomes and the impact upon MRC goals.

Summary of proposed future MRC planning process



As may be noted, Step 2 above would be similar to the currently proposed Basin Action Plan and do away with the need for the RAP as the requirements of the RAP would be fully covered by the MRC-SP. The need for a Basin Action Plan will remain as a means to distribute responsibilities at regional and national levels and to establish timelines for completion of actions in a coordinated manner. It is envisaged that a simplified form of Project Identification Note would be required to guide those responsible for specific strategic actions (outputs).

The benefits to be gained from such an approach are many and include:

- MRC Programmes work plans would be fully consistent with MRC overall strategic requirements (instead of trying to post-rationalise different strategies and plans), 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 overall 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 required outputs for the MRC Programmes (combined with national efforts) to deliver– across the MRC the number of the number of monitoring indicators would be reduced from over 2,000 to perhaps less than 200; 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 – across the MRC the number of strategic planning documents would be reduced from 15 to 2.

For the reasons above, it is recommended that MRC considers adopting this approach in the next cycle of strategic planning. A key issue within this will be obtaining the cooperation of Development Partners to both accept 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.

As a result of positive feedback received from MRCS management and the Member Countries and during the recent 19th MRC Council meeting, **a detailed proposal for streamlining the MRC strategic planning processes is being prepared for MRC Joint Committee and the MRC’s Development Partners.**

Monitoring and evaluation

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

To this end, three levels of monitoring are proposed to monitor (i) progress towards achievement of MRC-SP milestones (and thus progress towards implementation of both the MRC-SP and the BDS), (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 (see Chapter 4).

Progress monitoring

A simple system for monitoring progress of MRC Programme achievement of MRC-SP milestones has been developed in consultation with TCU and ICCS. MRC Programmes will submit percentage progress of each of their allocated MRC-SP milestones to TCU each quarter. TCU will enter these data in a spreadsheet which will automatically generate reports on progress towards MRC-SP outcomes and goals and BDS Strategic Actions and Priorities. Illustrations of the data entry and reporting formats are provided in Appendix E of this report. It is estimated that this incremental effort should not exceed one hour per quarter for each report.

Some key M&E term as used in this report

Goals – Contribute to achievement of the overall goal of the MRC as expressed in Article 1 of the 1995 Agreement and therefore relate to the achievement of environmental, social and economic conditions within the Basin

Desired Outcomes – Are the improved IWRM practices at all levels within the Basin that will result from MRC’s outputs and are generally behavioural in nature; the MRC-SP refers to these as specific goals and they can also be equated to the Strategic Priorities in the BDS relating to basin management

Outputs – Are the products and services delivered by the MRC which cause the behavioural changes above; these generally equate to the Strategic Actions in the BDS;

Activities – Are the activities undertaken by the MRC in order to deliver the outputs above; activities can be subdivided into individual tasks if needed.

Milestones – As used in the MRC-SP generally refer to the completion or part-completion of “activities” as defined by the MRC-SP, these “activities” normally being “outputs” as defined above (whereas in MRC Programme documents generally the definition of outputs and activities correspond to the definitions above).

Outcome monitoring

In general, outcomes should be associated with the manner by which MRC Programme activities have affected behaviours within the basin (eg the extent to which new processes are being adopted, national plans adapted or information generated is being used to good effect). Therefore outcome monitoring requires external assessment and it is proposed, for the purposes of the RAP, that it will be achieved through the mid-term review of the MRC-SP in 2013 and a further review to be conducted in 2014. BDP will assist TCU and ICCS in the design of these reviews to ensure that significant aspects of what the BDS is seeking to achieve are captured.

Strategic goal monitoring

The strategic goals associated with both the MRC-SP and BDS should relate to improved social, environmental and economic development within the basin. The State of the Basin (SoB) Report provides an ideal vehicle to monitor development within the basin. However, for this to happen, the SoB will need to be somewhat restructured and be focussed on an agreed set of development and management monitoring indicators. Furthermore, to the extent possible, the selected indicators must be measurable and some new databases will need to be developed to support the monitoring programme. In many instances, these requirements are to be met by addressing “knowledge gaps” as set out in the BDS and reflected in this RAP.

An important early task for BDP under the RAP is to work with the countries and other MRC Programmes to develop an appropriate set of development and management indicators that reflect the aspirations of MRC, underpin transboundary decision-taking, and provide a comprehensive (but manageable) picture of conditions within the basin. The next SoB needs to be prepared by 2014 in order to inform the next round of BDS updating, and preparations for this need to be factored into current work plans.

Monitoring of NIPs

Each NIP sets out the process by which progress and outcomes will be monitored by the respective NMC during the current plan period. Further details are provided in Section 4.7 of this report. NMCs are encouraged to share with MRCS the M&E reports that they produce during this period, as this will assist in the harmonisation process and inform the update of the Basin Development Strategy in readiness for the 2016-20 period.

Under the streamlining proposal, it is anticipated that during 2016-20, some regional activities are expected to be decentralised and fall under the responsibility of national agencies to undertake. The MRC monitoring systems for 2016-20 will need to be adjusted to accommodate monitoring of decentralised activities. Dialogue with the NMCs and concerned agencies is recommended to ascertain how this may best be accomplished.

Summary of further actions required for RAP implementation

The following summarises the main actions required to continue and strengthen implementation of the RAP:

Actions required		By whom
<i>On actions further required to implement the RAP</i>		
(i)	Each MRC Programme is to identify and leverage synergies with ongoing activities set out in each NIP to mutual benefit and to reflect the required actions within their Annual Work Plans	MRC Programmes
(ii)	Each MRC Programme is to identify as early as possible any key knowledge gaps that they will not be in a position to address and make these known to those who will be preparing the MRC "Council Study"	MRC Programmes
(iii)	Each MRC Programme is to develop an internal system capable of generating the percentage progress towards each allocated MRC-SP milestone for input by TCU into a simple spreadsheet system developed for the purposes of monitoring progress in implementing the MRC-SP milestones	MRC Programmes
(iv)	NMCs are encouraged to facilitate dialogue between national NIP implementing agencies and MRC Programmes as they commence new NIP projects to explore the potential areas for regional-national cooperation	NMCs
<i>On monitoring and evaluation of the RAP</i>		
(v)	Monitoring of activity progress of the RAP will be undertaken on a six-monthly basis by TCU on the basis of reports prepared by each MRC Programme of progress made in achieving each allocated MRC-SP milestone (see Section 4.3)	TCU
(vi)	Based on the above, BDP will provide an annual report summarising outputs achieved in implementing the Basin Development Strategy and highlighting any issues of significance	BDP
(vii)	Monitoring of the effectiveness of outcomes of the RAP will be undertaken as part of the mid-term and final reviews of the MRC-SP to be designed and coordinated by TCU	TCU
(viii)	Monitoring of the degree to which the Strategic Goals of the MRC are being attained will be monitored through the State of the Basin Report, for which BDP in collaboration with EP and other Programmes will establish a set of monitoring indicators consistent with MRC's strategic aims for basin management and development	BDP
(ix)	As part of the preparatory steps for decentralisation, future arrangements will be considered for M&E of decentralised regional activities undertaken by national agencies	ICCS, TCU
<i>On the opportunities for streamlining the MRC strategic planning process</i>		
(x)	Preparation of a detailed note and action plan for the MRC Joint Committee's consideration elaborating the steps, roles and responsibilities for streamlining the MRC strategic planning process	BDP, TCU

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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)
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 2011-15)
NESDP	: National Economic and Social Development Plan (of Thailand)
NIP	: National Indicative Plan
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
RBO	: River Basin Organization
SAWG	: Sub-area Working Groups
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

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1 Introduction

1.1 Background and objectives of the Regional Action Plan

In January 2011 the MRC Council adopted the **IWRM-based Basin Development Strategy (BDS)**, which provides a shared understanding of the LMB countries of the opportunities and risks of further water resources development in the Mekong Basin. This landmark document outlines the development opportunities and describes strategic priorities for basin development and basin management, specifically in order to move identified development opportunities to the implementation.

The BDS defines 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 main aim of the Basin Action Plan is to ensure that the agreed basin-wide strategic priorities are effectively addressed by a coordinated set of activities undertaken by the MRC Programmes and their national counterpart agencies over the course of the next five years. The Basin Action Plan will comprise a Regional Action Plan (RAP), for implementation by MRC Programmes, and four National Indicative Plans (NIPs).

The BDS stipulates that the preparation of the **National Indicative Plans** will be led by the National Mekong Committees in consultation with concerned line agencies and that the NIPs should supplement the prevailing national planning processes by providing incremental actions necessary to implement the BDS within each country. Whilst these incremental actions may differ from country to country with different focus areas and priorities, they will seek to incorporate the BDS's basin perspectives into national planning, decision-making and governance processes, resulting in growing networks with wide understanding and ownership of the regional perspectives of the BDS. This will increase the effectiveness of BDS implementation and bring national perspectives into future updates of the BDS, creating a "loop of ownership" between MRC and its Member Countries, and opportunity to move towards MRC core river basin management functions.

The BDS states also that the **Regional Action Plan** will be implemented with the support of the MRC Programmes within the framework of the MRC Strategic Plan for 2011-2015. The existing and planned activities of the MRC programmes are to be progressively aligned with the Strategic Priorities of the BDS to ensure a comprehensive response at the regional level to these priorities. This is to be achieved through revision of individual programme documents and work plans to fully reflect the milestone requirements of the MRC Strategic Plan.

The **MRC Strategic Plan for 2011-15 (MRC-SP)** was also adopted by the MRC Council in January 2011. The MRC-SP was developed in parallel to the BDS and sets out the aims and objectives for the MRC and provides a framework within which the MRC Programmes and support services are to operate. The MRC-SP establishes four specific technical goals and one institutional goal for the organisation and elaborates the activities required, the milestones to be

met and the outcomes to be achieved by the organisation during the five-year period. The MRC-SP's four specific technical goals and the related milestones, whilst expressed in different terms, are nevertheless consistent with the strategic priorities for basin development and basin management as set out in the BDS.

The **objective of this Regional Action Plan** is to serve as a guidance document aimed at serving three main purposes:

- ❑ Advising the MRC Programmes on how to interpret BDS requirements in the context of the MRC-SP milestones allocated to each Programme;
- ❑ Enabling the MRC Programmes to appreciate and develop the potential synergies with NIP projects; and
- ❑ Providing the basis for coordinated monitoring of progress of MRC Programme activities towards achieving strategic objectives of the MRC-SP and thus those of the BDS also.

In addition, in the course of preparing the Regional Action Plan, opportunities have been identified also to further improve and streamline the MRC's strategic planning processes in future planning cycles in a manner that will promote greater harmonisation of regional and national planning, underpin the efforts to decentralise MRC activities and move towards core functions at regional level. These opportunities, which are elaborated in Chapter 2, would also:

- ❑ Facilitate a simpler and more manageable approach to monitoring and evaluation for the MRC, leading to greater accountability and transparency (see Chapter 4).

1.2 Process for preparing the Regional 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 and 35th JC Meeting and the 18th Council Meeting.

At the regional level, the alignment of the MRC Strategic Plan with the Basin Development Strategy was reviewed, **confirming that achievement of the agreed 130 milestones in Annex B of the MRC Strategic Plan will lead to fulfilment of both the MRC Strategic Plan and the Basin Development Strategy** (see Appendix A of this report). The responsibilities for the achievement of the milestones have been distributed among the MRC Programmes in accordance with Annex B of the MRC-SP (see Appendix B of this report).

Guidelines were developed by BDP for the coordinated preparation of the RAP and NIPs³. A regional consultation workshop on 29 September 2011 with representatives of MRC Programmes, NMCSs, line agencies and River Basin Committees (RBCs) discussed and agreed

³ BDP report Planning for BDP 2011-2015 bridging period (May 2011-April 2012), published in May 2011

on a common approach, principles, guidelines and outlines for the coordinated preparation of the RAP and the four NIPs.

A draft RAP was prepared and discussed in a regional workshop on 13 February 2012 with the Member Countries and MRC Programmes. The draft RAP was aligned with the four specific goals of the MRC Strategic Plan and the achievement of its 130 milestones. The draft RAP grouped together the interrelated milestones in “Project Identification Notes” (PINs) aligned to key technical themes reflected within the MRC-SP. The PINs included indicators for monitoring implementation progress and assessing the achievement of the milestones. The milestones would link the M&E system of each programme to the overall MRC M&E system.

Internal discussions have also taken place between BDP, TCU and ICBP on developing a common approach to monitoring progress in achieving the MRC-SP milestones and between BDP and TCU and the MRC Programmes on alignment of their Programme Documents with the Basin Development Strategy and MRC Strategic Plan.

The 35th JC Meeting has approved an amendment of the timing of achieving the milestones established by the Regional Consultation Workshop in September 2011, as set out in Table 1.

1.3 Feedback on the draft Regional Action Plan

The draft Regional Action Plan was presented at the 2nd Regional Consultation Workshop held in Luang Prabang on 13 February 2012. The workshop was held to review the draft RAP, as well as the compatibility of the draft National Indicative Plans with the draft RAP. The workshop was attended by 39 participants drawn from NMCs, line agencies and MRC Programmes. In addition to the draft RAP being reviewed, progress on the preparation of the four draft NIPs was discussed along with issues of linkages between the NIPs and other emerging projects and studies with the RAP.

A summary of the discussions and conclusions at the workshop is provided in the box overleaf. In reviewing these and the detailed observations made during the workshop, it is clear that the following key points emerge that are central to finalisation of the RAP.

Table 1 Timetable for finalising the Basin Action plan

Action	Timing
Regional workshop to agree on a common planning approach, process, outcomes, and approval process	Done
Regional workshop to discuss the draft Regional Action Plan and compatibility with the emerging National Indicative Plan components	Done
Finalization of the draft Regional Action Plan	August 2012
Finalization of the four draft National Indicative Plans, including national consultations	August 2012
Progress report to 35th Joint Committee Meeting and approval of the Regional Action Plan	Done
Approval of the National Indicative Plan by the appropriate national authority	September 2012
Finalization of the four National Indicative Plans and the Regional Action Plan and their overview in a draft Basin Action Plan	September 2012
Regional Workshop to discuss and agree on the Basin Action Plan	October 2012
Finalization and distribution of Basin Action Plan	December 2012

Summary of discussions and conclusions regarding the draft RAP

- ❑ The Basin Action Plan (BAP) consists of the Regional Action Plan (RAP) derived mainly from the Strategic Priorities outlined in the IWRM based Basin Development Strategy, and four National Indicative Plans (NIPs) representing the actions that will be undertaken by the Member Countries. The brief progress on the formulation of the RAP and each NIP was presented at the workshop.
- ❑ The RAP focuses on regional actions that will be implemented by the MRCS Programmes between now and 2015. These actions are closely aligned to the milestones outlined in the MRC Strategic Plan for 2011-2015.
- ❑ The RAP will consist primarily of Project Identification Notes (PINs) in four thematic areas: 1) Strategies and Guidelines; 2) Operational Systems; 3) Dialogue and coordination of processes; and, 4) IWRM Capacity Development.
- ❑ The preparation progress of the NIPs varies amongst the MRC Member countries; the NIPs for Cambodia and Vietnam are well advanced, while Lao PDR is still in the early stages. Thailand has also made good progress in preparation of their NIP.
- ❑ Harmonization of the RAP with the NIPs will also help achieve the milestones in the MRC Strategic Plan for 2011-2015.
- ❑ Guidelines have been formulated and are being used to complete the Draft RAP and NIPs by MRC Programmes and National Working Groups.
- ❑ After completion of PINs, working meetings will be held to create synergies between PINs presented in the RAP and NIPs. This offers opportunities to develop transboundary PINs and joint PINs.
- ❑ Achievement of milestones can be monitored through the emerging MRC M&E system.
- ❑ Indicators for progress monitoring of activities will be identified in PINs.
- ❑ Together with the monitoring results from other indicators of MRC Programmes, these will feed into the M&E system.
- ❑ RBDP Team will make a progress report to the upcoming JC meeting with the new datelines for completion of the RAP, NIPs and BAP.

- ❑ **Firstly**, there was concern as to the apparent overlaps between actions being proposed in the RAP and those in the NIP and that these could lead to uncoordinated and wasted efforts in the coming years.
- ❑ **Secondly**, there was concern amongst some that the proposed activities in the RAP were insufficiently aligned with addressing the immediate concerns of the countries, risking a disconnection between regional activities and those of line agencies.
- ❑ **Thirdly**, the draft PINs were seen as overly complex and that perhaps there should be a greater number of simpler ones, including ones that provided more linkage with the NIPs.
- ❑ **Fourthly**, and within the context of a more general concern of there being too many different plans within the MRC framework, MRC Programmes sought greater clarity in the guidance within the RAP of how they should align their activities with those in the agreed Basin Development Strategy and MRC Strategic Plan.

Noting that all activities within the RAP are those prescribed by and consistent with the approved Basin Development Strategy and MRC Strategic Plan, **these concerns have been addressed therefore in two principle ways** within this final version of the RAP:

- (i) by **restructuring some aspects of the RAP**, principally by rebuilding the PINs around MRC Programmes (rather than cross-cutting themes as presented in the draft RAP) and highlighting within the PINs (and elsewhere in the report) the strong linkages with the agreed MRC Strategic Plan milestones; PINs have also been linked with the relevant activities in the NIPs, together providing opportunities for greater coordination of effort, and

- (ii) by **reinforcing the need to streamline and simplify the MRC's planning and performance monitoring processes** in the next round of strategic planning (commencing in 2014) in a manner that will better reflect country concerns, promote decentralisation of efforts, and fully align MRC Programme activities with strategic requirements.

A draft of the RAP as revised above and was discussed at the 17th BDP Coordination Meeting held on 13 November 2012. Feedback from this meeting was that greater emphasis was required within the RAP to highlight the actions required to implement the RAP as well as the key decisions which should be sought from the MRC Joint Committee when considering this report. Both areas have been addressed in this report, principally through condensing the background to and role of the RAP into a single chapter and amplifying the chapter on the RAP to highlight the actions required by the Programmes and MRC management. The key issues for the Joint Committee to consider have been added to the Executive Summary along with other adjustments reflecting the above.

1.4 Structure of this report

Accordingly, the Regional Action Plan has been restructured to reflect the feedback above and is now organised according to the following four further chapters:

- **Chapter 2** describes the context of the Regional Action Plan leading to a discussion of the need for and purpose of the current Regional Action Plan and how, in the future, the MRC strategic planning processes could be streamlined and the requirement for a separate Regional Action Plan phased out.
- **Chapter 3** describes the purpose and the role of the Regional Action Plan in addressing the regional components of IWRM-based Basin Development Strategy through facilitating the achievement of milestones agreed as part of the MRC Strategic Plan for 2011-15 and by strengthening linkages with national agencies and RBO/RBCs and their projects. The Chapter also describes the implementation arrangements and provides guidance to MRC Programmes on how best to progressively align their activities with the milestones of the MRC Strategic Plan in line with the requirements of the Basin Development Strategy. The next steps for MRC Programmes, TCU, BDP and MRCS management are also summarised in this Chapter.
- **Chapter 4** describes the monitoring and evaluation requirements of the Regional Action Plan, providing details of a system developed for monitoring progress in achieving milestones as well as outlining requirements for assessment of outcomes and development impacts.
- **Chapter 5** describes potential risks and mitigation measures associated with Regional Action Plan implementation.

This report also includes **five appendices**:

- ❑ **Appendix A** presents the linkage between the Strategic Actions identified in the IWRM-based Basin Development Strategy and the related milestones in the MRC Strategic Plan;
- ❑ **Appendix B** provides a listing of the milestones allocated to each MRC Programme in accordance with Annex B of MRC Strategic Plan;
- ❑ **Appendix C** provides Project Identification Notes (PIN) for each MRC Programme together with explanatory notes, which together elaborate the significance of the MRC-SP milestones in relation to the relevant Strategic Priorities of the BDS, set out the basis for monitoring these and identify national projects within the NIPs of sectoral relevance to each MRC Programme (where synergies may be developed);
- ❑ **Appendix D** presents a summary of the four National Indicative Plans and the overall relevance of the identified projects to the MRC Programmes
- ❑ **Appendix E** presents the pro forma for quarterly reporting of progress in achieving the milestones as a basis to monitoring progress towards achieving both the Strategic Priorities in the Basin Development Strategy and the goals and outcomes of the MRC Strategic Plan.

2 Context of the Regional Action Plan

MRC has been through an extensive period of planning during which an IWRM-based Basin Development Strategy, the MRC Strategic Plan 2011-15 and most MRC Programme documents have been prepared and agreed. For some, the obvious question is why is there a need for yet another plan, the Regional Action Plan? This chapter addresses this question and explains the need for and purpose of the current Regional Action Plan and how, in the future, the MRC strategic planning processes could be streamlined and the requirement for a separate Regional Action Plan phased out.

2.1 MRC strategic framework

In January 2011, the MRC Council agreed to two overarching documents guiding their strategy for 2011-15. The IWRM-based Basin Development Strategy which sets out the development opportunities within the basin and the Strategic Priorities (and associated Actions to address these) that should guide basin development and management. The other document, the MRC Strategic Plan for 2011-15, sets out how the MRC as an organisation responds to these priorities together with how it will evolve its own institutional arrangements.

2.1.1 *The IWRM-based Basin Development Strategy*

The requirement for a Basin Development Plan is stipulated in the MRC Agreement (1995). Under MRC's Basin Development Plan Phase 2 (BDP2), the concept of a rolling plan was developed to provide an integrated basin perspective through participatory planning amongst the four Member States. The rolling plan, which is to be updated every five years, currently comprises two main elements⁴:

- **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 in the various parts of the LMB underpinning formulation of the IWRM-based Basin Development Strategy; and

⁴ A third element, the Project Portfolio, is being reviewed by BDP. The BDP consider that the Project Portfolio may usefully be combined with the proposed Project Master Database (in which fields providing individual project status could be incorporated along with reporting tools serving the original intent of the Project Portfolio). As such the Project Master Database becomes an important tool to monitor existing, ongoing and planned development and thereby needs to be linked to MRC's Procedure for Water Use Monitoring (PWUM), rather than the rolling Basin Development Plan.

- ❑ **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 IWRM-based Basin Development Strategy (BDS) sets out a vision for guiding and developing the basin’s water-related resources within acceptable bounds. The Strategy was developed in parallel to the scenario assessment and draws heavily upon the findings in the assessment report⁵. Alongside defining the scope of **development opportunities** within the basin, the BDS sets out:

- ❑ **Strategic Priorities** – key issues that the 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 Strategy. There are 7 priorities for basin development, 6 for basin management plus monitoring and evaluation requirements (see box overleaf); and
- ❑ **Strategic Actions** – actions stipulated by the IWRM-based Basin Development Strategy as being necessary to undertake in order to address the issues raised as Strategic Priorities. Generally these actions are *non-structural* and *enabling* in nature. These are also described in Sections 4.2-4.4 and Section 5.3 of the IWRM-based Basin Development Strategy, and total approximately 64 identified actions.

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

⁵ Assessment of Basin-wide Development Scenarios, final main report published by MRC in April 2011 and accompanied by five supporting volumes of technical annexes

The BDS sets out a road map for its implementation within which a key early step is formulation of a **Basin Action Plan** to demonstrate at both the regional and national level of how the Strategic Actions are to be implemented over the next 5 years, leading to definition of projects and programmes to be entered into the Project Portfolio (within the non-structural/enabling parts), as expressed through a **Regional Action Plan** and four **National Indicative Plans**. The roadmap also stipulates the implementation arrangements for the Strategy:

*The MRC/BDP 2011-2015 will support the preparation of the Basin Action Plan in 2011. The regional plan component of the **Basin Action Plan** will be implemented with the support of the MRC programmes within the framework of the MRC Strategic Plan for 2011-2015. The existing and planned activities of the MRC programmes will be progressively aligned with the Strategic Priorities to ensure a comprehensive response at the regional level to these Priorities. As necessary, individual programme documents will be revised during the inception phases to achieve this alignment ... During the implementation of the Strategy, forums will be organized at the national and regional levels to undertake regular stakeholder reviews of the implementation of the Strategy.*

2.1.2 *The MRC Strategic Plan*

Whilst the BDS above primarily addresses the opportunities and issues related to basin development and management, the MRC Strategic Plan (MRC-SP) in principle sets out the manner by which the MRC as an institution will respond to the development opportunities and Strategic Priorities established under the BDS taking into account also the wishes of the Member States as to the role that the MRC Secretariat and RC Programmes should play. Thus, the MRC Strategic Plan focuses on providing direction to the MRC Secretariat and MRC Programmes (and related projects) over the next five years by:

- ❑ Reaffirming the vision and long term goal of the MRC as a whole;
- ❑ Setting an overall goal for the MRC for 2015 and, within this, specific goals for the MRCS, Programmes and projects to achieve;
- ❑ Defining the main activities to be taken up during the period; and
- ❑ Defining key indicators to be taken up into an M&E system to be developed in cooperation with TCU.

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

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 BDS. However, the greatest congruence of the two documents has been found to be between 110 of the 129 milestones set for each MRC Programme in Appendix B of the MRC Strategic Plan and

the Strategic Actions within the BDS (the remaining milestones relating to internal institutional reforms). The relationship between these milestones and the Strategic Actions (and thus Strategic Priorities) is set out in Appendix A of this report.

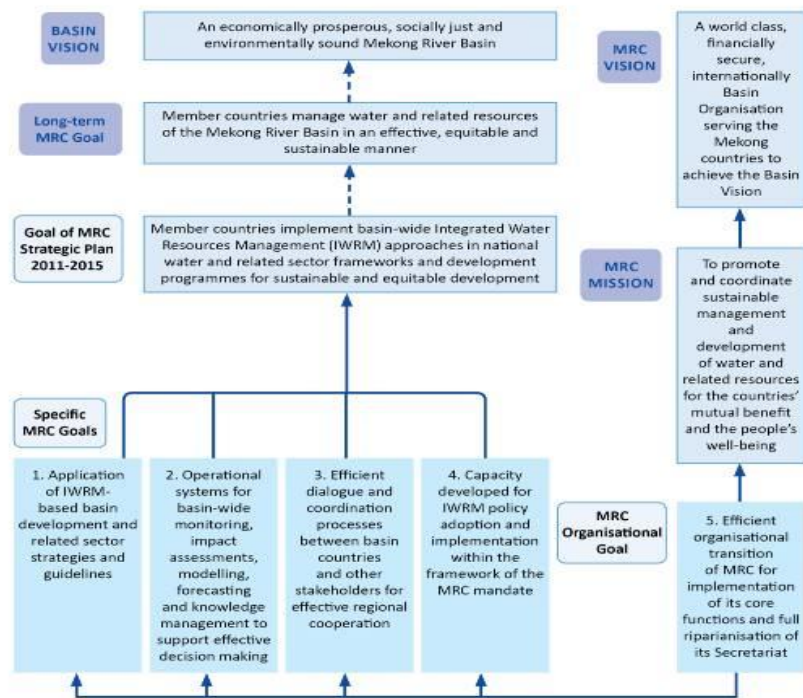


Figure 1 Results chain for the MRC Strategic Plan 2011-15

2.2 Related planning activities

2.2.1 Ongoing regional activities

Maintaining linkages with other ongoing regional activities conducted by governments, agencies and Development Partners is also essential. The BDS recognises the value to be leveraged in terms both of enriching the technical work undertaken by the MRC Programmes and also in building cooperation with other riparian countries.

LMB countries are all members of the Association of South East Asian Nations (ASEAN) and signatories to ASEAN agreements for economic integration and promotion of regional approaches to sector development.

Within the Greater Mekong Sub-region (GMS) cooperation framework, the countries are working together on sector approaches and priority programmes, with energy sector activities promoting regional power trade to develop the sub-region's energy potential, the facilitation of the development of grid interconnection, and private sector investment. The GMS Core Environmental Programme is improving environmental planning and management capacities for strategic environmental assessment of sector strategies and plans, promotion of pro-poor biodiversity conservation corridors, and environmental management.

2.2.2 Council Study

The cooperation between the MRC Member States will be further enhanced by the “Council Study” recently agreed in the 18th Meeting of the MRC Council, the scope of which is still under consideration but which presents obvious opportunities to further strengthen the MRC’s knowledge base and address important issues that may not be within the currently funded activities of the MRC Programmes.

The Minutes of the 18th Meeting of the MRC Council (Session 1) held on 8 December 2011 in Siem Reap, Cambodia state:

The Council of the Mekong River Commission agreed in principle to implement the outcome of the verbal discussion by the Member Countries’ Prime Ministers at the 3rd Mekong-Japan Summit in Bali, Indonesia, in November 2011, to approach the Government of Japan to support the conduct of a study on sustainable management and development of the Mekong River including impacts by mainstream hydropower projects. Some Member Countries require an additional national approval process and thus agreed to bring this matter back to their respective governments for their internal discussion and necessary actions.

A concept note has been prepared to address this statement from the Council, entitled “**Study on sustainable management and development of the Mekong river including impacts by mainstream hydropower projects**” (referred to hereafter as the *Council Study*).

The concept note has identified three key objectives and 7 main outputs for the study (see box on previous page), central to which is the addressing of 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

Key elements of the Council Study as set out in the concept note*

Objectives and outputs

Objective 1: Further develop/establish a reliable scientific evidence base on the environmental, social and economic consequences (positive and negative) of development in the Mekong Basin

- ❑ Output 1: Review the past scientific knowledge base and databases in terms of use as a basis and baseline for the study;
- ❑ Output 2: Critical knowledge gaps in understanding of the Mekong River system and the impact of development of the main thematic topics of infrastructure and water use are closed;
- ❑ Output 3: Climate change impacts are analysed in the context of the sector development impacts to assess opportunities and risks;

Objective 2: Results of the study are integrated into the MRC knowledge base and enhance the BDP process providing support to the Member Countries in the sustainable development of the Mekong River Basin

- ❑ **Output 4:** Inclusion of information from the Study and other parallel initiatives into the MRC knowledge base;
- ❑ **Output 5:** The Basin development scenario assessment for the Basin Development Strategy 2015-2020 uses the information and knowledge generated by the Study;

Objective 3: Promote capacity building and ensure technology transfer to Member Countries to conduct the Study:

- ❑ **Output 6:** Comprehensive capacity on scientific assessment, survey and analysis are strengthened among Member Country study team members;
- ❑ **Output 7:** Member Countries’ staff participating in the study are able to undertake major thematic studies and possible tools and guidelines are documented for future use of similar studies.

Thematic sectors

- ❑ **Irrigation** - including use, return flows, water quality, proposed diversions, etc
- ❑ **Agriculture and land use** – including watershed management, deforestation, livestock and aquaculture, fisheries etc
- ❑ **Domestic and industrial use** – including mining, sediment extraction, waste water disposal, urban development, water quality etc
- ❑ Flood protection structures and flood plain infrastructure
- ❑ **Hydropower** – including the potential of alternative energy options
- ❑ **Transportation** – including navigation (including use of infrastructure to promote navigation) and roads on major floodplains

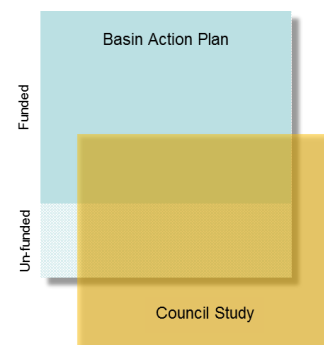
* Source: Concept Note agreed by the MRC Member States on the Follow-up of the MRC Council Meeting Decision of 8 December 2011 to conduct a study on the sustainable management and development of the Mekong River including impacts by mainstream hydropower projects, MRCS, November 2012

availability of essential baseline data as well as understanding of the impact relationships between changes in climate, flow regimes and water quality on environmental, social and economic conditions within the basin.

The concept note proposes that the study will be undertaken in five major phases: inception, field studies, analysis, consultation and recommendations, with interim results and findings reported at the end of the third phase. The initial inception phase will include the development of detailed guidance for the study formulated by expert working groups, who would go on to supervise the remaining phases. The concept note envisages that the study would commence in February 2013 with interim results reported in mid-2014 and mid-2015 and would be concluded by the December 2015.

Based on the scenario assessments previously undertaken, the BDS has already identified and prioritised key knowledge gaps affecting the MRC's capacity to undertake basin-scale strategic planning (Chapter 4 of the BDS). Addressing these identified gaps thus forms part of the Regional Action Plan. However, from a review of MRC Programme documents and plans it is evident that not all gaps can be filled under their current plans and that new activities will need to be incorporated in the MRC Programme work plans to ensure that all gaps identified in the BDS are fully addressed.

Whilst it is evident that the Council Study has its own distinct purpose, there is significant potential for the Study to complement the Regional Action Plan by addressing some of the important information needs and knowledge gaps that are not covered by current activities within the RAP. Detailed design of the Council Study should take fully into account these ongoing activities in determining which areas the Joint Study should focus its own efforts.



It is also highly desirable that, where possible, complementary activities under the Council Study should be appropriately prioritised to address key emerging issues that will have bearing on updating the BDS in 2014.

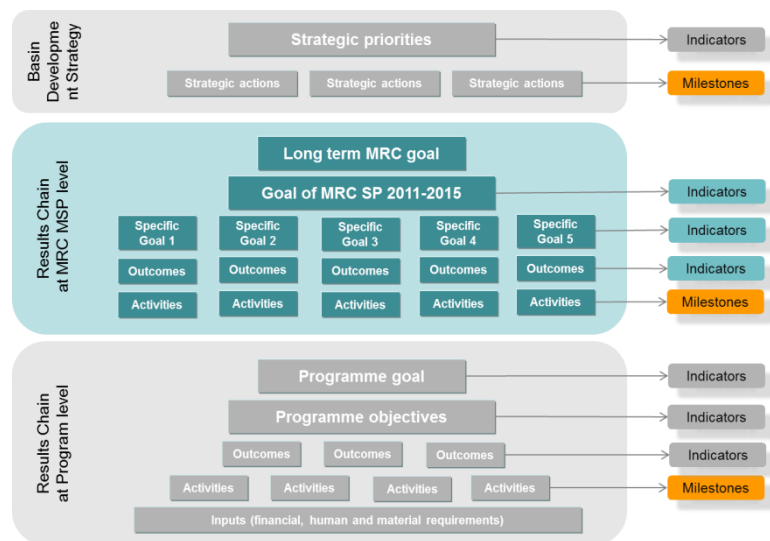
2.3 The opportunity to streamline MRC's planning cycle

2.3.1 Status and complexity of current MRC planning framework

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 aims, objectives, outcomes, outputs and activities which are neither easy to coordinate nor to monitor, as illustrated in Figure 2.

In addition, the MRC Programmes are at different stages of their Programme cycles. For historic reasons, their activities and outputs are not necessarily fully aligned with either the latest MRC Strategic Plan or the Basin Development Strategy priorities. The need is made clear in the Basin Development Strategy to create this alignment of activities progressively over the current planning cycle.

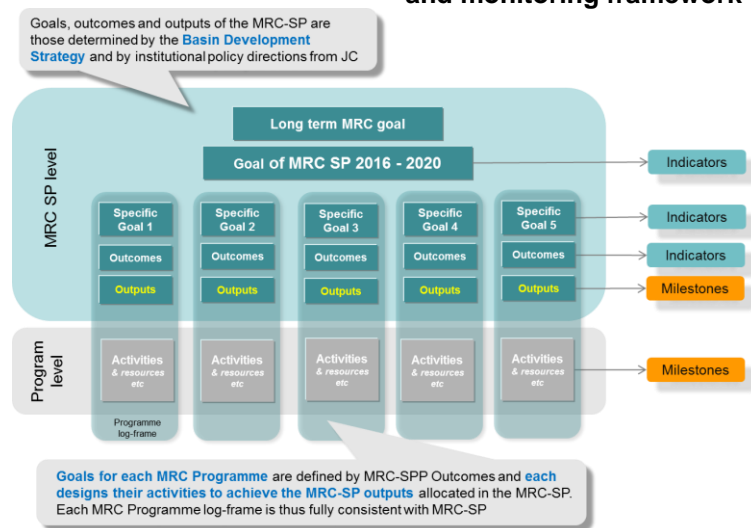
Figure 2 Current MRC planning and monitoring



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 3 that could be applied for the 2016-20 plans.

As proposed, the goals, outcomes and required outputs 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. In addition, the activities of the MRC Programmes would be designed to address these same goals, outcomes and outputs as established under the MRC-SP. In this way, the overall planning process and monitoring requirements would be much simplified and would lead to greater efficiency and ease of coordination.

Figure 3 Proposed rationalisation of MRC planning and monitoring framework



2.3.2 *The way forward to strengthen and simplify the MRC planning framework*

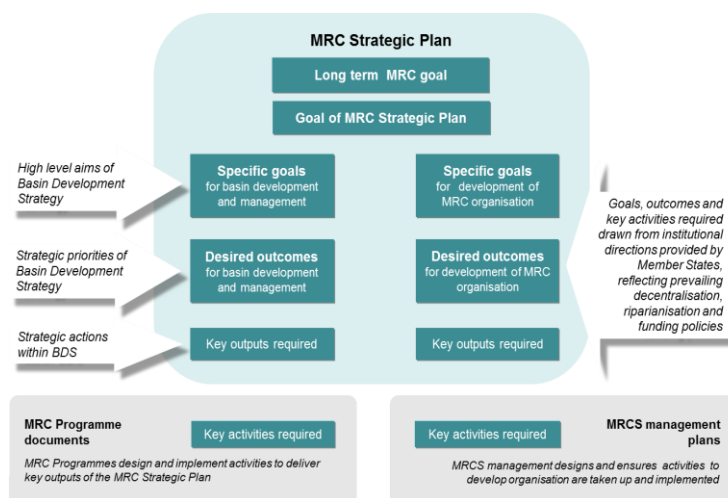
To address the issues of complexity as described above, BDP now plans to update the Basin Development Strategy a year ahead of originally planned. This update, together with directions

provided by the Member States for organisational development of the MRC, will guide (and much simplify) the preparation of the MRC Strategic Plan for 2016 – 20 (see Figure 5).

The responsibilities of the MRC Secretariat, as embedded within the MRC-SP, will need to be balanced against those

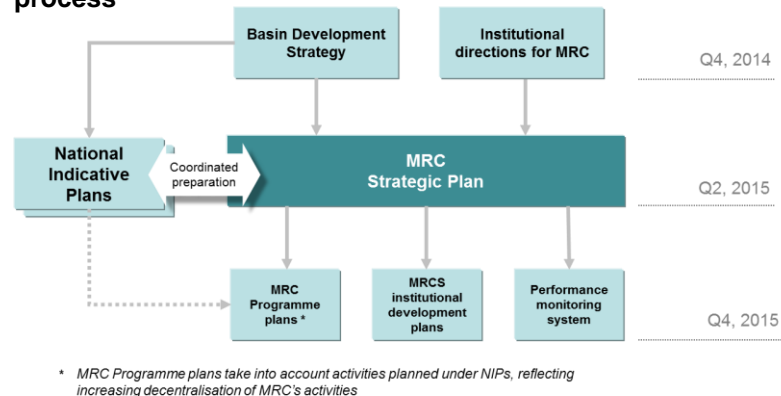
which are to be addressed at the national level, reflecting an increasing decentralisation of efforts. Thus each country needs to develop its National Indicative Plan in parallel to the MRC-SP, sharing the onus of strategic actions (as defined in the updated BDS) with those to be undertaken by the MRC Secretariat through the MRC Programmes. Once these are agreed and the MRC-SP is fixed, the MRC Programmes will be able to develop their work plans consistent with the strategic directions described above.

Figure 4 Proposed linkages between BDS, MRC Strategic Plan and MRC Programme documents



The former, basin development and management, necessarily should be determined through the activities leading up to the BDS. This will require that the BDS, when updated in 2014, is structured somewhat differently from the previous version, with clear definition of specific goals (long term and over the ensuing five year period), desired outcomes in the next 5 years (equivalent to the current Strategic Priorities – albeit phrased somewhat differently) and key outputs (equivalent to the strategic actions identified within the current BDS).

Figure 5 Streamlining of the MRC strategic planning process



* MRC Programme plans take into account activities planned under NIPs, reflecting increasing decentralisation of MRC's activities

The second theme, related to evolving the MRC's organisation, requires that a process is developed within MRC to arrive at specific guidance (from the Member States, through JC). This process needs to be designed and planned for with similar rigour as with the other components of the MRC-SP (an activity which should soon start), and needs to extend well beyond consideration of capacity building in support of cost effective national and regional implementation of MRC's strategies and plans.

Importantly, and as may be deduced from Figure 5, the parallel development of the MRC-SP with the National Indicative Plans opens up considerable opportunity to determine the balance of effort between the countries and the MRC Programmes to address the required actions determined under the Basin Development Strategy (the BDS strategic actions having been established through the extensive participatory process developed and facilitated by the BDP Programme).

This dialogue, conducted at this strategic planning level, can provide a rational basis for and be a key driver in addressing the issues of decentralisation, riparianisation and development of core functions. Whilst this will have potential implications also for the form and structure of future National Indicative Plans, the process should lead to the countries determining which strategic actions rightfully should be addressed by the countries, with the implication that the balance should be taken up regionally and entered into the MRC-SP.

It follows that thereafter, once the MRC-SP is completed, each MRC Programme then needs to design a set of activities in consultation with the countries to achieve each "key output" within the MRC-SP (it is implicit that the MRC-SP should allocate outputs to individual MRC Programmes for this to happen).

2.3.3 *Opportunity to simplify the MRC monitoring framework*

The process described above will lead to a coherent and much simplified set of plans for the MRCS to monitor, as 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 States' requirements. The principles of the required M&E system are illustrated in Figure 6.

Under the basin development and management theme, the specific goals will relate to improved social, environmental and economic development within the basin and therefore this should be addressed by the State of the Basin (SoB) Report.

Future SoB reports will need to be presented in a more structured form and report on an agreed set of development. At the next level down- desired outcomes - it will be necessary to conduct external surveys and/or assessments to measure whether the outcomes have achieved the desired results amongst the relevant stakeholders. Below this level, the delivery of outputs and the completion of activities can be addressed through internal progress reporting.

Under the organisational development theme, the same principles can be expected to apply, with the higher level indicators requiring external assessment, whereas the lower levels can be tracked through progress reporting.

Figure 6 Proposed monitoring framework under future Strategic Plans



2.3.4 Implications for design of the current Regional Action Plan

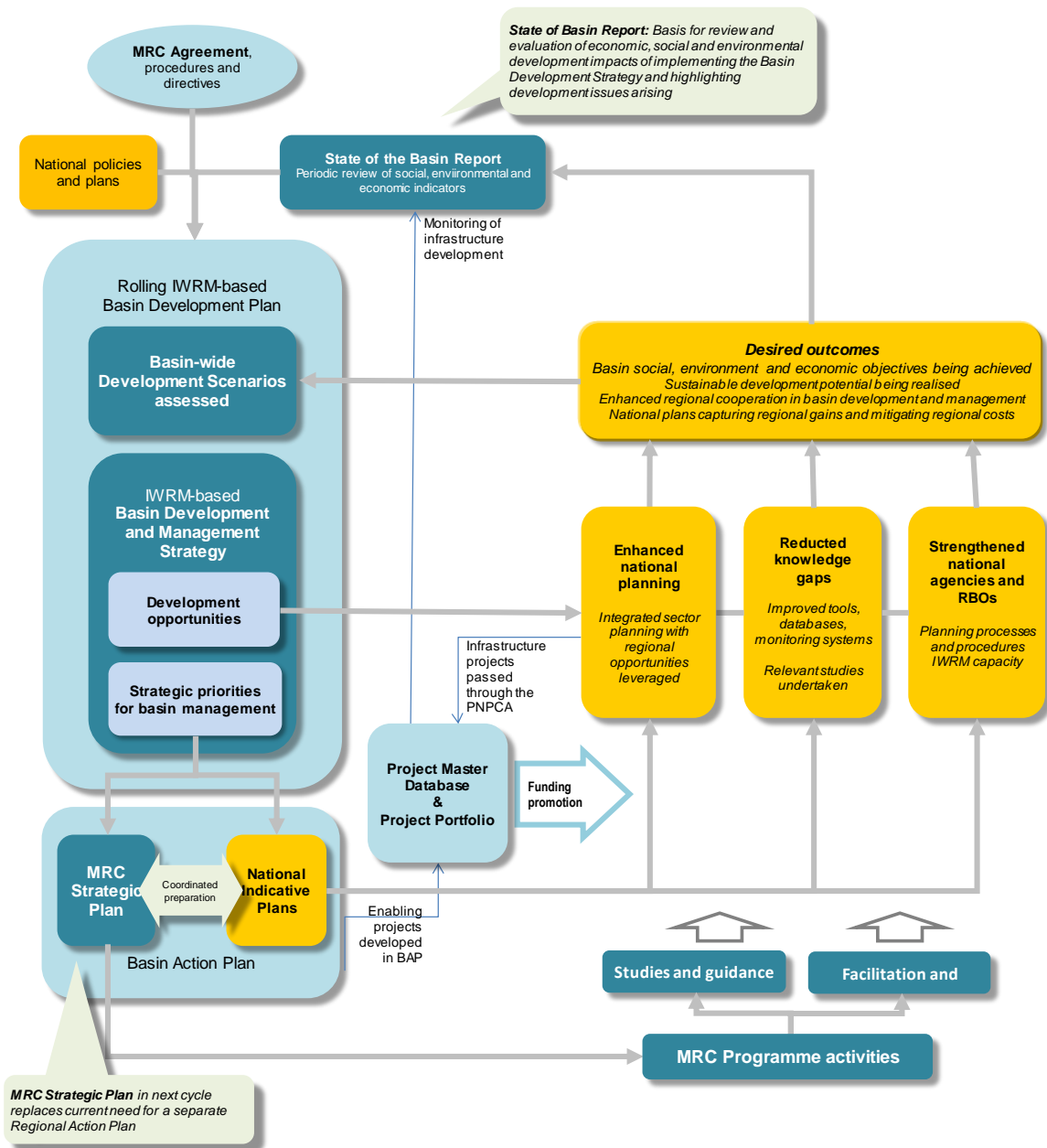
As illustrated in

Figure 7 overleaf, in the next cycle of strategic planning, the MRC Strategic Plan together with the four NIPs will form a five-year Basin Action Plan that will guide and enhance basin development and management. The need for a separate Regional Action Plan will be removed as the activities of the MRC Programmes will be fully aligned and rendered consistent both with the Basin Development Strategy and the MRC Strategic Plan, as well as taking into account those actions being addressed nationally.

Assuming that these proposals above for streamlining the MRC strategic planning process are adopted in principle, this will have significant implications for the current “Regional Action Plan”. These are highlighted below.

- ❑ The current RAP is an interim measure to assist the MRC in progressively achieving the harmonisation of the basin’s strategic requirements with those of the MRC Programmes, taking into account country needs and ongoing and planned activities;
- ❑ In future, there will not be a need for a separate Regional Action Plan, as the requirements of the current RAP will be addressed through the MRC Strategic Plan;
- ❑ During this transitional period, the current RAP needs also to look to and anticipate the form in which future plans are prepared, recognising that the outcomes and required outputs for MRC Programmes would be set at a higher strategic level based on the needs of the countries, requiring that the MRC Programmes design activities to achieve these; and

Figure 7 Functions and relevance of Basin Action Plan in context of basin development and management



- In addition, and as noted in the regional workshop to discuss the first draft of the RAP, there is a need to promote greater synergy between regional and national activities, both in relationship to strengthening the linkages between the different levels of water management planning as well as, importantly, identifying and leveraging opportunities for harmonisation of transboundary development including bilateral initiatives.

Accordingly, the current RAP has been redesigned with the following relevant features:

- (i) The revised focus of the RAP has been set on providing clarity to the MRC Programmes on how best to align their activities with the milestones given in the MRC Strategic Plan, these milestones having been shown to be broadly consistent with achieving the Strategic Actions and the Strategic Priorities presented in the Basin Development Strategy;
- (ii) At the same time, with the availability of draft and/or final NIPs, opportunity has been taken to highlight where there are apparent synergies between the MRC Programme activities (as already agreed in the MRC Strategic Plan) and those planned under the NIPs, with the intention that the MRC Programmes and individual countries should explore how these synergies may be leveraged;
- (iii) As a consequence of both the above, the Project Identification Notes within this RAP have been redesigned, with one for each Programme (rather than cross-cutting PINs as before, built around the strategic themes of the MRC-SP⁶); and
- (iv) Taking into account the potential for streamlining the future planning and monitoring arrangements, the RAP's M&E system has been further developed to serve tracking of progress in implementing both the Basin Development Strategy and the MRC Strategic Plan.

The above is intended to reflect and respond to the key concerns raised in the regional workshop to discuss the draft RAP. In summary:

- The basis for the RAP has been much simplified as a result;
- MRC Programmes will need to achieve their milestones as agreed in the MRC Strategic Plan and the RAP as now presented provides guidance on the significance of these as well as the relevance of activities being taken up under the National Indicative plans;
- MRC Programmes will need simply to report progress on the achievement of their milestones and the M&E system will automatically interpret these data in terms of progress of activities contributing to both the Specific Goals and Outcomes of the MRC-SP as well as the Strategic Priorities and Strategic Actions of the Basin Development Strategy.

Furthermore, the revised RAP and its related M&E system mirrors closely the proposed future arrangements for strategic planning and monitoring within the MRC and, as such, lays the foundation to streamlining these processes.

⁶ It may be observed that the association of PINs with individual MRC Programmes is a device to achieve the necessary alignment of current MRC Programmes during what may be termed as a transitional period through to 2015. In the future, PINs can be used to address basin-level strategic planning outcome and output requirements, which may be cross-cutting in nature and/or may incorporate joint regional/national activities associated with transboundary issues involving two countries or more.

3 The Regional Action Plan

A key objective of the Regional Action Plan is to ensure that those parts of the IWRM-based Basin Development Strategy to be implemented by the MRC Programmes are taken up in a timely and coordinated manner. This Chapter provides guidance to MRC Programmes on how best to progressively align their activities with the milestones of the MRC Strategic Plan in line with the requirements of the Basin Development Strategy. This guidance is further elaborated in Project Identification Notes prepared for each MRC Programme individually, which are presented in Appendix C of this report along with some explanatory notes. The key actions for MRC management, MRC Programmes, TCU and BDP to take are also summarised in this Chapter.

3.1 Purpose of the Regional Action Plan

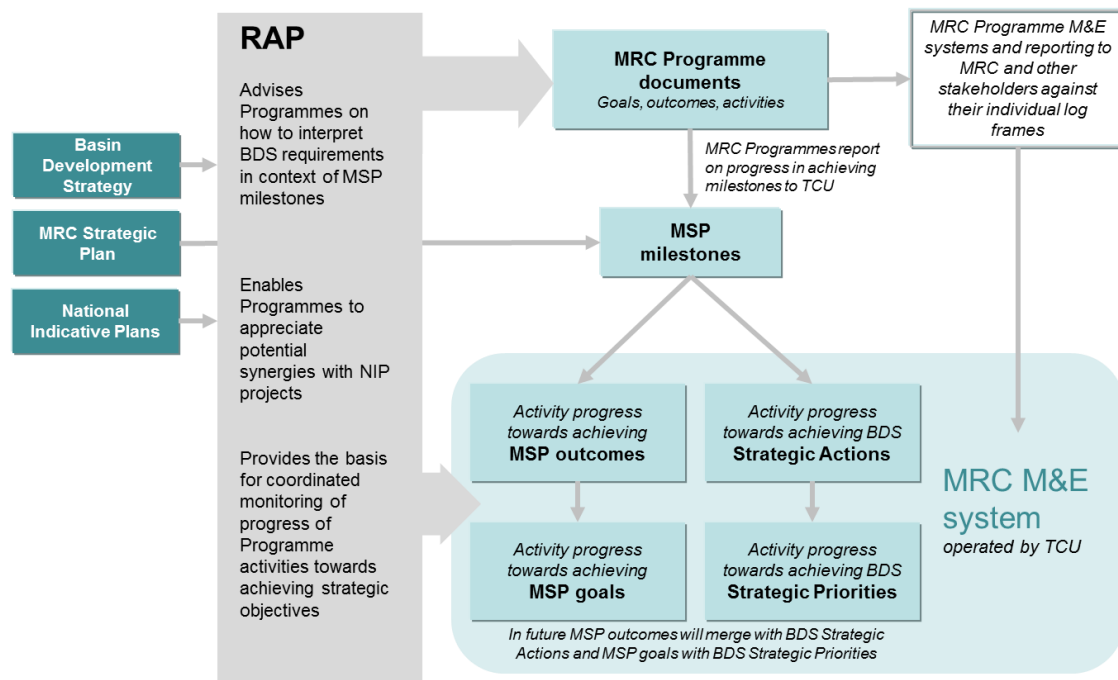
As explained in Chapter 2 (and assuming that the proposed streamlining of the MRC strategic planning process is taken up), the role of the Regional Action Plan is a temporary one for the purposes of the 2011-15 period to guide and progressively harmonise MRC Programme activities with both the MRC Strategic Plan and the Basin Development Strategy. As proposed, for the 2016-20 cycle, the Regional Action Plan will no longer be required as this need will have been addressed by the MRC Strategic Plan, the goals and outcomes of which (relating to basin management) will have been formed in the updated Basin Development Strategy, which will precede formulation of the MRC Strategic Plan.

Within the current strategic planning framework of the MRC and its Member States, the Regional Action Plan is aimed therefore at serving four main purposes as illustrated below in Figure 8. These are to:

- ❑ Advise MRC Programmes on how to interpret BDS requirements in the context of MRC-SP milestones;
- ❑ Enable MRC Programmes to appreciate and develop the potential synergies with NIP projects;
- ❑ Lay the foundation to adoption of a streamlined process to MRC strategic planning for the next planning cycle for 2016-20; and
- ❑ Provide the basis for coordinated monitoring of progress of MRC Programme activities towards achieving strategic objectives.

These first three of these aims are addressed in this Chapter and the requirements for monitoring and evaluation are set out in Chapter 4.

Figure 8 Relevance of RAP within current strategic planning and monitoring framework



3.2 MRC Programme activities

The principal vehicle for providing guidance to the MRC Programmes on the strategic significance of the MRC-SP milestones is the Project Identification Note (PIN). The PIN is so called as it is intended to bring together the strategically important components of each MRC Programme’s work in a single document or “project”.

The format of the PIN, described in Appendix C , has been created in a manner that may usefully be applied also in future strategic planning cycles to provide the essential linkages between the outcomes and outputs of the MRC-SP and the activities that each MRC Programme would need to plan to the desired outcomes allocated to that Programme.

Within the current planning cycle, for the reasons earlier explained in this report, the PINs are needed to rationalise the differences that exist between the wording of MRC-SP Outcomes and BDS Strategic priorities and MRC-SP Outputs with BDS Strategic Actions. Furthermore, as also explained earlier in this report, there are also inconsistencies between MRC-SP milestone descriptions and the activities set out in the MRC Programme documents, as well as in the definition of goals, outcomes and outputs found in the MRC-SP and MRC Programme documents.

Thus for current purposes, and bearing in mind the underlying requirement is to ensure that the BDS is being implemented, the PINs adopt the hierarchy of aims, objectives etc as set out in

Appendix C , which also demonstrates how the PINs may usefully be used in the next strategically planning cycle.

The fourteen PINs that make up the MRC Programme contribution to the Regional Action Plan are listed in Table 2 below.

Table 2 Listing of Project Identification Notes

Ref	Programme
R-01	AIP Agriculture and Irrigation Programme
R-02	BDP Basin Development Plan Programme
R-03	CCAI Climate Change and Adaptation Initiative
R-04	DMP Drought Management Project
R-05	EP Environment Programme
R-06	FMMP Flood Management and Mitigation Programme
R-07	FP Fisheries Programme
R-08	ICBP Integrated Capacity Building Programme
R-09	ICCS International Cooperation and Communication Section
R-10	IKMP Information and Knowledge Management Programme
R-11	ISH Initiative on Sustainable Hydropower
R-12	MIWRM Mekong Integrated Water Resources Management Project
R-13	NP Navigation Programme
R-14	WMP Watershed Management Programme

A summary of the MRC-SP milestones associated with each PIN is provided in Appendix B and the full Project Identification Notes are provided in Appendix C of this Regional Action Plan. The key features of each PIN are set out in the sections below.

3.2.1 *Agriculture and Irrigation Programme*

The scope of work is designed to enable AIP to contribute greater understanding of the agricultural sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

- 422000 Expand and intensify irrigated agriculture for food security and poverty alleviation
- 432000 Strengthen national level water resources management processes
- 433000 Strengthen basin management processes
- 530000 Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2014
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2014
AIP01	By 2013	Study report on groundwater development potential	2014
AIP02	By 2013	Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	<i>Pending</i>
AIP03	By 2013	Guidelines for improved irrigation management	<i>Pending</i>
AIP04	Continuously	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis	2015
AIP05	to be updated	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

The National Indicative Plans set out a number of national projects of relevance to AIP's work. Further information on relevant projects are set out in Appendix C .

3.2.2 *Basin Development Programme*

The scope of work to be undertaken by BDP is intended to contribute to improved and integrated IWRM planning and management within basin at all levels supported by strengthened procedures and improved monitoring systems, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin
425000	Options for sharing the potential benefits and costs of development opportunities
427000	Integration of basin development planning considerations into national systems
433000	Strengthen basin management processes
440000	Studies and Guidelines
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP milestone date	Output description (SP Milestone)	Updated target date
ALL01	By 2014	Sector reviews updated by sector Programmes	By 2015
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC	Nov 2013

Programmes			
BDP01	By 2011	Basin Action Plans approved for implementation	Dec 2012
BDP02	By 2013	Basin-wide objectives or “baseline indicators” covering economic, environmental and social factors developed	Jun 2014
BDP03	By 2015	Basin development strategy updated every 5 years to also include sub-basin water management issues	Nov 2014
BDP04	By 2015	A basin-wide management plan/strategy prepared	Nov 2014
BDP05	Continuously	National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy	Continuous
BDP06	By 2015	Basin-wide and sector water resources management guidelines	By 2015
BDP07	By 2011	Study report on management of risks of on-going and committed water resources development projects	Dec 2013
BDP08	Continuously	A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established	Oct 2014
BDP09	By 2014	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions	Feb 2014
BDP10	Continuously	A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational	Continuous
BDP11	Continuously	A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRCS for monitoring and providing early advice on addressing transboundary risks associated with LMB water development	Dec 2014
BDP12	By 2011	Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream	Dec 2013
BDP13	By 2011	Strategy implementation monitoring system designed	Nov 2012
BDP14	By 2012	Strategy implementation monitoring system operational	Dec 2012

The National Indicative Plans set out a number of national projects of relevance to BDP’s work. Further information on relevant projects are set out in Appendix C .

3.2.3 *Climate Change and Adaptation Initiative*

The scope of work is designed to enable CCAI to contribute greater understanding of climate change and adaptation measures in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

426000	Climate change adaptation
433000	Strengthen basin management processes
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2013
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	June 2013
CCAI01	By 2015	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	By 2015	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	By 2015	Study report on the impacts of climate change on navigation and existing infrastructure	2015
CCAI04	By 2015	Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn	1st batch June 2013, 2nd batch Dec 2014
CCAI05	By 2013	A Climate Change Adaptation Strategy for the LMB prepared and approved	June 2015
EP05*	By 2013	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	2013/updated 2014
EP07*	By 2012	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	2015
EP15*	By 2015	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	2015

Note: () Responsibility for milestone transferred by mutual consent from EP*

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.4 *Drought Management Programme*

The scope of work is designed to enable DMP to contribute greater understanding of the management of droughts in rainfed agriculture as an area of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

422000	Expand and intensify irrigated agriculture for food security and poverty alleviation
433000	Strengthen basin management processes
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2014
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2013, 2014, 2015
DMP01	By 2013	Drought mitigation strategies and mitigation options developed for rainfed areas	2014

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.5 *Environment Programme*

The scope of work is designed to enable EP to contribute greater understanding of the environment sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

427000	Integration of basin development planning considerations into national systems
433000	Strengthen basin management processes
440000	Studies and Guidelines
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	...
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...

EP01	By 2013	Management plans for environmental hotspots impacted by changed flow regimes developed	2015
EP02	By 2013	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	...
EP03	By 2015	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	...
EP04	Continuously	Environmental impact assessments undertaken for proposed regional navigation developments	...
EP05*	By 2013	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	<i>See CCAI</i>
EP06	By 2012	Climate change impact and vulnerability assessment tools developed for biophysical and social systems	<i>Is part of EP07</i>
EP07*	By 2012	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	<i>See CCAI</i>
EP08	By 2013	Study report on biodiversity changes	2015
EP09	By 2012	Guide to integrate climate change into SEA and EIA processes developed	2013
EP10	By 2013	Study report on social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	2014
EP11	Continuously	Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts	...
EP13	By 2014	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored	2015
EP14	By 2012	Diagnostic study for toxic contaminants in the Mekong riverine environments	...
EP15*	By 2015	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>See CCAI</i>
EP16	By 2014	Environmental Outlook published	...

Note: () Responsibility for milestone transferred by mutual consent to CCAI*

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.6 *Flood Management and Mitigation Programme*

The scope of work is designed to enable FMMP to contribute greater understanding of flood management in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic

development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

427000	Integration of basin development planning considerations into national systems
431000	Establish basin visions and management strategies for water-related sectors
433000	Strengthen basin management processes
440000	Studies and Guidelines
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	...
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...
FMMP01	By 2013	IFRM incorporated into the BDP	2014
FMMP02	By 2015	IFRM process applied to flood prone areas	2015
FMMP03	By 2015	National Planning Processes reflect IFRM considerations	2015
FMMP04	By 2014	A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	2014
FMMP05	By 2015	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	Continuously	Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared	Ongoing
FMMP07	By 2014	Trans-boundary flood risk management tools developed	2014

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.7 *Fisheries Programme*

The scope of work is designed to enable FP to contribute greater understanding of the fisheries sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

422000	Expand and intensify irrigated agriculture for food security and poverty alleviation
424000	Acquisition of essential knowledge to address uncertainties and minimise risk
431000	Establish basin visions and management strategies for water-related sectors
433000	Strengthen basin management processes
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2014
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2012, 13, 14
FP01	By 2013	Guidelines for fish-friendly development of irrigation schemes	2013
FP02	By 2014	A comprehensive, basin-wide fish management strategy developed	2015
FP03	By 2013	Study report on reduction of capture fisheries and its social implications	2013
FP04	to be updated	Study report on classification of LMB habitats and their fish, threats and opportunities	2013

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.8 *Integrated Capacity Building Programme*

The scope of work is designed to enable ICBP to contribute strengthening institutional capacity in areas of strategic importance to the MRC, and as part of this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

432000	Strengthen national level water resources management processes
433000	Strengthen basin management processes
435000	Implement a targeted IWRM capacity building programme
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	...
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...
ICBP01	Continuously	Gender audits undertaken for all MRC programmes and major policy documents to ensure gender responsive approaches are mainstreamed	2013
ICBP02	Continuously	Gender tools (gender analysis, gender statistic, gender budgeting, etc.) are applied in each stage of the project management cycle.	2013-2014
ICBP03	Continuously	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	By 2012	An IWRM competency framework developed	May 2012
ICBP06	By 2012	IWRM training materials updated	2013
ICBP07	By 2012	Leadership capacity development needs/gaps assessed	...
ICBP08	Continuously	Networks of capacity building institutions in the sub-region and region established	...
ICBP09	By 2011	Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity	2011 - 2013
ICBP10	By 2012	Capacity development plans for the MRCS and targeted national agencies prepared	2011-2013
ICBP11	By 2012	IWRM competency framework developed and applied for the MRCS and targeted national agencies	2012 on wards
ICBP12	Continuously	MRC, MDBA, and AusAID Strategic Liaison Partnership established	2012 - 2016
ICBP13	Continuously	Internships, professional work exchange opportunities, and provision of scholarship-related information updated	On-going

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.9 *International Cooperation and Communication Section*

The scope of work is designed to enable ICCS to contribute to improved communications in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

- 433000 Strengthen basin management processes
- 530000 Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	...
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...
ICCS01	Continuously	Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy	Continuously
ICCS02	By 2013	MRC-wide stakeholder analysis and structured engagement process developed	2013

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.10 *Information and Knowledge Management Programme*

The scope of work is designed to enable IKMP to contribute to strengthened information systems and knowledge management in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

- 424000 Acquisition of essential knowledge to address uncertainties and minimise risk
- 432000 Strengthen national level water resources management processes
- 433000 Strengthen basin management processes
- 440000 Studies and Guidelines
- 530000 Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2014
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2013,14,15

IKMP01	By 2015	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	Continuously	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ongoing
IKMP02	Continuously	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ongoing
IKMP03	By 2013	Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures	2013
IKMP04	Continuously	National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies	2015
IKMP05	Continuously	Tools developed to analyse and assess impacts of water use in different sectors	2015
IKMP06	to be updated	Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures	ongoing

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.11 *Initiative on Sustainable Hydropower*

The scope of work to be undertaken by ISH is intended to contribute greater understanding of the hydropower sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin
423000	Improve sustainability of hydropower development
433000	Strengthen basin management processes
440000	Studies and Guidelines
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC SP milestone date	Output description (SP Milestone)	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2014
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared,	2012,13,14

		reviewed and updated by individual MRC programmes	
ISH01	By 2013	Ecologically sensitive sub-basins identified for limited development of hydropower on tributaries	2013
ISH02	By 2013	Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams	2013/14
ISH03	By 2013	Negative impact mitigation measures for tributary dams	2014
ISH04	By 2013	Design guidance for mainstream dams	2013
ISH05	By 2013	Study report on evaluated options of mainstream power development in context of national and regional power strategies	2013
ISH06	By 2013	Guidelines on risk mitigation options for possible mainstream dams	2014
ISH07	By 2015	a) Mainstream and tributary hydropower potential and alternative power options assessed and reported, including b) innovative hydropower schemes that do not affect connectivity in the lower basin	a)2014 b)2013
ISH08	By 2013	Essential knowledge acquired to minimize uncertainty of possible mainstream dams	2014
ISH09	By 2015	Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools	2013
ISH10	By 2014	Guidance on Sustainable Management of Reservoir Watersheds prepared	2014
ISH11	Continuously	Environmental baseline information improved for hydropower planning	2014/15
ISH12	By 2015	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	By 2013	Benefit-sharing options for hydropower on tributaries evaluated and reported	2013
ISH14	Continuously	Technical assistance provided to hydropower developers on safeguards and compliance monitoring	Ongoing
ISH15	By 2011	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

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.12 *Mekong IWRM Project (MIWRMP)*

The scope of work is designed to enable MIWRMP to contribute strengthened processes and procedures and related institutional capacity in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in

promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin
423000	Improve sustainability of hydropower development
432000	Strengthen national level water resources management processes
433000	Strengthen basin management processes
435000	Implement a targeted IWRM capacity building programme
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	...
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...
MIWRM01	By 2013	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	2015
MIWRM02	By 2011	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	2016
MIWRM03	Continuously	Strengthened implementation of MRC Procedures	Ongoing (2015)
MIWRM04	Continuously	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	By 2011	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	2011

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.13 *Navigation Programme*

The scope of work is designed to enable NAP to contribute greater understanding of the navigation sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

423000	Improve sustainability of hydropower development
431000	Establish basin visions and management strategies for water-related sectors
433000	Strengthen basin management processes
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	2014
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2012,13,14
NAP01	By 2013	Regional Master Plan for the overall navigation development in the LMB prepared	2014-2015
NAP02	By 2012	Overall Strategy for incorporation of ship locks in planned mainstream dams , including standards for lock design and operations formulated	2013-2014
NAP03	By 2014	Regional Feasibility Study for Mekong Waterway Improvement prepared	<i>Not in NAP programme</i>
NAP04	By 2013	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 States	2014
NAP05	By 2014	Significance of the tributaries of the LMB for navigation identified	2015
NAP06	By 2014	Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established	Ongoing
NAP07	By 2015	Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups	2014-2015
NAP08	By 2014	Trans-boundary environmental impact assessment of physical navigation improvement conducted	2015
NAP09	to be updated	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	By 2014	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	By 2014	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	to be updated	Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism	2014
NAP13	By 2014	Aids to navigation as per priority needs, including landing facilities for tourists installed	Ongoing + 2013
NAP14	By 2014	River surveys: Comprehensive analysis of the river by multi-beam echo-sounding conducted: the feasibility for conducting a comprehensive assessment of the river's bathymetry will be examined, including such technologies as echo-sounding.	Ongoing + 2013
NAP15	By 2014 and continuously later	Information on Navigation accidents published and disseminated to regional, dialogue and Development Partners	2014
NAP16	By 2013	Standards for waterway classifications developed	2014

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.2.14 *Watershed Management Project*

The scope of work is designed to enable WMP to contribute greater understanding of watershed management in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.

The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:

433000	Strengthen basin management processes
530000	Monitoring, evaluation and reporting

As specified in the MRC Strategic Plan, The key outputs and milestone dates to be achieved are:

MRC-SP Ref	MRC-SP planned date	Description	Updated target date
ALL01	By 2014	Sector reviews updated by sector programmes	...
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...
WMP01	to be updated	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	...

The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects are set out in Appendix C .

3.3 Linkages with National Indicative Plans

As noted above and reflected in each MRC Programme PIN, a component of the RAP is to foster linkage between MRC Programme activities and activities being taken up nationally under the NIPs.

3.3.1 *Overview of National Indicative Plans*

The NIPs form an integral part of the Basin Action Plan. They have been prepared in each country under the coordination of the respective NMC following guidelines prepared by BDP and endorsed by the MRC JC. NIP projects are generally described using the same format for PINs as in the RAP. Each NIP has been developed in 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 through implementing the Basin Development Strategy.

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 summarized as follows.

Cambodia has identified five programmatic outcomes and 28 programmes/projects worth US\$530 million. Of these projects measured by value, some 81% are associated with ongoing and pipeline projects in agricultural and livelihood development and water resource sector projects as well as climate change adaptation and disaster risk reduction designed to leverage opportunities and cope with risks associated with natural and human-made changes. The unfunded programmes and projects cover both enabling and non-structural activities such as capacity building, inter-ministerial/cross sectoral coordination mechanism and capacity, and studies and planning to address key knowledge gaps, protect natural resources and improve water management in key hot-spots or watersheds, as well as in some small scale irrigation and drainage system development and improvement. About 30% of the proposed programmes/projects in Tonle Sap, 3Ss and Mekong Delta in Cambodia are of bilateral and basin-wide significance. Cambodia's NIP is directed at the following strategic focus – irrigated agriculture, hydropower (development options, cost and benefit sharing and guidelines), climate change, knowledge gaps, and study and guidelines. These will be mainly implemented through government agencies through inter-ministerial partnership arrangement at both national and sub-national levels.

Lao PDR has identified 43 projects with a total budget of US\$ 369 million, some 39% of which are funded and ongoing. A large proportion of these projects in financial terms is associated with non-structural measures to strengthen forestry and natural resources management and to upgrade the hydro-meteorological 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. Over 70% of the projects are judged to be of basin-wide significance reflecting 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.

Thailand's 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. 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.

Viet Nam has identified 45 projects, excluding funded and on-going projects, with a total investment of US\$9.5 million additionally required. Nearly all of these projects, which cover both the Delta and Highlands regions within the LMB, are enabling projects. These projects have been identified to address key knowledge gaps and planning issues and to strengthen water management and related procedures. Many of Viet Nam's projects are outward facing and are designed to address basin-scale issues that affect Viet Nam and support their negotiating position as a downstream riparian country. Viet Nam will implement these projects through a wide variety of agencies and institutes at their disposal, reflecting the breadth of their institutional capacity.

3.3.2 *Synergies between NIP projects and RAP activities*

Although the projects identified in each NIP vary considerably between countries, it is evident that they reflect each country's perspective on the water management issues raised in the BDS that are not only of greatest national concern but also which offer opportunities to benefit from cooperation with other countries in the area of regional and national water resource management. As may also be expected, the selection of projects reflects as well the status of their respective institutional capacities.

It is further evident that 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 States. 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.

An assessment has been made for the purposes of preparing the RAP of the potential linkages between MRC Programme activities and NIP projects. This is presented in full in Appendix D of this document and a listing of those relevant to each MRC Programme is provided for convenience in each PIN. All MRC Programmes have NIP projects associated with them, with BDP unsurprisingly having the most. Development planning, capacity building, climate change, environment and fisheries, flood management, knowledge management and hydropower are common themes to be found within the NIPs.

The publication of the NIPs offers MRC Programmes a better insight into national areas of concern and the priorities each country attaches to them and the opportunity to leverage the evident synergies.

3.3.3 *Opportunities to develop these synergies*

As noted in Section 2.3 of this report, it may be anticipated that the manner by which MRC activities are planned and implemented for 2016-20 will be different to the current processes. The exact nature of how this will be done depends upon decisions yet to be considered and made by the MRC Joint Committee on the strategic planning and decentralisation processes and on the move towards an institutional set up related to core river basin management functions.

Nevertheless, the positive feedback received from draft versions of this report suggest that there is a commonly expressed view that in the next planning cycle a more structured approach should be adopted to integrate regional and national basin management activities within a shared strategic framework (the updated BDS). This would bring significant advantages, in particular ensuring alignment of activities undertaken at regional level with those at national level under refreshed NIPs, all of which would be designed around a common purpose as defined by the updated BDS.

It also seems clear that that, for the reasons stated in Section 2.3, the current 2011-15 period should be viewed as a transitional one in which MRC Programme activities are progressively aligned with the requirements of the BDS (as expressed through the milestones required under the MRC-SP). It is evident that significant progress towards this alignment is being made (vide the MRC Programme adoption of most MRC-SP milestones as expressed through their updates on the MRC-SP milestones given in this report). However, it is recognised that for some MRC Programmes there are continuing commitments to activities previously agreed that lie outside the MRC-SP framework and also constraints with regard to fund and resource availability that together will limit the speed with which the transition can be completed.

It must be recognised also that there are constraints too on the part of countries to take up their NIP projects. Whilst in Lao PDR and Cambodia in particular a significant portion of their NIP activities are covered under ongoing project activities, in general, new activities are as yet unfunded and therefore will take some time to be taken up. In some cases, for instance in Thailand, steps to put funding and cooperative arrangements with MRC have already been taken. In other cases, countries look to MRC Programme support to initiate some of their proposed projects, and BDP for instance is making provision for funding a part of these⁷.

Under these circumstances where there are clear limitations at both regional and national levels, **a pragmatic approach is needed to leveraging synergies between regional and national activities during this transitional period up to 2015**. In this regard, the following is recommended:

- **MRC Programmes** should review each NIP and identify those projects of relevance to their ongoing and planned activities within the transitional period (a preliminary identification of these is given in each MRC Programme PIN), with a view to identifying how links may be established (if not already in place) with the concerned implementing agencies and opportunities to share information and insights may be established to mutual benefit – the focus of these efforts will naturally fall *mainly on NIP activities which are ongoing*; and
- **National Mekong Committees** should focus their attention on *new activities* planned under their NIPs and facilitate a dialogue between the intended implementing agencies and relevant MRC Programmes to identify ways by which cooperation can be established (taking into account the fund and resource limitations of the MRC Programmes) – priority should be attached to setting up meetings between concerned national agencies and relevant MRC Programmes for those projects considered to be *bilateral in nature* (involving two or more countries in their implementation) as well as those of *basin-wide significance* (the outcomes of which would lead to expansion of the Development Opportunity Space to the mutual benefit of all countries).

3.3.4 *Benefits to be gained from developing synergies*

Both the initiatives above are intended to foster stronger links between regional and national levels. In practical terms, during this transitional period, this will lead to greater appreciation by the MRC Programmes of what are the issues being faced within each country that are of most concern with regard to basin management. It is hoped that these links will also benefit the MRC Programmes through greater access to information and data of relevance to their work, which will better position each MRC Programme to contribute to and help shape the updating of the BDS and the nature of activities required in the next 2016-20 planning cycle.

⁷ BDP intend to provide up to US\$200,000 per country to support start-up of priority NIP activities.

From the national perspective, in addition to gaining practical assistance where possible in implementing their NIPs, a key gain will be greater awareness amongst the line agencies and RBOs of basin-wide perspectives and how these may help them in fulfilling their development and management mandates. In turn, this will strengthen country contributions to the updating of the BDS through clearer appreciation of what actions are needed at regional level to address national concerns.

In addition to the preliminary identification of linkages between NIP Projects and MRC Programmes given in Appendix D and within each RAP PIN given in Appendix C, an overview of the Basin Action Plan is presented in Figure 9 overleaf which summarises the strategic linkages between NIP projects and MRC Programme activities (as characterised by the MRC-SP milestones that each Programme has been allocated).

It is hoped that this chart will help both NMCs and MRC Programmes in appreciating the strategic relevance of their activities, as well as conveniently identifying where cooperation can be beneficially explored during the transitional period.

It is worth noting in addition that updating this chart would become in a key step in the proposed streamlined planning process. Following refreshment of the Strategic Priorities (desired outcomes for the 2016-20 period) and Strategic Actions (desired outputs to achieve the desired outcomes) as an outcome of updating the Basin Development Strategy, this chart would summarise the allocation of responsibilities for achieving those outputs (individually or collectively) between countries and MRC Programmes.

Thus, together an agreed timeline (BDS road map) for achieving those outputs in a coordinated manner, the updated chart would establish the top level framework for the Basin Action Plan 2016-20, within which the four National Indicative Plans and the MRC Strategic Plan would be developed.

3.4 Key actions for implementation of the RAP

The next steps for the **MRCS' management** are proposed as follows:

- ❑ MRCS management should review and consider the opportunities highlighted in this report to streamline the MRC strategic planning cycle and make appropriate recommendations to MRC Joint Committee for their consideration and direction.
- ❑ MRCS management thereafter should ensure that the MRCS makes ready for and aligns its activities in accord with MRC Joint Committee's directions in this regard.

The next steps for the **MRC Programmes** are proposed as follows:

- ❑ Each MRC Programme should assimilate its PIN and develop an internal plan for the progressive alignment of their Annual Work Plans to achieve the MRC-SP milestones as soon as is practicable, taking into account any resource and funding constraints. Most

Figure 9 Summary of NIP and RAP projects and relevance to BDS Strategic Priorities and Actions (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	CCAI	DMP	EP	FMPP	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														
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														

Figure 9 Summary of NIP and RAP projects and relevance to BDS Strategic Priorities and Actions (Basin Action Plan) - continued

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	IWRMP	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, 4.4		5.2							04	02,04							01, 05,07, 12,18	
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, 8.12, 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 mainstream 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																			
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	

Programmes have already started this, and all Programmes should have done this for their 2013 Annual Work Plan.

- ❑ Each Programme should review the national projects in the NIPs and identify where synergies can be leveraged to the mutual benefit of the concerned national agencies/RBO/RBC and the Programme, and commence a process of engagement to develop these synergies and reflect the required actions within their Annual Work Plans.
- ❑ Each Programme should identify as early as possible any remaining knowledge gaps that they are unable to address and make these known to those who will be preparing the MRC “Council Study”.
- ❑ Each MRC Programme should develop an internal system capable of generating the percentage progress towards each MRC-SP milestone allocated to them – the system may be simple or sophisticated, but needs to be documented, transparent and verifiable.

The next steps for the **MRC’s Technical Coordination Unit (TCU)** are proposed as follows:

- ❑ TCU should make arrangements for and put in place the system for monitoring progress towards achievement of milestones (for which a preliminary design is set out in the next Chapter 4 of this report and for which a trial spreadsheet tool has already been developed).
- ❑ TCU should make preparations for the monitoring of MRC-SP outcomes through a mid-term review in 2013 as an input to the next MRC strategic planning cycle.
- ❑ TCU may also use the mid-term review of the MRC-SP to provide independent validation of progress being made towards achievement of MRC-SP milestones.

The next steps for the **MRC’s Basin Development Programme** are proposed as follows:

- ❑ BDP should support and facilitate (to the extent their resources allow) implementation of the RAP and NIPs and prepare periodic reports on BDS implementation.
- ❑ BDP should also ensure that their own work plans are consistent with the requirements of the RAP, and that steps are taken to advance the preparation of the next State of the Basin Report and update of the Basin Development Strategy, factoring in and prioritising key preceding activities, such as development of basin-wide indicators, building consensus on the revised formats needed of the SoB and BDS etc.

The next steps for the **National Mekong Committees** are proposed as follows:

- ❑ National Mekong Committees are encouraged to facilitate meetings between the intended implementing line agencies of their NIP projects and relevant MRC Programmes to identify ways by which cooperation can be established – priority should be attached for those projects considered to be bilateral in nature as well as those of basin-wide significance.

4 Monitoring and evaluation

A core function of the BDP 2011-15 is to monitor and coordinate implementation of the IWRM-based Basin Development Strategy. The Basin Development Strategy will be implemented through the Basin Action Plan, comprising the Regional Action Plan and the four National Indicative Plans. This chapter explains and discusses the main requirements for monitoring the implementation of the Regional Action Plan and how M&E of the NIPs may be undertaken.

4.1 Monitoring requirements

The Regional Action Plan will be implemented primarily by the MRC Programmes through their various activities over the period 2011-15. The central issues in this regard are:

- That the MRC Programme activities meet the requirements of the 64 Strategic Actions as set out in the IWRM-based Basin Development Strategy in a manner that leads to:
 - An improved knowledge base;
 - A better appreciation of MRC sector issues, requirements and opportunities;
 - Enhanced collaboration with other riparian countries;
 - Strengthened institutional capacity and procedures by which to plan, manage and monitor development of water resources within the LMB; and
 - Informed decision taking on the part of the Member States.
- That the MRC Programme activities are conducted in a timely fashion to enable effective coordination of cross-sectoral issues and updating of the IWRM-based Basin Development Strategy in advance of setting the next MRC Strategic Plan for 2016-20.

4.2 Principles applied to M&E system design

MRCS through TCU, and with the assistance of ICCS, are in the process of upgrading and harmonising arrangements for monitoring MRC performance. The basis for this is the MRC Strategic Plan for 2011-15 together with the individual MRC Programme (and MRC Project) documents together with, more particularly, their annual work plans.

The parallel development of the IWRM-based Basin Development Strategy, the MRC Strategic Plan and the MRC Programme documents (taken in the context also of ongoing MRC Programme commitments to funding agencies) created a major challenge for MRC to arrive at a fully consistent set of planning documents. That this has been substantially achieved bears testament to those involved.

However, and as discussed in Section 2.2 of this report, as a consequence largely of the parallel development of the two strategies, a highly complex set of monitoring indicators has emerged. As also discussed in Section 2.2 there is opportunity to simplify both the MRC’s planning and monitoring processes. The M&E system proposed for the RAP has been developed with this in mind.

The basis for the proposed monitoring the implementation of the Regional Action Plan reflects the earlier discussions in Section 2.2 and recognises that three levels of monitoring are required, as follows:

- ❑ **Monitoring of progress** in implementing the activities designed to address the MRC’s strategic Priorities, which can effectively be done through monitoring of the achievement of the MRC-SP milestones allocated to each MRC Programme (see Appendix B);
- ❑ **Monitoring of the effectiveness of outcomes** of achieving these milestones in enhancing basin management practices within the MRC and within the countries; and
- ❑ **Monitoring the degree to which the Strategic Goals of the MRC are being attained** with regard to development within basin and the prevailing social, environmental and economic conditions.

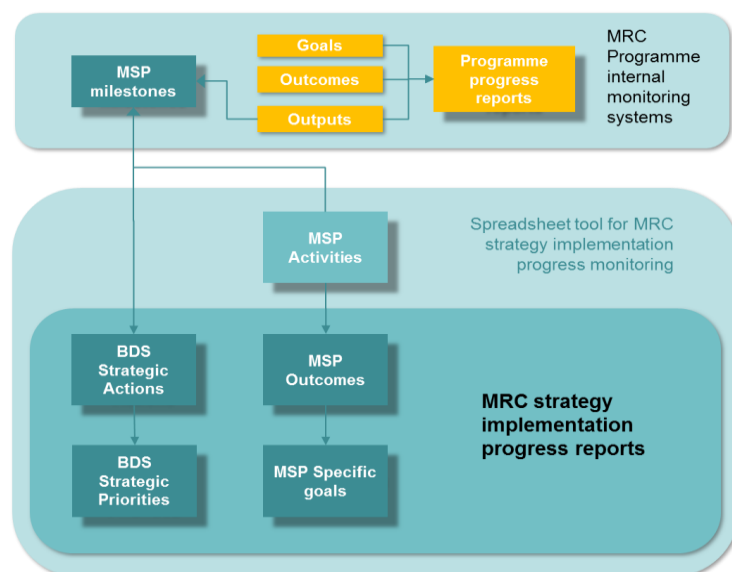
The manner in which each of these may be addressed is set out below.

4.3 Progress monitoring

The key indicator for monitoring of progress in implementing the Regional Action Plan will be the progress towards achieving the MRC-SP milestones as reported by each MRC Programme. A bespoke spreadsheet tool has been developed to assist the TCU in undertaking this, and sample pages from this tool are presented in Appendix E of this report.

The logic employed in the tool is illustrated in Figure 10. The progress of each Programme is estimated by the MRC Programmes and reported to TCU (MRC Programmes will in addition continue to provide separate Progress Reports against their own log frames in accordance with MRCS standard procedures).

Figure 10 Progress monitoring tool



MRC-SP milestones are linked to MRC Strategic Plan activities and in turn to MRC-SP outputs and goals. Similarly, as demonstrated in Appendix A, MRC-SP milestones are also linked to Strategic Actions and Strategic Priorities in the Basin Development Strategy.

The spreadsheet tool mimics these linkages and allows TCU to weight the aggregation of parameters from one level to the next in instances where more than one milestone contributes to a strategic action. In such a situation, some milestones may be judged to be more significant than others in fulfilling a Strategic Action for instance. The tool takes all the MRC Programme reports and aggregates them to a report on progress in implementing the Basin Development Strategy and a similar one for the MRC Strategic Plan.

It is recommended that reports are prepared quarterly so that an effective check can be kept on progress. The generation of reports by MRC Programmes should take no more than an hour for each Programme Coordinator and at most 3-4 hours for TCU.

4.4 Monitoring of the effectiveness of outcomes

Whilst progress monitoring will track the timeliness of generating generally specific products, monitoring of the effectiveness of outcomes addresses whether those products are valued by stakeholders and contributing to enhanced basin management practices within the MRC and within the countries. This may be, for instance, that procedures and guidelines are being adopted and followed, databases are being used, basin-level sector plans are being reflected in national planning and so on.

In principle, these outcomes will be assessed in the mid-term reviews of the MRC-SP planned for mid-2013 and again at the end of 2014. These reviews will require careful design to ensure that the breadth of outputs under the MRC-SP is fully covered. In practice, it may be appropriate and cost-effective to identify a range of key outputs that are assessed in depth, rather than what otherwise may be a superficial assessment. IKMP has recently pioneered a focus group approach to assessing their qualitative indicators, and this might be a useful approach to adopt for the mid-term reviews.

4.5 Monitoring the degree to which the Strategic Goals of the MRC are being attained

The aims of the MRC are set out in the 1995 Agreement, which have been echoed and elaborated in successive MRC Strategic Plans. Fundamentally, they relate to improving social, environmental and economic conditions within the basin through the cooperative efforts of the Member States, facilitated by the MRC. The Basin Development Strategy fully aligns with these aims and sets out the agreed priorities for enhancing basin management at regional, national and sub-national levels.

The MRC therefore needs to track conditions within the basin in order to assess whether its strategic plans are leading to improved conditions within the basin. To do this requires the establishment of a range of indicators which can be measured on a 5-yearly basis. The BDP

Programme has been charged with developing these indicators and has plans to do this starting in 2012.

It may be noted that in principle there should be congruence between those indicators selected to track development progress and those which are used to assess the development scenarios (which underpin MRC's strategic planning). BDP has already developed a wide range of indicators for the 2010 scenario assessment, and this may be a useful place to start in establishing development monitoring indicators.

As discussed in Chapter 2 of this report, the State of the Basin report provides the ideal vehicle for monitoring development indicators. There are a number of key issues to address for this to happen:

- ❑ The SoB will need to be somewhat restructured around the agreed development monitoring indicators;
- ❑ Necessarily, agreement on the initial set of indicators is needed prior to preparing the SoB;
- ❑ In addition, to the extent possible, the selected indicators must be measurable, requiring that databases are developed to support monitoring (the range of measureable indicators is likely to evolve as a consequence of the studies and data acquisition identified in the Basin Development Strategy under priority actions – eg. social, fish, sediment data etc);
- ❑ The next SoB needs to be prepared by 2014 in order to inform the next round of BDS updating, and preparations for this need to be factored into current and 2013 work plans.

Preparation of the SoB requires inputs from all MRC Programmes and will be coordinated by EP and BDP.

4.6 Reporting

4.6.1 *Progress monitoring*

BDP are responsible for monitoring of the implementation of the Regional Action Plan. They will do this on the basis of the quarterly reports on milestones provided by TCU, themselves based on MRC Programme reports (augmented by bilateral discussions with Programmes, if needed, to clarify any aspects of these reports).

On this basis, BDP will prepare:

- ❑ **Quarterly reports** on progress with achieving milestones and thus addressing the topics under each RAP theme – the report would flag any milestones missed or in danger of being missed in the next quarter;

- ❑ **Six-monthly reports** summarising progress towards fulfilling the requirements under each topic, highlighting where there is significant divergence from the RAP timetable and the implications such divergences may have; and
- ❑ **Annual reports**, incorporating the second six-monthly report, and providing a review of (a) the status of implementation of the RAP, (b) the status of implementing the IWRM-based Basin Development Strategy and (c) highlighting any actions that may be required to keep implementation of the Strategy on track.

4.6.2 *Outcome monitoring*

TCU are responsible for monitoring of the quality of outcomes resulting from the Regional Action Plan. They will do this through:

- ❑ A mid-term review of the MRC-SP to be conducted in 2013; and
- ❑ A further review of the MRC-SP to be conducted in late 2014

Each review will culminate in a report submitted to the Joint Committee.

4.6.3 *Development monitoring*

EP is responsible for preparation of the State of Basin report. They will be supported by BDP in the design of the SoB and the identification of social, environmental and economic development indicators, and by all MRC Programmes in the contribution of monitoring data.

The next SoB will be prepared in 2014.

4.7 **Monitoring and evaluation of NIP implementation**

4.7.1 *Current national plans for monitoring and evaluation*

Each of the National Indicative Plans sets out arrangements planned for monitoring and evaluation. As may be observed from the summaries below, each plan covers monitoring of both progress in NIP implementation as well as impacts arising.

The approaches advocated in Cambodia, Lao PDR and Thailand are broadly similar and focus on regular assessment of implementation progress and the outcomes arising from their NIP projects, with an explicit commitment to provide regular reports to MRC.

Viet Nam appears to have taken a slightly different approach. Whilst progress of NIP implementation will be recorded as above, impact monitoring is to be based on the much broader issue of the impacts in Viet Nam of implementation of the BDS as a whole. Viet Nam states simply that the monitoring information will be used to support building cooperation with other MRC and upstream countries.

Cambodia

CNMC will monitor and evaluate the progress of their NIP programme against the set milestones and expected outcomes for each of their NIP projects according to the established log frames. They intend to undertake:

- ❑ *Quarterly performance review*: focussed on progress achieved against each NIP outcome, with any observed constraints and lessons highlighted;
- ❑ *Six monthly performance review*: a bi-annual report summarising and evaluating the process with respect to the principles of transparency and stakeholder participation, with subsequent sharing of the resulting reports with those who are involved;
- ❑ *Annual performance review*: As above but conducted with a greater degree of independence of the review team, the results being made available for Development Partners;
- ❑ *Mid-term and final independent evaluation*: independent evaluations carried out upon the completion of the outcomes and incorporate lessons learned, with the results made available to the public online through the Council for the Development of Cambodia and CNMC websites.

Lao PDR

The members of National Indicative Plan Implementation Committee (NIPIC) will be required to report on progress of NIP implementation in their sectors or provinces/districts twice per year. Based on the reports submitted from each member of the NIPIC, LNMCS will compile a progress report for submission to the LNMC and to MRC.

LNMCS together with NIPIC will be required to complete and present their progress reports on NIP implementation progress to date at the annual NIP implementation review meeting. NIP implementation plans and guidelines for the next year will also be presented at the annual meeting. If needed, LNMCS will arrange for external audits of NIP implementation activities. Special meetings would be organized and audit reports provided to the LNMC and MRC, if required.

Thailand

TNMC will ask RBCs to prepare detailed proposals for each of their three NIP projects. Both implementation progress and impacts will be monitored.

- ❑ *Implementation monitoring* will be based on indicators developed in the T-NIP log frame and quarterly progress reports will be prepared and submitted to MRCS.

- *Impact monitoring* will be against outcome indicators established in the T-NIP, which relate to decentralization of river basin management core function to member countries, and reported at completion.

Viet Nam

The monitoring of the V-NIP will cover both VNMC monitoring of NIP performance by the line agencies and coordination and management (including the activities of RAP) and secondly monitoring of the impacts of water utilization and exploitation following IWRM principles. Monitoring will result in setting forth measures to promote the successful implementation of the BDS and making recommendations for the MRC to mitigate the impacts through structural measures, non-structural and enabling measures.

- *Implementation monitoring* will cover monitoring BDS implementation through measurement of project progress against deliverables and identified milestones, evaluation of achievement of the project objectives and the coordination achieved between agencies with the assistance of the VNMC, assessment of project output, outcome and quality of product and of technical and financial support and its efficiency. Monitoring will be implemented by the V-NIP Steering Committee in a regular manner and with the help of inspection missions consisting of the representatives of the SC and National Working Group (NWG) established by the SC.
- *Impact monitoring* will be aimed at obtaining scientific data and information to support cooperation with other MRC countries as well other upstream countries in developing the measures to mitigate negative impacts to the environment, socio-economy and their implication to the people livelihood. Impact monitoring will include flow changes, water quality, salinity intrusion, impact to wetland and biodiversity, impacts on fish migration, capture and aquaculture and sediment and nutrient trapping and its impact to bank erosion and agriculture production etc. Impact monitoring will be undertaken by VNMC, MONRE, MARD and the provinces.

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

If the proposals for streamlining the overall planning process as set out in Section 2.3 are adopted, then the nature and content of the NIPs will need to take on a somewhat different form:

- **In the current cycle**, as prescribed by the BDS, the NIPs represent each country's individual response to the opportunities presented by the BDS 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 monitoring framework of MRC activities as described in Section 2.3.3 and which would be similar to that described for the RAP in Section 4.6 above⁸.

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.

⁸ 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 BDS is updated and how Outcomes and Outputs under the updated BDS are described. In principle, the updated BDS 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 Risks and mitigation

Any venture has certain risks attached to it, irrespective of how well it has been planned. Identifying key risks and how these can be mitigated is an important feature of a resilient plan. This Chapter summarises the proposed approach to risk management within the RAP.

5.1 Introduction

Implementation of the regional component of the IWRM-based Basin Development Strategy is clearly a challenging task. Successful implementation requires not only the achievement of 110 individual milestones, but also that this is accomplished in an integrated and consistent manner through the endeavours of 14 MRC Programmes over the next four years.

Three main risks have been identified to successfully implementing the Regional Action Plan. These are summarised below in Table 3 and are discussed further in Sections 5.2 to 5.5 below.

Table 3 Summary of key risks for successful implementation of the RAP

Risk	Likelihood of arising	Impact on RAP if arising	Overall risk	Mitigation
Capacity to implement the IWRM-based Basin Development Strategy <i>MRC Programmes do not have capacity to meet their milestone requirements</i>	M	H	H	<i>Constructive dialogue between MRC Programmes, TCU and BDP to identify and address any gaps and/or timetable conflicts at an early stage</i>
Cross-sectoral coordination <i>Inadequate cooperation between MRC Programmes undermines IWRM principles and/or delays outputs</i>	L	M	L	<i>BDP monitoring of PIN implementation and early identification of cross-sectoral coordination issues and remedies</i>
Timeliness of outputs <i>Delays in achieving milestones has knock-on effect on implementation of other activities</i>	M	H	H	<i>BDP monitoring of progress towards milestones, interim facilitation of how to deal with delays, and annual work plans to take into account cross-sectoral timetable issues</i>
Retained focus on implementing the Strategy <i>New projects and/or funding divert attention from implementing the Basin Development Strategy</i>	L	H	M	<i>MRC management to ensure complementarity of new projects and studies with the Basin Development Strategy</i>

Legend: L = low, M = medium, H = high risk

5.2 Capacity to implement the IWRM-based Basin Development Strategy

Successful implementation of the Regional Action Plan requires that the MRC Programmes have the mandate to work on achieving the required milestones, have secured funding for the work and have the necessary staff in place.

Whilst generally the milestone requirements are consistent with the MRC Programme activity areas, it is clear that in some instances the specific requirements are not included within their Programme Documents or their Project Implementation Plans. In some instances, prior commitments to funding agencies require that certain other outputs are delivered and that potentially some new milestones may lie outside these agreements.

These are complex issues which need to be addressed in a constructive and sensitive manner. Nevertheless, it is important that they are addressed. The process of MRCS management engaging in dialogue with MRC Programmes must be continued and the outcomes reflected in each Programme's successive work plans. Equally, it is important to identify and address:

- Those milestones which the MRC Programmes are unable to address for reasons of funding and/or resource constraints. ; and
- Agreement is reached on what should be done about any gaps or timetable conflicts and by whom and by when.

As further discussed below, the MRC "Council Study" presents a significant opportunity to address some of these gaps.

5.3 Cross-sectoral coordination

As evident from the detail contained within the Project Identification Notes, many of the activities undertaken to achieve the milestones require co-ordination with the activities of others. The PINs have highlighted the key linkages.

The MRC Programmes are well used to inter-acting with each other through day-to-day work, workshops and the like. As such, whilst this is judged to be a low risk, it is an important risk given the significance attached in the Basin Development Strategy to the principles of IWRM and the inter-connectivity between different sectors.

The Project Identification Notes, underpinned by the detailed analyses reproduced in the Appendices to this report, are intended to highlight the key points of interaction by drawing together different Programme milestones into each PIN in a transparent way.

Nevertheless, it will remain important that BDP, under its monitoring programme of the Regional Action Plan, makes twice-yearly assessments of the implementation of the PINs (as well as the Regional Action Plan and the Basin Action Plan overall) to identify any issues of cross-sectoral coordination that need to be addressed.

5.4 Timeliness of outputs

Again, given the inter-dependence of many of the activities required under the Regional Action Plan, it is self-evident that a delay in one activity may have a knock-on effect on other activities, either delaying their completion and/or diminishing the quality of their product.

Monitoring of progress in attainment of milestones is therefore critical, and the basis for this has been set out in Chapter 4. It is to be anticipated, however, that delays will inevitably occur in some cases (eg in getting funding arranged, mobilising staff, acquiring data, etc). BDP will monitor this and assist TCU in mitigating the consequences of delays upon other activities to the extent possible.

The principal opportunity for making adjustments as a result of delayed outputs is the annual work planning process. These plans need to be framed taking into account BDP's annual assessment of progress and any recommendations for setting priorities or revised milestone dates, etc.

5.5 Retained focus on implementing the Strategy

The world is littered with best intentions to follow a course of action up until new opportunities arise which lead people in different directions.

The MRC has arrived at coherent strategies for basin development and management (the Basin Development Strategy) and for managing its programmes and projects (the MRC Strategic Plan), both of which have been approved by the MRC Council. The strategies are comprehensive and reflect the current state of knowledge within the basin and are intended to address a wide range of issues affecting the basin and wise management of its development.

Nevertheless, there may be exceptional events or circumstances in the coming years which lie outside the purview of the Basin Development Strategy and which the Member States are fully entitled to require the MRC Secretariat to address. However, these should be viewed as being exceptional and unless called upon to do otherwise, it remains important that the MRC Programmes retain focus on implementing the MRC Strategic Plan and IWRM-based Basin Development Strategy.

Of particular and likely significance is the MRC Council Study which has been recently approved (see Section 2.2.2), but of which the scope is being determined. The scope should be complementary to the implementation of the Basin Development Strategy. As such, the Council Study may be seen as refocusing the priority that Member States attach to specific issues within the Basin Development Strategy. It may also be seen as an opportunity not only to build upon the extensive acquired knowledge of the MRC but also to address particular knowledge gaps which the MRC Programmes may not be currently funded to do.

The MRC management is best placed to ensure complementarity of new projects and studies with the IWRM-based Basin Development Strategy and provide appropriate guidance as new opportunities arise. BDP, together with TCU, should provide support in this regard.

Appendices

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Appendix A Identified BDS Strategic Actions and related milestones in MRC Strategic Plan

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BDS Strategic Actions and related milestones in MRC Strategic Plan

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
Strategic Priorities for Basin Development							
421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin						
421001	Strengthen cooperation with China	Inst. capacity	ISH	ISH15	By 2011	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	IKMP, ICCS
421002	Enhance coordination among the LMB countries on the operation of tributary dams by improving the implementation of the MRC Procedures	Inst. capacity	MIWRMP	MIWRM02	By 2011	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	ISH, IKMP, EP
421003	Reach agreement to protect the baseline dry season flows on the Mekong mainstream	Procedure	BDP	BDP12	By 2011	Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream	EP, ISH, IKMP, MIWRMP
421004	Management of risks of committed projects and mitigation measures	Study report	BDP	BDP07	By 2011	Study report on management of risks of on-going and committed water resources development projects	EP, ISH, IKMP
422000	Expand and intensify irrigated agriculture for food security and poverty alleviation						
422001	Drought mitigation strategies for rainfed areas	Sector plan	ALL	AIP01	By 2013	Study report on groundwater development potential	IKMP, DMP
			DMP	DMP01	By 2013	Drought mitigation strategies and mitigation options developed for rainfed areas	AIP, IKMP, EP
422003	Guidelines for fish-friendly development of irrigation schemes	Guideline	FP	FP01	By 2013	Guidelines for fish-friendly development of irrigation schemes	AIP
422004	Guidelines for promoting integrated pest management (IPM)	Guideline	AIP	AIP02		Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	EP
422005	Guidelines for improved irrigation management	Guideline	AIP	AIP03	By 2013	Guidelines for improved irrigation management	DMP
423000	Improve sustainability of hydropower development						
423100	(a) Move towards sustainable development of hydropower on tributaries						
423101	Identification of ecologically sensitive sub-basins	Guideline	ISH	ISH01	By 2013	Ecologically sensitive sub-basins identified for limited development of hydropower on tributaries	EP, FP
			ISH	ISH09	By 2015	Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools	EP
423102	Multi-purpose evaluation of hydropower projects	Guideline	ISH	ISH02	By 2013	Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams	EP, FP, BDP, FMMP, IKMP

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
423103	Negative impact mitigation measures for tributary dams	Guideline	ISH	ISH03	By 2013	Negative impact mitigation measures for tributary dams	EP, FP
			ISH	ISH10	By 2014	Guidance on Sustainable Management of Reservoir Watersheds prepared	WMP, AIP, MIWRMP
423104	Management plans for affected environmental hot spots	Study report	EP	EP01	By 2013	Management plans for environmental hotspots impacted by changed flow regimes developed	FP, WMP
423105	Evaluation of benefit-sharing options	Study report	ISH	ISH13	By 2013	Benefit-sharing options for hydropower on tributaries evaluated and reported	BDP, EP, AIP, WMP
423200	<i>(b) Address the uncertainty and risk of possible mainstream dams</i>						
423201	Acquire essential knowledge to minimize uncertainty	Study report	ISH	ISH08	By 2013	Essential knowledge acquired to minimize uncertainty of possible mainstream dams	EP, FP, BDP
423202	Identification of risk mitigation options	Guideline	ISH	ISH06	By 2013	Guidelines on risk mitigation options for possible mainstream dams	EP, FP
423203	Strengthening PNPCA process	Procedure	MIWRMP	MIWRM01	By 2013	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	BDP, EP, IKMP
423204	Design guidance for mainstream dams	Guideline	ISH	ISH04	By 2013	Design guidance for mainstream dams	EP, FP, IKMP, BDP, FMMP
			NAP	NAP02	By 2012	Overall Strategy for incorporation of ship locks in planned mainstream dams, including standards for lock design and operations formulated	ISH
423205	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	Guideline	EP	EP02	By 2013	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	IKMP
423300	<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	Study report	ISH	ISH05	By 2013	Study report on evaluated options of mainstream power development in context of national and regional power strategies	BDP
424000	Acquisition of essential knowledge to address uncertainties and minimise risk						
424001	Sediment and nutrient trapping and their consequent risks	Study report	IKMP	IKMP03	By 2013	Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures	ISH, EP
424002	Reduction of capture fisheries and social implications	Study report	FP	FP03	By 2013	Study report on reduction of capture fisheries and its social implications	EP, ISH
			FP	FP03	By 2013	Study report on reduction of capture fisheries and its social implications	EP, ISH
424003	Biodiversity changes	Study report	EP	EP08	By 2013	Study report on biodiversity changes	FP, ISH
424004	Social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	Study report	EP	EP10	By 2013	Study report on social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	FP, ISH

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
425000	Options for sharing the potential benefits and costs of development opportunities						
425001	Options for sharing the potential benefits and costs of development opportunities	Inst. capacity	BDP	BDP09	By 2014	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions	All other programmes
426000	Climate change adaptation						
426001	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report	CCAI	CCA103	By 2015	Study report on the impacts of climate change on navigation and existing infrastructure	NAP
			EP	EP05	By 2013	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	IKMP, CCAI, FP, AIP, BDP
426002	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan	CCAI	CCA102	By 2015	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	NAP
			CCAI	CCA105	By 2013	A Climate Change Adaptation Strategy for the LMB prepared and approved	EP, FP, AIP, DMP, NAP, FMMP, ISH, WMP
			EP	EP07	By 2012	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	CCAI
426003	Pilot schemes for climate change adaptation	Pilot schemes	CCAI	CCA104	By 2015	Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn	
427000	Integration of basin development planning considerations into national systems						
427001	Alignment of national water resources development planning and project identification	Inst. capacity	BDP	BDP05	Continuously	National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy	ICBP
427002	Addressing identified risks early in project identification and preparation	Inst. capacity	FMMP	FMMP07	By 2014	Trans-boundary flood risk management tools developed	IKMP, ISH, CCAI
			BDP	BDP07	By 2011	Study report on management of risks of on-going and committed water resources development projects	EP, ISH, IKMP
427003	Maintain a register of existing, ongoing and planned water resources development and water-related projects at NMCSs and MRCS	Monitoring system	BDP	BDP11	Continuously	A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRCS for monitoring and providing early advice on addressing transboundary risks associated with LMB water development	IKMP, ICBP

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
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	Sector plan	FP	FP02	By 2014	A comprehensive, basin-wide fish management strategy developed	AIP, EP, WMP
			FP	FP04	to be updated	Study report on classification of LMB habitats and their fish, threats and opportunities	EP
			FP	FP04	to be updated	Study report on classification of LMB habitats and their fish, threats and opportunities	EP
431002	Navigation: Preparation of a master plan for regional waterborne transport and development of rural water transport	Sector plan	EP	EP04	Continuously	Environmental impact assessments undertaken for proposed regional navigation developments	NAP
			NAP	NAP01	By 2013	Regional Master Plan for the overall navigation development in the LMB prepared	And other programmes
			NAP	NAP05	By 2014	Significance of the tributaries of the LMB for navigation identified	
			NAP	NAP07	By 2015	Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups	BDP, FP, EP
			NAP	NAP12	to be updated	Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism	EP, ISH
431003	Navigation: Preparation of a master plan for navigation in Cambodia	Sector plan	NAP	NAP01	By 2013	Regional Master Plan for the overall navigation development in the LMB prepared	And other programmes
			NAP	NAP03	By 2014	Regional Feasibility Study for Mekong Waterway Improvement prepared	All other programmes
431004	Navigation: Preparation of a navigation improvement plan	Sector plan	NAP	NAP04	By 2013	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 States	
			NAP	NAP06	By 2014	Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established	
			NAP	NAP08	By 2014	Trans-boundary environmental impact assessment of physical navigation improvement conducted	EP, MWRMP

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
431004	Navigation: Preparation of a navigation improvement plan	Sector plan	NAP	NAP09	to be updated	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	EP, IKMP, ISH
			NAP	NAP13	By 2014	Aids to navigation as per priority needs, including landing facilities for tourists installed	
			NAP	NAP14	By 2015	River scan: Comprehensive analysis of the river by multi-beam echo-sounding conducted	
431005	Flood and drought risk management: Detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	Study report	FMMP	FMMP04	By 2014	A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	BDP, EP, FP, AIP, IKMP and other programmes
431006	Wetland management: Monitoring of biodiversity loss in wetlands with ecologically important areas with high dependence of local population	Monitoring system	EP	EP13	By 2014	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored	IKMP
431007	Wetland management: Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population	Guideline	EP	EP13	By 2014	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored	IKMP
			FMMP	FMMP02	By 2015	District or comparable level IFRM and Land-use Management Plans prepared for flood focal areas (one in each Member Country)	BDP, AIP, WMP, MIWRMP
432000	Strengthen national level water resources management processes						
432001	Capacity building in surface water and groundwater monitoring	Inst. capacity	IKMP	IKMP02	Continuously	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ICBP, MIWRMP, NAP
432002	Capacity building in water use permitting (of withdrawals and pollution discharges) and compliance assurance of permit conditions and regulations	Inst. capacity	MIWRMP	MIWRM04	Continuously	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	ICBP and other programmes
432003	Capacity building in water information system	Inst. capacity	AIP	AIP04	Continuously	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis	MIWRMP
			ICBP	ICBP06	By 2012	IWRM training materials updated	
433000	Strengthen basin management processes						
433001	Strengthening implementation of MRC Procedures	Procedure	MIWRMP	MIWRM01	By 2013	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	BDP, EP, IKMP
			MIWRMP	MIWRM03	Continuously	Strengthened implementation of MRC Procedures	ICBP, IKMP, EP, BDP

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
433002	Development and promotion of harmonized methods and tools	Inst. capacity	EP	EP06	By 2012	Climate change impact and vulnerability assessment tools developed for biophysical and social systems	CCAI
			EP	EP14	By 2012	Diagnostic study for toxic contaminants in the Mekong riverine environments	IKMP, NAP
			FMMP	FMMP06	Continuously	Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared	IKMP, DMP, CCAI
			ICBP	ICBP01	Continuously	Gender audits undertaken for all MRC programmes and major policy documents to ensure gender responsive approaches are mainstreamed	
			ICBP	ICBP02	Continuously	Gender tools (gender analysis, gender statistic, gender budgeting, etc.) are applied in each stage of the project management cycle.	
			IKMP	IKMP02	Continuously	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ICBP, MWRRMP, NAP
			IKMP	IKMP05	Continuously	Tools developed to analyse and assess impacts of water use in different sectors	AIP, BDP, DMP, EP, FP, ISH, NAP
			IKMP	IKMP06	to be updated	Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures	AIP, FMMP, DMP
			NAP	NAP04	By 2013	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 States	
			NAP	NAP10	By 2014	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	
NAP	NAP11	By 2014	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	IKMP			
WMP	WMP01	to be updated	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	IKMP			

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
433003	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system	AIP	AIP05	to be updated	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	
			EP	EP09	By 2012	Guide to integrate climate change into SEA and EIA processes developed	CCAI, ISH
			NAP	NAP15	By 2014 and continuously later	Information on Navigation accidents published and disseminated to regional, dialogue and development partners	
433004	Strengthen State of Basin monitoring and reporting	Inst. capacity	BDP	BDP02	By 2013	Basin-wide objectives or "baseline indicators" covering economic, environmental and social factors developed	EP, and other programmes
			EP	EP12	Continuously	Strengthened State of Basin monitoring and reporting	BDP, ICBP, MIWRMP, and other programmes
			EP	EP16	By 2014	Environmental Outlook published	
433005	Develop and implement a system of comprehensive monitoring of project development in the basin	Monitoring system	IKMP	IKMP04	Continuously	National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies	
			BDP	BDP10	Continuously	A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational	IKMP, ICBP, MIWRMP
433006	Develop a network of national WRM agencies and RBOs	Inst. capacity	ISH	ISH11	Continuously	Environmental baseline information improved for hydropower planning	EP, IKMP
			BDP	BDP08	Continuously	A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established	ICBP, MIWRMP
433007	Strengthen and support regional and national stakeholder participation	Inst. capacity	ALL	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	
			ICCS	ICCS01	Continuously	Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy	ICBP, MIWRMP, BDP
			ICCS	ICCS02	By 2013	MRC-wide stakeholder analysis and structured engagement process developed	All programmes
433008	Development of guidelines or mechanisms to facilitate early resolution of disputes	Guideline	BDP	BDP09	By 2014	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions	All other programmes
434000	Development of environmental and social objectives and baseline indicators						
434001	Facilitated development of agreed basin-wide objectives or "baseline indicators"	Study report	EP	EP11	Continuously	Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts	CCAI, BDP, IKMP, AIP, DMP, WMP

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
435000	Implement a targeted IWRM capacity building programme						
			ICBP	ICBP03	Continuously	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	
			ICBP	ICBP05	By 2012	An IWRM competency framework developed	MIWRMP
			ICBP	ICBP06	By 2012	IWRM training materials updated	MIWRMP
			ICBP	ICBP07	By 2012	Leadership capacity development needs/gaps assessed	MIWRMP
			ICBP	ICBP08	Continuously	Networks of capacity building institutions in the sub-region and region established	MIWRMP
			ICBP	ICBP09	By 2011	Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity	MIWRMP
435001	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity	ICBP	ICBP10	By 2012	Capacity development plans for the MRCS and targeted national agencies prepared	MIWRMP
			ICBP	ICBP11	By 2012	IWRM competency framework developed and applied for the MRCS and targeted national agencies	MIWRMP
			ICBP	ICBP12	Continuously	MRC, MDBA, and AusAID Strategic Liaison Partnership established	MIWRMP
			ICBP	ICBP13	Continuously	Internships, professional work exchange opportunities, and provision of scholarship-related information updated	MIWRMP
			MIWRMP	MIWRM04	Continuously	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	ICBP and other programmes
			MIWRMP	MIWRM05	By 2011	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	ICBP, BDP, EP, IKMP, ICCS
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	Study report	EP	EP03	By 2015	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	FP, ISH, AIP
			ISH	ISH06	By 2013	Guidelines on risk mitigation options for possible mainstream dams	EP, FP
440002	Mainstream dams: Mitigation of the impacts of converting much of the mainstream to a series of slow moving waters	Guideline	ISH	ISH07	By 2015	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	

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
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	Study report	ISH	ISH12	By 2015	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	IKMP, FMMP
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	Study report	FMMP	FMMP01	By 2013	A regional IFRM strategy and implementation Roadmap prepared	
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	Study report	FMMP	FMMP05	By 2015	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	BDP, EP, FP, AIP, IKMP and other programmes
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	Study report	CCAI	CCAI01	By 2015	Climate change adaptation studies of sub-basins to define climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	IKMP
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	Monitoring system	EP	EP15	By 2015	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	CCAI, IKMP, and other programmes
440008	Groundwater: Inventory of groundwater throughout the Basin including development and management plans	Study report	IKMP	IKMP01	By 2015	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)	BDP, AIP, DMP
440009	Development of selected water resources management and sector guidelines	Guideline	BDP	BDP06	By 2015	Basin-wide and sector water resources management guidelines	ISH, AIP, FP, NAP, EP and other programmes
			ISH	ISH14	Continuously	Technical assistance provided to hydropower developers on safeguards and compliance monitoring	

Ref.	IWRM-based Basin Development Strategy Strategic Priorities and Actions	Primary product	Lead Programme	MRC Strategic Plan milestone			Supporting Programme(s)
				Ref	Priority	Description	
Monitoring, Evaluation and Reporting							
530000	Monitoring, evaluation and reporting						
530001	Strategy implementation monitoring system design	Guideline	BDP	BDP01	By 2011	Basin Action Plans approved for implementation	All other programmes
			BDP	BDP13	By 2011	Strategy implementation monitoring system designed	
530002	Strategy implementation monitoring system	Monitoring system	BDP	BDP14	By 2012	Strategy implementation monitoring system operational	
			ALL	ALL01	By 2014	Sector reviews updated by sector programmes	
			BDP	BDP03	By 2015	Basin development strategy updated every 5 years to also include sub-basin water management issues	All other programmes
530003	Basin development strategy updated	Sector plan	BDP	BDP04	By 2015	A basin-wide management plan/strategy prepared	All other programmes
			FMMP	FMMP01	By 2013	A regional IFRM strategy and implementation Roadmap prepared	
			FMMP	FMMP03	By 2015	Country specific roadmaps developed to formulate IFRM policies and strategies	BDP, WMP, AIP, MWRMP, EP

Appendix B Allocation of MRC-SP milestones to MRC Programmes

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AIP Agriculture and Irrigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
AIP	AIP01	By 2013	2014	Study report on groundwater development potential	IKMP, DMP	422001	Expand and intensify irrigated agriculture for food security and poverty alleviation	Drought mitigation strategies for rainfed areas	Sector plan
	AIP02	By 2013	<i>Pending</i>	Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	EP	422004	Expand and intensify irrigated agriculture for food security and poverty alleviation	Guidelines for promoting integrated pest management (IPM)	Guideline
	AIP03	By 2013	<i>Pending</i>	Guidelines for improved irrigation management	DMP	422005	Expand and intensify irrigated agriculture for food security and poverty alleviation	Guidelines for improved irrigation management	Guideline
	AIP04	Continuously	2015	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis		432003	Strengthen national level water resources management processes	Capacity building in water information system	Inst. capacity
	AIP05	to be updated	2015	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		433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system

BDP Basin Development Plan Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
BDP	BDP01	By 2011	Dec-12	Basin Action Plans approved for implementation	All other programmes	530001	Monitoring, evaluation and reporting	Strategy implementation monitoring system design	Guideline
	BDP02	By 2013	Jun-14	Basin-wide objectives or "baseline indicators" covering economic, environmental and social factors developed	EP, and other programmes	433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system
	BDP03	By 2015	Nov-14	Basin development strategy updated every 5 years to also include sub-basin water management issues	All other programmes	530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	BDP04	By 2015	Nov-14	A basin-wide management plan/strategy prepared	All other programmes	530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
BDP05	Continuously	Continuous	National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy	ICBP	427001	Integration of basin development planning considerations into national systems	Alignment of national water resources development planning and project identification	Inst. capacity	

BDP Basin Development Plan Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
	BDP06	By 2015	2015	Basin-wide and sector water resources management guidelines	ISH, AIP, FP, NAP, EP and other programmes	440009	Studies and Guidelines	Development of selected water resources management and sector guidelines	Guideline
	BDP07	By 2011	Dec-13	Study report on management of risks of on-going and committed water resources development projects	EP, ISH, IKMP	421004	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Management of risks of committed projects and mitigation measures	Study report
						427002	Integration of basin development planning considerations into national systems	Addressing identified risks early in project identification and preparation	Inst. capacity
	BDP08	Continuously	Oct-14	A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established	ICBP, MIWRMP	433006	Strengthen basin management processes	Develop a network of national WRM agencies and RBOs	Inst. capacity
	BDP09	By 2014	Feb-14	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions	All other programmes	425001	Options for sharing the potential benefits and costs of development opportunities	Options for sharing the potential benefits and costs of development opportunities	Inst. capacity
						433008	Strengthen basin management processes	Development of guidelines or mechanisms to facilitate early resolution of disputes	Guideline
	BDP10	Continuously	Continuous	A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational	IKMP, ICBP, MIWRMP	433005	Strengthen basin management processes	Develop and implement a system of comprehensive monitoring of project development in the basin	Monitoring system

BDP Basin Development Plan Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
	BDP11	Continuously	Dec-14	A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRCS for monitoring and providing early advice on addressing transboundary risks associated with LMB water development	IKMP, ICBP	427003	Integration of basin development planning considerations into national systems	Maintain a register of existing, ongoing and planned water resources development and water-related projects at NMCSs and MRCS	Monitoring system
	BDP12	By 2011	Dec-13	Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream	EP, ISH, IKMP, MIWRMP	421003	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Reach agreement to protect the baseline dry season flows on the Mekong mainstream	Procedure
	BDP13	By 2011	Nov-12	Strategy implementation monitoring system designed		530001	Monitoring, evaluation and reporting	Strategy implementation monitoring system design	Guideline
	BDP14	By 2012	Dec-12	Strategy implementation monitoring system operational		530002	Monitoring, evaluation and reporting	Strategy implementation monitoring system	Monitoring system

CCAI Climate Change and Adaptation Initiative

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
CCAI	CCAI01	By 2015	2014	Climate change adaptation studies of sub-basins to define climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	IKMP	440006	Studies and Guidelines	Climate change adaptation studies of sub-basins: Study of climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	Study report
	CCAI02	By 2015	2015	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	NAP	426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
		By 2015					426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB
	CCAI03	By 2015	2015	Study report on the impacts of climate change on navigation and existing infrastructure	NAP	426001	Climate change adaptation	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report
	CCAI04	By 2015	1st batch June 2013, 2nd batch Dec 2014	Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn		426003	Climate change adaptation	Pilot schemes for climate change adaptation	Pilot schemes
CCAI05	By 2013	Jun-2015	A Climate Change Adaptation Strategy for the LMB prepared and approved	EP, FP, AIP, DMP, NAP, FMMP, ISH, WMP	426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan	

CCAI Climate Change and Adaptation Initiative

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
CCAI06 <i>Formerly EP05</i>	By 2013	2013/updated 2014	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	IKMP, EP, FP, AIP, BDP	426001	Climate change adaptation	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report	
CCAI07 <i>Formerly EP07</i>	By 2012	2015	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	EP	426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan	
CCAI08 <i>Formerly EP15</i>	By 2015	2015	Monitoring and assessment programme developed to analyze implications of climate change on basin's long-term hydrology, agriculture, food security, ecological conditions and biodiversity	EP, IKMP, and other programmes	440007	Studies and Guidelines	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 biodiversity	Monitoring system	

DMP Drought Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
DMP	DMP01	By 2013	2014	Drought mitigation strategies and mitigation options developed for rainfed areas	AIP, IKMP, EP	422001	Expand and intensify irrigated agriculture for food security and poverty alleviation	Drought mitigation strategies for rainfed areas	Sector plan

EP Environment Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
EP	EP01	By 2013	2015	Management plans for environmental hotspots impacted by changed flow regimes developed	FP, WMP	423104	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Management plans for affected environmental hot spots	Study report
	EP02	By 2013	By 2013	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	IKMP	423205	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	Guideline
	EP03	By 2015	By 2015	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	FP, ISH, AIP	440001	Studies and Guidelines	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	Study report

EP Environment Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
EP	EP04	Continuously	Continuously	Environmental impact assessments undertaken for proposed regional navigation developments	NAP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	EP05	By 2013	Transferred to CCAI	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	IKMP, CCAI, FP, AIP, BDP	426001	Climate change adaptation	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report
	EP06	By 2012	Is part of EP07	Climate change impact and vulnerability assessment tools developed for biophysical and social systems	CCAI	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	EP07	By 2012	Transferred to CCAI	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas		426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
	EP08	By 2013	2015	Study report on biodiversity changes	FP, ISH	424003	Acquisition of essential knowledge to address uncertainties and minimise risk	Biodiversity changes	Study report
	EP09	By 2012	2013	Guide to integrate climate change into SEA and EIA processes developed	CCAI, ISH	433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system
	EP10	By 2013	2014	Study report on social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	FP, ISH	424004	Acquisition of essential knowledge to address uncertainties and minimise risk	Social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	Study report

EP Environment Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
EP	EP11 EP12	Continuously	Continuously	Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts	Lead transferred to BDP, EP supports	434001	Development of environmental and social objectives and baseline indicators	Facilitated development of agreed basin-wide objectives or "baseline indicators"	Study report
	EP13	By 2014	2015	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored	IKMP	431006	Establish basin visions and management strategies for water-related sectors	Wetland management: Monitoring of biodiversity loss in wetlands with ecologically important areas with high dependence of local population	Monitoring system
						431007	Establish basin visions and management strategies for water-related sectors	Wetland management: Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population	Guideline
	EP14	By 2012	By 2012	Diagnostic study for toxic contaminants in the Mekong riverine environments	IKMP, NAP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	EP15	By 2015	Transferred to CCAI	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	CCAI, IKMP, and other programmes	440007	Studies and Guidelines	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	Monitoring system
	EP16	By 2014	By 2014	Environmental Outlook published		433004	Strengthen basin management processes	Strengthen State of Basin monitoring and reporting	Inst. capacity

FMMP Flood Management and Mitigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
FMMP	FMMP01	By 2013	2014	A regional IFRM strategy and implementation Roadmap prepared		440004	Studies and Guidelines	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	Study report
						530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	FMMP02	By 2015	2015	District or comparable level IFRM and Land-use Management Plans prepared for flood focal areas (one in each Member Country)	BDP, AIP, WMP, MIWRMP	431007	Establish basin visions and management strategies for water-related sectors	Wetland management: Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population	Guideline
	FMMP03	By 2015	2015	Country specific roadmaps developed to formulate IFRM policies and strategies	BDP, WMP, AIP, MIWRMP, EP	530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan

FMMP Flood Management and Mitigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
FMMP	FMMP04	By 2014	2014	A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	BDP, EP, FP, AIP, IKMP and other programmes	431005	Establish basin visions and management strategies for water-related sectors	Flood and drought risk management: Detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	Study report
	FMMP05	By 2015	2015	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		440005	Studies and Guidelines	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	Study report
	FMMP06	Continuously	Ongoing	Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared	IKMP, DMP, CCAI	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	FMMP07	By 2014	2014	Trans-boundary flood risk management tools developed	IKMP, ISH, CCAI	427002	Integration of basin development planning considerations into national systems	Addressing identified risks early in project identification and preparation	Inst. capacity

FP Fisheries Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
FP	FP01	By 2013	2013	Guidelines for fish-friendly development of irrigation schemes	AIP	422003	Expand and intensify irrigated agriculture for food security and poverty alleviation	Guidelines for fish-friendly development of irrigation schemes	Guideline
	FP02	By 2014	2015	A comprehensive, basin-wide fish management strategy developed	AIP, EP, WMP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	FP03	By 2013	2013	Study report on reduction of capture fisheries and its social implications	EP, ISH	424002	Acquisition of essential knowledge to address uncertainties and minimise risk	Reduction of capture fisheries and social implications	Study report
	FP04	to be updated	2013	Study report on classification of LMB habitats and their fish, threats and opportunities	EP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan

ICBP Integrated Capacity Building Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
ICBP	ICBP01	Continuously	2013	Gender audits undertaken for all MRC programmes and major policy documents to ensure gender responsive approaches are mainstreamed		433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	ICBP02	Continuously	2013-2014	Gender tools (gender analysis, gender statistic, gender budgeting, etc.) are applied in each stage of the project management cycle.		433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	ICBP03	Continuously	2013-2015	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		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP05	By 2012	41030	An IWRM competency framework developed	MIWRMP	435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

ICBP Integrated Capacity Building Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ICBP	ICBP06	By 2012	2013	IWRM training materials updated		432003	Strengthen national level water resources management processes	Capacity building in water information system	Inst. capacity
						435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP07	By 2012	2012	Leadership capacity development needs/gaps assessed		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP08	Continuously	Continuously	Networks of capacity building institutions in the sub-region and region established		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP09	By 2011	2011 - 2013	Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

ICBP Integrated Capacity Building Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ICBP	ICBP10	By 2012	2011-2013	Capacity development plans for the MRCS and targeted national agencies prepared		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP11	By 2012	2012 onwards	IWRM competency framework developed and applied for the MRCS and targeted national agencies		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP12	Continuously	2012 - 2016	MRC, MDBA, and AusAID Strategic Liaison Partnership established		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP13	Continuously	On-going	Internships, professional work exchange opportunities, and provision of scholarship-related information updated		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

ICCS International Cooperation and Communication Section

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
ICCS	ICCS01	Continuously	Continuously	Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy	ICBP, MIWRMP, BDP	433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
	ICCS02	By 2013	2013	MRC-wide stakeholder analysis and structured engagement process developed	All programmes	433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity

IKMP Information and Knowledge Management Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
IKMP	IKMP01	By 2015	2015	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)	BDP, AIP, DMP	440008	Studies and Guidelines	Groundwater: Inventory of groundwater throughout the Basin including development and management plans	Study report
	IKMP02	Continuously	ongoing	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ICBP, MIWRMP, NAP	432001	Strengthen national level water resources management processes	Capacity building in surface water and groundwater monitoring	Inst. capacity
						433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	IKMP03	By 2013	2013	Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures	ISH, EP	424001	Acquisition of essential knowledge to address uncertainties and minimise risk	Sediment and nutrient trapping and their consequent risks	Study report
	IKMP04	Continuously	2015	National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies		433004	Strengthen basin management processes	Strengthen State of Basin monitoring and reporting	Inst. capacity
IKMP05	Continuously	2015	Tools developed to analyse and assess impacts of water use in different sectors	AIP, BDP, DMP, EP, FP, ISH, NAP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity	

IKMP Information and Knowledge Management Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
IKMP	IKMP06	to be updated	ongoing	Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures	AIP, FMMP, DMP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity

ISH Initiative on Sustainable Hydropower

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
ISH	ISH01	By 2013	2013	Ecologically sensitive sub-basins identified for limited development of hydropower on tributaries	EP, FP	423101	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Identification of ecologically sensitive sub-basins	Guideline
	ISH02	By 2013	2013/14	Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams	EP, FP, BDP, FMMP, IKMP	423102	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Multi-purpose evaluation of hydropower projects	Guideline
	ISH03	By 2013	2014	Negative impact mitigation measures for tributary dams	EP, FP	423103	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Negative impact mitigation measures for tributary dams	Guideline
	ISH04	By 2013	2013	Design guidance for mainstream dams	EP, FP, IKMP, BDP, FMMP	423204	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Design guidance for mainstream dams	Guideline
	ISH05	By 2013	2013	Study report on evaluated options of mainstream power development in context of national and regional power strategies	BDP	423301	Improve sustainability of hydropower development: (c) Assess power options, including alternatives to mainstream hydropower	Evaluation of mainstream power development options in context of national and regional power strategies	Study report

ISH Initiative on Sustainable Hydropower

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ISH	ISH06	By 2013	2014	Guidelines on risk mitigation options for possible mainstream dams	EP, FP	423202	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Identification of risk mitigation options	Guideline
						440002	Studies and Guidelines	Mainstream dams: Mitigation of the impacts of converting much of the mainstream to a series of slow moving waters	Guideline
	ISH07	By 2015	#N/A	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		440002	Studies and Guidelines	Mainstream dams: Mitigation of the impacts of converting much of the mainstream to a series of slow moving waters	Guideline
	ISH08	By 2013	2014	Essential knowledge acquired to minimize uncertainty of possible mainstream dams	EP, FP, BDP	423201	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Acquire essential knowledge to minimize uncertainty	Study report
	ISH09	By 2015	2013	Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools	EP	423101	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Identification of ecologically sensitive sub-basins	Guideline
	ISH10	By 2014	a)2014 b)2013	Guidance on Sustainable Management of Reservoir Watersheds prepared	WMP, AIP, MIWRMP	423103	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Negative impact mitigation measures for tributary dams	Guideline

ISH Initiative on Sustainable Hydropower

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ISH	ISH11	Continuously	2014/15	Environmental baseline information improved for hydropower planning	EP, IKMP	433005	Strengthen basin management processes	Develop and implement a system of comprehensive monitoring of project development in the basin	Monitoring system
	ISH12	By 2015	2015	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	IKMP, FMMP	440003	Studies and Guidelines	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	Study report
	ISH13	By 2013	2013	Benefit-sharing options for hydropower on tributaries evaluated and reported	BDP, EP, AIP, WMP	423105	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Evaluation of benefit-sharing options	Study report
	ISH14	Continuously	Ongoing	Technical assistance provided to hydropower developers on safeguards and compliance monitoring		440009	Studies and Guidelines	Development of selected water resources management and sector guidelines	Guideline
	ISH15	By 2011	2012-14	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	IKMP, ICCS	421001	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Strengthen cooperation with China	Inst. capacity

MIWRM Mekong Integrated Water Resources Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
MIWRM	MIWRM01	By 2013	2015	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	BDP, EP, IKMP	423203	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Strengthening PNPCA process	Procedure
		By 2013				433001	Strengthen basin management processes	Strengthening implementation of MRC Procedures	Procedure
	MIWRM02	By 2011	2016	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	ISH, IKMP, EP	421002	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Enhance coordination among the LMB countries on the operation of tributary dams by improving the implementation of the MRC Procedures	Inst. capacity
	MIWRM03	Continuously	Ongoing (2015)	Strengthened implementation of MRC Procedures	ICBP, IKMP, EP, BDP	433001	Strengthen basin management processes	Strengthening implementation of MRC Procedures	Procedure

MIWRM Mekong Integrated Water Resources Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
MIWRM	MIWRM04	Continuously	2013	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	ICBP and other programmes	432002	Strengthen national level water resources management processes	Capacity building in water use permitting (of withdrawals and pollution discharges) and compliance assurance of permit conditions and regulations	Inst. capacity
						435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	MIWRM05	By 2011	2011	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	ICBP, BDP, EP, IKMP, ICCS	435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

NAP Navigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
ALL	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
NP	NAP01	By 2013	2014-2015	Regional Master Plan for the overall navigation development in the LMB prepared	And other programmes	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
				Regional Master Plan for the overall navigation development in the LMB prepared	And other programmes	431003	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a master plan for navigation in Cambodia	Sector plan
	NAP02	By 2012	2013-2014	Overall Strategy for incorporation of ship locks in planned mainstream dams , including standards for lock design and operations formulated	ISH	423204	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Design guidance for mainstream dams	Guideline
	NAP03	By 2014	Not in NAP programme	Regional Feasibility Study for Mekong Waterway Improvement prepared	All other programmes	431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP04	By 2013	2014	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 States		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
		By 2013				433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	NAP05	By 2014	2015	Significance of the tributaries of the LMB for navigation identified		431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan

NAP Navigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
NP	NAP06	By 2014	Ongoing	Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP07	By 2015	2014-2015	Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups	BDP, FP, EP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	NAP08	By 2014	2015	Trans-boundary environmental impact assessment of physical navigation improvement conducted	EP, MIWRMP	431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP09	to be updated	Ongoing	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	EP, IKMP, ISH	431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP10	By 2014	2014- 2015	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		433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	NAP11	By 2014	2015	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	IKMP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	NAP12	to be updated	2014	Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism	EP, ISH	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan

NAP Navigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
NP	NAP13	By 2014	Ongoing + 2013	Aids to navigation as per priority needs, including landing facilities for tourists installed		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP14	By 2015	Ongoing + 2013	River scan: Comprehensive analysis of the river by multi-beam echo-sounding conducted		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP15	By 2014 and continuously later	2014	Information on Navigation accidents published and disseminated to regional, dialogue and development partners		433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system
	NAP16	By 2013	2014	Standards for waterway classifications developed		431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan

WMP Watershed Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
WMP	WMP01	to be updated	to be updated	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	IKMP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity

Appendix C Project Identification Notes (PIN)

Ref		Programme
R-01	AIP	Agriculture and Irrigation Programme
R-02	BDP	Basin Development Plan Programme
R-03	CCAI	Climate Change and Adaptation Initiative
R-04	DMP	Drought Management Programme
R-05	EP	Environment Programme
R-06	FMMP	Flood Management and Mitigation Programme
R-07	FP	Fisheries Programme
R-08	ICBP	Integrated Capacity Building Programme
R-09	ICCS	International Cooperation and Communication Section
R-10	IKMP	Information and Knowledge Management Programme
R-11	ISH	Initiative on Sustainable Hydropower
R-12	MIWRM	Mekong Integrated Water Resources Management Project
R-13	NP	Navigation Programme
R-14	WMP	Watershed Management Project

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Explanatory notes

Principles adopted in formulating the Regional Action Plan

Implementation of the Regional Action plan is founded on achievement of 110 of the 129 milestones set out in Annex B of the MRC Strategic Plan for 2011-15 by the MRC Programmes (the remaining 19 being associated with achievement of the MRC-SP's organisational goal and allocated to FAS, HRS and TCU).

A listing of the 110 milestones and their allocation to MRC Programmes is provided in Appendix B of this report. These 110 milestones have been shown to be consistent with the 15 Strategic Priorities and 64 Strategic Actions in the BDS, as demonstrated in Appendix A of this report.

The road map in the BDS recognises that a transitional period is required to achieve full alignment of the MRC Programme activities with these 110 milestones. Accordingly, the following principles have been adopted in preparing the implementation arrangements for the Regional Action Plan:

- (i) Since the Regional Action Plan is to be implemented principally by the MRC Programmes, it is critical that the required activities under the RAP are aligned with the MRC-SP and are presented in a manner consistent with MRC management processes; until such time as these processes are revised (ie streamlined), it would not be appropriate to create a new planning framework just to suit the RAP.
- (ii) The monitoring of progress towards achieving these milestones should be undertaken in a manner that serves the purposes of both the MRC-SP and the BDS, to avoid duplication of effort.
- (iii) In recognition of some MRC Programme and Project activities being in fact not currently fully aligned to the milestones within the MRC-SP, the Regional Action Plan provides a framework within which to progressively evolve the MRC Programme activities to achieve alignment. TCU have proposed this should be done through the annual planning process as far as possible.
- (iv) In order to provide further guidance to the alignment process, the key elements of the BDS have been set out in a number of **Project Identification Notes**, which amplify the milestone requirements in a manner intended to make clear the underlying objectives of those milestones in meeting the relevant aspects of the BDS.
- (v) Given the current availability of the draft final National Indicative Plans, the opportunities for developing closer cooperation between the MRC Programmes and national activities should be promoted and form part of the guidance to MRC programmes in the PINs.

Implementation responsibilities

The responsibilities related to the Regional Action Plan and the implementation of activities required by the PINs are summarised below together with *how these might relate to circumstances in the next strategic planning cycle*.

- ❑ **RAP preparation**

The preparation of the Regional Action Plan has been entrusted to the Basin Development Programme in accordance with the directives of the Basin Development Strategy.

In future strategic planning cycles, whilst BDP will continue to facilitate the preparation of updates of the Basin Development Strategy, the RAP will be replaced by the MRC Strategic Plan, which will remain the responsibility of TCU to facilitate under the direction of MRCS management. It is suggested here however that BDP should provide support to TCU in this regard to ensure that the MRC-SP adequately reflects the updated BDS. In particular, BDP could play an important role in developing PINs for each Programme if PINs are adopted as the means by which the strategic outputs are allocated to the MRC Programmes under an Annex to the next MRC-SP.
- ❑ **RAP approval**

The RAP is to be submitted through MRCS management to the RC Joint Committee for review and approval.

This would also be the case when the RAP is replaced by the MRC-SP, except that ultimate approval for the MRC-SP would lie with MRC Council.
- ❑ **Detailed activity planning**

Planning of detailed activities to achieve the milestones as set out in each PIN is the responsibility of each MRC Programme to whom those milestones are allocated.

As discussed, it is foreseen that this responsibility would remain the case in future strategic planning cycles.
- ❑ **Progress monitoring**

The responsibility for monitoring progress in achieving milestones lies with TCU. A system for doing this has been developed and is described in Chapter 4 of this report, which requires MRC Programmes to report periodically to TCU.

It is expected that this approach will remain valid under future arrangements.
- ❑ **Outcome monitoring**

The responsibility for monitoring outcomes related to achievement of milestones lies with TCU. An approach for doing this is outlined in Chapter 4 of this report.

It is expected that this approach will in principle remain valid under future arrangements, but will require further evolution and elaboration in response to emerging key issues within the basin.

□ Monitoring of implementation of the Basin Development Strategy

The responsibility for monitoring implementation of the Basin Development Strategy lies with the Basin Development Programme. This can be accomplished for the regional component drawing upon TCU's monitoring of the MRC-SP milestones as set out in Chapter 4 of this report. The manner in which the overall Basin Action Plan (the Regional Action Plan and the four NIPs) will be set out in the Basin Action plan document.

In the future, the regional component (as elaborated in PINs annexed to the MRC-SP) will be fully integrated with the monitoring systems for the MRC Strategic Plan. The manner in which national components of the MRC's strategic efforts are monitored will need to be developed and agreed, and may be predicated by consideration of such monitoring arrangements as emerge for the Basin Action Plan

Introduction to Project Identification Notes

The principal vehicle for providing guidance to the MRC Programmes on the strategic significance of the MRC-SP milestones is the Project Identification Note (PIN). The PIN is so called as it is intended to bring together the strategically important components of each MRC Programme's work in a single document or "project".

The format of the PIN, described in Appendix C, has been created in a manner that may usefully be applied also in future strategic planning cycles to provide the essential linkages between the outcomes and outputs of the MRC-SP and the activities that each MRC Programme would need to plan to the desired outcomes allocated to that Programme.

Within the current planning cycle, for the reasons earlier explained in this report, the PINs are needed to rationalise the differences that exist between the wording of MRC-SP Outcomes and BDS Strategic priorities and MRC-SP Outputs with BDS Strategic Actions. Furthermore, as also explained earlier in this report, there are also inconsistencies between MRC-SP milestone descriptions and the activities set out in the MRC Programme documents, as well as in the definition of goals, outcomes and outputs found in the MRC-SP and MRC Programme documents.

Thus for current purposes, and bearing in mind the underlying requirement is to ensure that the BDS is being implemented, the PINs adopt the hierarchy of aims, objectives etc as set out in Table 4 below, which also demonstrates how the PINs may usefully be used in the next strategically planning cycle.

Table 4 Goals, outcomes, outputs and activities in current and future PINs

Strategic levels	In the current PINs	In the next planning cycle
Goals	These are expressed as “aims and objectives”, which are focussed on assisting MRC Programmes in gaining alignment with the BDS and firming up timelines for implementation of the activities related to the BDS	In updating the Basin Development Strategy, it is suggested that the MRC sets a clear goal or set of goals to be achieved in the ensuing five years. These may include “development” goals (that could be monitored through the State of the Basin report, but must include “management” goal(s) that shape the agenda of the MRC and its member countries and reflect the overall MRC vision.
Outcomes	The outcomes are expressed as the “relevant strategic priorities” which the particular PIN is seeking to address, in order for the MRC Programme to better understand the strategic relevance of the milestones allocated to them under the MRC-SP	These will be developed as part of the updating of the Basin Development Strategy, and will be broadly equivalent to the types of statements currently used in the BDS as “strategic priorities”, but necessarily phrased as a “desired outcome” rather than as now a mix of ambitions and/or topic areas.
Outputs	The outputs are defined by the descriptions applied to the activity milestones given in Annex B of the MRC-SP, which the MRC Programmes have agreed to progressively work towards and which correlate best with the BDS Strategic Actions	<p>These will be determined also as part of the updating of the Basin Development Strategy as the outputs desired under the Strategy to achieve the outcomes as above. They will broadly be equivalent to the current strategic actions, again expressed as a measurable and specific output or product (eg a sector plan).</p> <p>The next MRC-SP will be prepared in parallel and coordinated with the four National Indicative Plans, during which the responsibilities for delivering outputs between national agencies, RBOs etc and the MRC Programmes will be decided. The next MRC-SP must allocate those outputs to be addressed at regional level, and this may be done usefully by appending a PIN for each MRC Programme to the MRC-SP setting this out</p>
Activities	Activities are to be planned by the MRC Programmes to meet the outputs above and will be set out in their Annual Work Plans. These are not necessarily the same as the “activities” set out in the MRC-SP annexes nor the “activities” defined in the Programme document, but are that which the MRC Programmes need to take up to achieve their agreed MRC-SP milestones and thus align their work with the Strategic Priorities.	Activities are to be planned by the MRC Programmes to meet the outputs above. Programme log frames will adopt the same outputs, outcomes and goals as defined above.

General contents of PINs

Project Identification Notes for each MRC Programme follow a common format, the main elements of which are summarised below:

- ❑ **Project Title** The project title refers to the MRC Programme to whom the PIN is addressed and reminds that the purpose is to address the requirements of the Basin Development Strategy in accordance with the directions given in the Strategy.
- ❑ **Responsible (lead) entity** The lead entity is the concerned MRC Programme on whom responsibility is conferred to take the necessary actions to align their work plans with the requirements of the MRC Strategic Plan milestones (which is deemed sufficient to meet the requirements of the Basin Development Strategy).
- ❑ **Other entities involved** This refers to other MRC Programmes who may be required to provide support to the lead Programme. The list of supporting Programmes is drawn from the MRC-SP Annex B.
- ❑ **Principal beneficiaries** These are set for all Programmes as “National planners, line agencies, river basin organisations/committees, research institutions and other related organisations” as a reminder that the role of the MRC Programmes is to facilitate integrated water resources management within each country consistent with the aims and objectives of the MRC Agreement.
- ❑ **Aims and objectives** As explained earlier in this report, the aims and objectives of the PIN are to provide guidance to each MRC Programme on how to achieve alignment with the over-arching MRC Strategies.
- ❑ **Relevant Strategic Priorities** The Strategic Priorities (of the Basin Development Strategy) which each MRC Programme is expected to address are those determined by reference to the milestones allocated to each MRC Programme in Annex B of the MRC Strategic Plan and the established linkage (see Appendix A of this report) between these and the BDS’ Strategic Actions and thence Strategic Priorities. Further details of the linkages relevant to each Programme are attached to the PIN. The referencing system for Strategic Priorities and Strategic Actions aligns with the numbering of paragraphs and sub-paragraphs in the BDS.
- ❑ **Key outputs and milestone dates** As explained earlier in this report, the aims and objectives of the PIN are associated with each MRC Programme addressing in timely manner the milestones allocated to that Programme under the MRC Strategic Plan. Given the need for some MRC Programmes to realign their existing work programmes, opportunity has been provided for each MRC Programme to update

the target date for each milestone in the light of current circumstances.

Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos). Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014. Further details are provided in Chapter 4 of this report.

□ Linkages to other Projects

Separate to the work of other MRC Programmes highlighted above, each country has prepared a National Indicative Plan (NIP). The NIPS set out the projects that each country intends to take up (subject to fund availability) in response to Basin Development Strategy, which will form part of the Basin Action Plan (being this Regional Action plan and the four NIPs). In future strategic planning cycles the NIPs will be prepared in parallel and coordinated with the MRC Strategic Plan, leading to greater integration of regional-national efforts within the context of increased decentralisation of MRC activities.

For this Regional Action Plan, it is intended that each MRC Programme should take note of relevant national projects under their NIPs and explore where synergies can best be developed to promote greater programme delivery efficiency. To this end, a list of NIP projects relevant to the concerned MRC Programme is appended to the PIN. A full listing of NIP Projects is provided in Appendix D of the Regional Action Plan.

□ Outline description

The outline description provides for the concerned MRC Programme a narrative elaborating each milestone allocated to the Programme in the context of the Strategic Priorities and related Strategic Actions. The intention of these narratives is to assist the concerned Programme in interpreting the strategic intent of the milestone, whilst not prescribing how the Programme should design the activities required to address the milestone.

Each PIN contains two common milestones (ALL01 and ALL02). These relate to the common needs of refreshing their stakeholder participation programmes, being prepared for and contributing to the State of Basin report from their sector's perspective (appropriate indicators, monitoring data and commentaries as may be required) and to the updating of the Basin Development Strategy (in a manner to be elaborated by and mutually agreed with BDP).

- ❑ **Tasks and outputs** The design of activities and outputs (deliverables) to meet the milestones above is something each Programme needs to do as part of their annual work planning, and is not considered a requirement of the PIN (either in this or future strategic planning cycles).
- ❑ **Implementation arrangements** Implementation arrangements for each Programme are determined in their Programme document. In principle, the alignment of Programme activities with the MRC-SP milestones should not cause these to alter.
- ❑ **Principal risks and means of mitigating risks** This section highlights potential risks that they affect the MRC Programmes' ability to meet milestone dates. Three risk areas are seen as common to all PINs (Programmes are free to add more if they wish). These are (i) the extent of misalignment of their existing Programme with the MRC-SP milestones and whether this raises potential conflicts with existing undertakings with their funders, (ii) the inadequacy of their existing funding to meet all of the milestones and (iii) any resource constraints that may have bearing on the Programme's ability to meet the target dates, such as further recruitment needs.
- ❑ **Additional funding required** This section provides an opportunity to highlight where additional funding is required to meet the milestone dates above and to elaborate the estimated further amounts required.

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Project Identification Note - AIP

Project Title	Agriculture and Irrigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-01
Responsible (lead) entity	AIP	Start date	2012
Other entities involved	DMP, EP, IKMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the AIP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to AIP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to AIP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for AIP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to AIP and its work plans. AIP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of AIP.</p>
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Project Title	Agriculture and Irrigation Programme Actions to address Basin Development Strategy			BDP ref	PIN R-01																												
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>422000</td> <td></td> <td>Expand and intensify irrigated agriculture for food security and poverty alleviation</td> </tr> <tr> <td>432000</td> <td></td> <td>Strengthen national level water resources management processes</td> </tr> <tr> <td>433000</td> <td></td> <td>Strengthen basin management processes</td> </tr> <tr> <td>530000</td> <td></td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					422000		Expand and intensify irrigated agriculture for food security and poverty alleviation	432000		Strengthen national level water resources management processes	433000		Strengthen basin management processes	530000		Monitoring, evaluation and reporting																
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433000		Strengthen basin management processes																															
530000		Monitoring, evaluation and reporting																															
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<table border="1"> <thead> <tr> <th>MRC-SP Ref</th> <th>MRC-SP planned date</th> <th>Description</th> <th>Updated target date</th> </tr> </thead> <tbody> <tr> <td>ALL01</td> <td>By 2014</td> <td>Sector reviews updated by sector programmes</td> <td>2014</td> </tr> <tr> <td>ALL02</td> <td>By 2012</td> <td>Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes</td> <td>2014</td> </tr> <tr> <td>AIP01</td> <td>By 2013</td> <td>Study report on groundwater development potential</td> <td>2014</td> </tr> <tr> <td>AIP02</td> <td>By 2013</td> <td>Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality</td> <td>Pending</td> </tr> <tr> <td>AIP03</td> <td>By 2013</td> <td>Guidelines for improved irrigation management</td> <td>Pending</td> </tr> <tr> <td>AIP04</td> <td>Continuously</td> <td>Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis</td> <td>2015</td> </tr> <tr> <td>AIP05</td> <td>to be updated</td> <td>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</td> <td>2015</td> </tr> </tbody> </table>	MRC-SP Ref	MRC-SP planned date	Description	Updated target date	ALL01	By 2014	Sector reviews updated by sector programmes	2014	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2014	AIP01	By 2013	Study report on groundwater development potential	2014	AIP02	By 2013	Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	Pending	AIP03	By 2013	Guidelines for improved irrigation management	Pending	AIP04	Continuously	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis	2015	AIP05	to be updated	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
MRC-SP Ref	MRC-SP planned date	Description	Updated target date																														
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<p>Linkages to other Projects</p>	<p>The National Indicative Plans set out a number of national projects of relevance to AIP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to AIP.</p> <p>AIP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>AIP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>																																

Project Title	Agriculture and Irrigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-01
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Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable AIP to contribute greater understanding of the agricultural sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • AIP01 - Groundwater study: see also IKMP01 project description. The goal is to establish the potential for groundwater development within the LMB to expand and intensify agricultural production and to minimise the impact of droughts, in doing so creating appropriate databases to support national and regional planning. • AIP02 - Integrated pest management guidelines: to review international best practice in IPM, current use within the LMB and recommend ways by which expanded use of IPM could contribute to improved agricultural practices and production within the LMB and minimise pollution risks. (<i>Currently no activity/output that can contribute to this milestone, alternatively this may need some modification of wording or implement this as additional study</i>). • AIP03 - Improved irrigation management guidelines: drawing from past studies, to consider cost-effective and socially-acceptable means of improving irrigation management within the basin, particularly as affects water use efficiency, agricultural productivity, adaptation to climate change and promotion of fish-friendly schemes. Account needs to be taken of spatial characteristics across the basin and emphasis should be on sharing examples of best practice from within the basin. (<i>Same situation as AIP 02 above</i>). • AIP04 - Water use monitoring: in tandem with the guidelines above, to establish the means by which water use for agricultural purposes may be monitored to support basin-scale and national assessments. The approach necessarily should be pragmatic and draw to the extent possible on existing information sources available within each country within the frameworks of PWUM and PDIES. Databases created should be consistent with IKMP-established standards. • AIP05 – Research and monitoring reports: an activity complementary to AIP01 above, involving periodic monitoring and review reports of groundwater use, based on selected pilot groundwater areas of transboundary significance aimed at identifying appropriate transboundary groundwater management systems. The regional consultation workshop on the revised proposal was held
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Project Title	Agriculture and Irrigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-01
	<p>in late December 2012 in Udon Thani, Thailand. The meeting successfully agreed on the objective and overall framework of the activity, national implementation plans, and roadmap after the workshop.</p> <ul style="list-style-type: none"> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, AIP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between AIP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, AIP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed. 		
Tasks and outputs	Detailed tasks and outputs will be developed by AIP through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		
Implementation arrangements	As per AIP Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes <p>AIP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	See AIP Programme document
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Project Title	Agriculture and Irrigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-01
Additional funding required	AIP to review and identify any funding gaps and report to these to TCU		
Work plan			
Work plan	See AIP Programme Implementation Plan and Annual Work Plan		

Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

AIP Agriculture and Irrigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
AIP	AIP01	By 2013	2014	Study report on groundwater development potential	IKMP, DMP	422001	Expand and intensify irrigated agriculture for food security and poverty alleviation	Drought mitigation strategies for rainfed areas	Sector plan
	AIP02	By 2013	Pending	Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	EP	422004	Expand and intensify irrigated agriculture for food security and poverty alleviation	Guidelines for promoting integrated pest management (IPM)	Guideline
	AIP03	By 2013	Pending	Guidelines for improved irrigation management	DMP	422005	Expand and intensify irrigated agriculture for food security and poverty alleviation	Guidelines for improved irrigation management	Guideline
	AIP04	Continuously	2015	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis		432003	Strengthen national level water resources management processes	Capacity building in water information system	Inst. capacity
	AIP05	to be updated	2015	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		433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system

National Indicative Plan projects relevant to AIP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.1: Improvement of agricultural productivity and diversification	□
Cambodia	Project 1.2: Agricultural land classification and Soil Fertility Improvement in LMB	□
Cambodia	Project 1.3: Integration of Environmentally Friendly Practices in Agriculture and Water Management	□
Cambodia	Project 1.4: Improvement and development of irrigation and drainage systems	□
Cambodia	Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■
Cambodia	Project 1.6: Tonle Sap Lowland Rural Development Project	■
Cambodia	Project 1.7: Tonle Sap Smallholder Development project	■
Cambodia	Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■
Cambodia	Project 1.9: Project for Agricultural Development and Economic Empowerment (PADEE)	■
Cambodia	Project 1.10: Climate Resilient Rice Commercialization Sector Development Program (SDP)	■
Cambodia	Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 4.5: IWRM Multi Stakeholder Platform in Pursat Catchment, Tonle Sap	■
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Lao PDR - priority project	Project 1.1: Improvements to irrigated agriculture along the Mekong River to increase crop and livestock productivity	□
Lao PDR	Project 1.6: The Agro-Biodiversity Initiative (TABI) – Phase II: Sustainable management and use of Agro-biodiversity (ABD) in multi-functional landscapes in upland communities	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■
Lao PDR - ongoing project	Project 4.3: Improving the Resilience of the Agriculture Sector to Climate Change Impacts	■

Country	NIP Project title	Funding status
Lao PDR - new project	Project 5.7: Case study on impacts of climate change on agriculture	☐
Lao PDR - new project	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)	☐
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.4.1 Improvement of water use efficiency for irrigated agriculture and fishery development in the Mekong Delta.	■
Viet Nam - Mekong delta	FA.4.3 Diversification of agriculture production and rural development in the situation of upstream development, climate change and sea water rise.	■

Project Identification Note - BDP

Project Title	Basin Development Programme Actions to address Basin Development Strategy	BDP ref	PIN R-02
Responsible (lead) entity	BDP	Start date	2012
Other entities involved	All other MRC Programmes, NMCs, RTWG etc	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the BDP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to BDP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to BDP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for BDP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to BDP and its work plans. BDP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of BDP.</p>
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Project Title	Basin Development Programme Actions to address Basin Development Strategy			BDP ref	PIN R-02
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <p>421000 Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin</p> <p>425000 Options for sharing the potential benefits and costs of development opportunities</p> <p>427000 Integration of basin development planning considerations into national systems</p> <p>433000 Strengthen basin management processes</p> <p>440000 Studies and Guidelines</p> <p>530000 Monitoring, evaluation and reporting</p>				
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC SP Ref</p> <p>ALL01</p> <p>ALL02</p> <p>BDP01</p> <p>BDP02</p> <p>BDP03</p> <p>BDP04</p> <p>BDP05</p> <p>BDP06</p> <p>BDP07</p> <p>BDP08</p>	<p>MRC SP milestone date</p> <p>By 2014</p> <p>By 2012</p> <p>By 2011</p> <p>By 2013</p> <p>By 2015</p> <p>By 2015</p> <p>Continuously</p> <p>By 2015</p> <p>By 2011</p> <p>Continuously</p>	<p>Output description (SP Milestone)</p> <p>Sector reviews updated by sector Programmes</p> <p>Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC Programmes</p> <p>Basin Action Plans approved for implementation</p> <p>Basin-wide objectives or “baseline indicators” covering economic, environmental and social factors developed</p> <p>Basin development strategy updated every 5 years to also include sub-basin water management issues</p> <p>A basin-wide management plan/strategy prepared</p> <p>National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy</p> <p>Basin-wide and sector water resources management guidelines</p> <p>Study report on management of risks of on-going and committed water resources development projects</p> <p>A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established</p>	<p>Updated target date</p> <p>By 2015</p> <p>Nov 2013</p> <p>Dec 2012</p> <p>Jun 2014</p> <p>Nov 2014</p> <p>Nov 2014</p> <p>Continuous</p> <p>By 2015</p> <p>Dec 2013</p> <p>Oct 2014</p>	

Project Title	Basin Development Programme Actions to address Basin Development Strategy			BDP ref	PIN R-02
	BDP09	By 2014	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions		Feb 2014
	BDP10	Continuously	A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational		Continuous
	BDP11	Continuously	A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRCS for monitoring and providing early advice on addressing transboundary risks associated with LMB water development		Dec 2014
	BDP12	By 2011	Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream		Dec 2013
	BDP13	By 2011	Strategy implementation monitoring system designed		Nov 2012
	BDP14	By 2012	Strategy implementation monitoring system operational		Dec 2012
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to BDP's work. Further information on relevant projects is set out in the attached table on National Indicative Plan projects relevant to BDP.</p> <p>BDP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>As a consequence of the first prior consultation process on mainstream dams, the MRC Council agreed in December 2011 to undertake a joint study on the 'Sustainable development and management of the Mekong River including impacts of mainstream hydropower projects.' It is expected that the TOR of the 'Council' study will address many of the knowledge gaps identified in the Basin Development Strategy and consequently in the MRC SP milestones. Strong coordination and management will be required to avoid duplication of efforts and create synergies.</p> <p>In addition to the Council Study, Viet Nam has included an assessment of the possible impacts of proposed upstream developments on the Mekong Delta in its National Indicative Plan.</p> <p>BDP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>				

Project Title	Basin Development Programme Actions to address Basin Development Strategy	BDP ref	PIN R-02
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Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work to be undertaken by BDP is intended to contribute to improved and integrated IWRM planning and management within basin at all levels supported by strengthened procedures and improved monitoring systems, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others. The specific tasks required are:</p> <ul style="list-style-type: none"> • BDP01 - Basin Action Plans approved for implementation: To support and coordinate the preparation, approval, implementation and the monitoring and evaluation of a Basin Action Plan that will effectively address the development opportunities and strategic priorities in the IWRM-based Basin Development Strategy. The Basin Action Plan comprises a Regional Action Plan (RAP), for implementation by MRC Programmes, and four National Indicative Plans (NIPs) that will be implemented by national agencies. Looking towards the future, the NIPs provide a link to the national planning systems and can be seen as part of a wider process to decentralize certain basin planning activities now being undertaken by the MRC. The NIPs could also bring also national perspectives and interests into future updates of the Basin Development Strategy and thus into the MRC Strategic Plan. • BDP02 - Basin-wide objectives or “baseline indicators” covering economic, environmental and social factors developed: The move towards a more results-based approach at MRC comes with a greater recognition of the importance of designing a hierarchy of indicators that inform water resources managers, policy makers and the wider public on the health of the basin and also the efficacy of various management interventions. They will provide continuity in different aspects and levels of MRC’s work from routine monitoring to scenarios assessment and state of the basin reporting. Defining a set of indicators for routine collection by MRC requires a pragmatic balance between information needs and cost. The main activities are: to facilitate the process within MRC to consolidate the range of indicators used in previous activities in close collaboration with EP and further propose a hierarchy of social, environmental and economic indicators for monitoring, scenario assessment and strategy development; consult with Member Countries and wider stakeholders to reach a common understanding on the indicators and approval for their use; and consult with Member Countries and wider stakeholders on setting of objectives for the future condition of the Basin as a basis for developing a long term Basin management strategy. • BDP03 - Basin Development Strategy (BDS) updated every 5 years to also include sub-basin water management issues: The Basin Development Strategy was drafted to cover a five year timeframe. It is increasingly evident
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Project Title	Basin Development Programme Actions to address Basin Development Strategy	BDP ref	PIN R-02
	<p>that the basic elements of the Strategy will remain relevant for longer than this period. Updating the BDS will involve incorporating modifications to reflect a broader scenario analysis and feedback from the initial implementation and the studies undertaken to fill knowledge gaps. The updated BDS needs to be available prior to formulating the next MRC SP. An adaptive and flexible approach will be required as the updated BDS will be dependent on the outcome of the Council Study on proposed mainstream dams and its consideration by Member Countries. The main activities are: to identify the potential scope for a broadened set of scenarios and strengthened basin-wide development scenario assessment; design and implement a consultative and quantitative scenario assessment process that also focuses on transfer of knowledge and skills to relevant national agencies, NMCSs and MRC Programmes; design and implement a participatory process for updating the BDS and addressing the changing development context, initial results of the broadened scenario assessment, nexus considerations, initial results of the dialogue on regional benefit sharing, and lessons learned from implementation of BDS 2011-2015; and facilitate the consultation process and approval of the BDS 2016-2020 by the MRC Council in 2015 and disseminate it so it is accessible to a wide range of basin stakeholders including translation into riparian languages and related communications products.</p> <ul style="list-style-type: none"> • BDP04 - A basin-wide management plan/strategy prepared: This will be covered in the BDMS 2016-2020 (see BDP03 above). A significant difference for the next version of the BDS will be greater definition of basin management issues, building on Section 4.3 of the current version. This will be achieved through dialogue on the most appropriate economic, social and environmental indicators to describe basin health and the corresponding consideration of medium to long term objectives (see BDP02). Much of this work will be undertaken by other MRC Programmes and coordinated by the BDP Programme into what could, in the future, be called a Basin Development and Management Strategy (BDMS 2016-2017) • BDP05 - National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy: This will be covered through the implementation of the National Indicative Plans (see BDP01) and the preparation of the BDMS 2016-2020 (BDP03). • BDP06 - Basin-wide and sector water resources management guidelines: The long list of guidelines is provided in the “Working towards an IWRM-base Basin Development Strategy: (March 2011). Guidelines will be prioritized by national line agencies and MRC Programmes so as to meet immediate information needs of planners, designers, developers, managers and decision makers. The priority guidelines include: guidelines for fish friendly development of irrigation schemes (FP01), guidelines on multi-purpose evaluation of hydropower projects including SEA (ISH02), guidelines for the facilitation of a Mekong network of RBCs/RBOs with linkages to wider networks (BDP08) and others as described in the 130 milestones of the MRC SP 2011-2015. 		

Project Title	Basin Development Programme Actions to address Basin Development Strategy BDP ref PIN R-02
	<ul style="list-style-type: none"> • BDP07 - Study report on management of risks of on-going and committed water resources development projects: To coordinate preparation of a risk management report for major ongoing, committed and proposed projects based on inputs from other MRC Programmes and provide support to fill knowledge gaps where necessary. The results will be used to prepare the BDMS 2016-2020 (see BDP03 and BDP04 above). • BDP08 - A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established: Such networks could be very effective ways of practical capacity building in IWRM issues and it is a legitimate part of the MRC's 'cooperation and coordination' role to facilitate these networks. The main activities are to: review the role and composition of RBOs / RBCs in each Member Country and their potential and constraints in the basin planning and management processes; support Member Countries in establishing a national forum or network of RBOs as a vehicle for exchanging experience and providing feedback on river basin issues and dialogue with national agencies; and to organise a regional forum among national agencies for exchanging experience, IWRM capacity building, and supporting dialogue and engagement on basin-wide policy and planning issues and the implementation of the BDS. • BDP09 - Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions: In parallel to the focus on project-level benefit sharing that continues to be facilitated by the Initiative of Sustainable Hydropower (ISH), there has been an increasing discussion on the scope for regional, or country to country, benefit sharing solutions. In part, this was highlighted by the International Panel of Experts in the second phase of BDP and was echoed more recently in various presentations at the Mekong₂Rio Conference. The main activities are to: review experience in other river basins and regions on regional benefit sharing mechanisms and conflict mediation and raise awareness of these approaches within the LMB; identify and analyse the scope of existing and potential arrangements for regional benefit-sharing in the Mekong Basin and provide a Ministerial-level briefing on global experience and potential relevance to the Mekong Basin; design a follow-on dialogue among Member Countries on regional benefit sharing; and facilitate a ministerial-level study tour to a basin(s) with relevant experience of regional benefit sharing. Inclusion of this second study tour will depend on resource availability. • BDP10 - A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational: This will be achieved by the development, maintenance and use of the Project Master Database that will record existing, ongoing and planned water resources development, as described under BDP11 below. The database will help improve the implementation of MRC Procedures, in particular the PNPCA as data fields can be introduced to record a project's status in respect of these 'approvals' processes. The database would then have the functionality to search on projects at different stages of planning and approval. The database also needs to link to the PDIES and the PWUM.

Project Title	Basin Development Programme Actions to address Basin Development Strategy	BDP ref	PIN R-02
	<ul style="list-style-type: none"> <li> <p>• BDP11 - A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRCS for monitoring and providing early advice on addressing transboundary risks associated with LMB water development: The Project Master Database will provide this register by providing the summary records of all existing and proposed projects in a consistent manner appropriate to basin level planning assessments and be supported by sector databases with more detailed project level data (like the hydropower and irrigation databases developed during BDP2). The main activities are to: reach consensus on the concept and design of the Project Master Database and the internal mechanism to keep track of approved infrastructure projects once they have been considered under national regulatory processes and the PNPCA; construct the Project Master Database, upload project information and establish processes for its regular update and reporting; and use the Project Master Database in applying the MRC Procedures, monitoring and reporting basin developments, promoting investments, use in basin-wide assessments and studies, updating the IWRM-based Basin Development Strategy and managing transboundary risks.</p> <li> <p>• BDP12 - Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream: In April 2012 agreement was reached with all Member Countries to implement the Procedures for Maintaining Flows in the Mainstream (PMFM) through a ‘learning by doing’ approach, including the four alternative flow frameworks that are currently being considered for minimum flows for the implementation of Article 6A for planning purposes. In parallel, activities will be implemented to reach a four-country consensus of one specific flow framework for minimum monthly flows for planning purposes. The main activities are to: prepare a comprehensive Information Report that usefully summarizes the PMFM process so far and provides an analysis of pros and cons of the considered flow frameworks for minimum flows for planning purposes; facilitate dialogue among Member Countries leading to endorsement of a specific flow framework for minimum monthly flows for planning purposes by the Technical Review Group and approval by the Joint Committee; monitor daily flows including any necessary data collection and present the information on the MRC website in a way that is accessible to a wide audience and consistent with other elements of MRCs information system; and take action when necessary based on the monitoring programme.</p> <li> <p>• BDP13 - Strategy implementation monitoring system designed: This RAP describes the M&E system that will be used to monitor progress of activity implementation and assess the achievement of the goals and outcomes of the MRC SP and the Strategic Priorities and Strategic Actions of the Basin Development Strategy. The spread sheet based M&E system has been prepared for self-monitoring by MRC Programmes and annual independent assessments by outside consultants. The self-monitoring of MRC Programmes will be done through their traditional 6-monthly and annual progress reporting in which they will assess progress towards achieving the MRC SP milestones that are allocated to them. The spread sheet will link the progress reporting on the milestones to the goals and outcomes of the MRC SP and the Strategic Priorities and Strategic Actions of the Basin Development Strategy. The BDP will support the TCU and the Programmes whenever needed. Strategy</p> 		

Project Title	Basin Development Programme Actions to address Basin Development Strategy BDP ref PIN R-02
	<p>implementation and monitoring will be a challenge this planning cycle as described in this report. The proposed streamlining of the MRC planning processes will lead to a coherent and much simplified set of plans for MRCS to monitor as described in Section 2.4 of this RAP.</p> <ul style="list-style-type: none"> • BDP14 - Strategy implementation monitoring system operational: The described monitoring system under BDP13 will be operational by the end of 2012. • ALL01 - Stakeholder participation: in common with all other MRC Programmes, the BDP will review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between BDP and relevant line agencies and RBO/RBCs. The BDP 2011-2015 will update the Basin Stakeholder Analysis and propose a more structured approach to identifying representative organisations from the full range of relevant stakeholder interest groups. The Programme will also update the Stakeholder Participation and Communication Plan (SPCP) for Basin Development Planning in conjunction with key stakeholders, and implement a broad consultation process at sub-national, national and regional levels on the updated Basin Development Strategy and other major planning activities. • ALL02 – State of Basin Report update: Also in common with all other MRC Programmes, BDP will cooperate with EP in updating the State of the Basin Report. The nature of this cooperation will be mutually agreed. The next version to be published in 2015. One of the main differences will be the extension of the scope to include description of the Lancang-Upper Mekong Basin for which the BDP Programme will be responsible in cooperation with assigned Chinese institutes. To the extent possible, the work on developing economic, social and environmental indicators will be used in the Report as a basis for future analysis of long term trends in basin conditions. The main BDP activities are to: contribute to the preparation of the updated State of the Basin Report 2014 with specific emphasis on the extension to cover the Lancang-Upper Mekong Basin; coordinate discussion with China and Myanmar on the data and information needed to extend the State of the Basin Report to the Lancang-Upper Mekong Basin and mechanisms for data collection, preparation, acceptance and dissemination of the State of the Basin Report; and support the consultation process with Member Countries and approval of the MRC JC, followed by an extensive dissemination programme including summaries in riparian languages.
Tasks and outputs	Detailed tasks and outputs will be developed by BDP through their Annual Work Plans, which as required will be progressively aligned with the priorities above
Location	Basin-wide
Implementation arrangements	As per BDP Programme Document or as otherwise amended through Annual Work Plans

Project Title	Basin Development Programme Actions to address Basin Development Strategy	BDP ref	PIN R-02
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Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks and means of mitigating these are as follows:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme Document and work plans – BDP is preparing an Inception Report and Project Implementation Plan which should minimise this risk. • Inadequate funding – BDP anticipates having adequate funding • Inadequate resources – The Development Partner Mission in May 2012 raised the concern about recruitment and retention of qualified riparian staff at MRCS and this remains an issue. BDP has prepared a staff recruitment plan and anticipates that staff resources can be mobilised without delay with support from HRS and relevant NMCs • MRC Programmes don't reinforce each other – MRC is working towards a more coordinated approach for Programmes through the streamlining of its planning cycle (Basin Development Strategy – MRC SP – Programme Documents) and the development of the MRC PMS (see Section 2.4). • The BDP 2011-2015 is ambitious and any delay at the national levels could result in delays to the overall Programme - National BDP teams are experienced in coordinating the Programme but due to the short timeframes, additional emphasis will be given to efficient coordination, review and procurement activities.
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	The currently committed development partner contribution to the current phase of BDP 2011-2015 is USD 9.03 million.
Additional funding required	The funding gap for the full implementation of the BDP 2011-2015 as described in the Inception Report and Project Implementation Plan is USD 3.59 million. Discussions are ongoing with SDC and USAID on possible allocations that would fill this gap in funding

Work plan

Work plan	See the BDP 2011-2015 the Inception Report and Project Implementation Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

BDP Basin Development Plan Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
BDP	BDP01	By 2011	Dec-12	Basin Action Plans approved for implementation	All other programmes	530001	Monitoring, evaluation and reporting	Strategy implementation monitoring system design	Guideline
	BDP02	By 2013	Jun-14	Basin-wide objectives or "baseline indicators" covering economic, environmental and social factors developed	EP, and other programmes	433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system
	BDP03	By 2015	Nov-14	Basin development strategy updated every 5 years to also include sub-basin water management issues	All other programmes	530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	BDP04	By 2015	Nov-14	A basin-wide management plan/strategy prepared	All other programmes	530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
BDP05	Continuously	Continuous	National water resources development planning and project identification aligned with the identified development opportunities under the Basin Development Strategy	ICBP	427001	Integration of basin development planning considerations into national systems	Alignment of national water resources development planning and project identification	Inst. capacity	

BDP Basin Development Plan Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
BDP	BDP06	By 2015	2015	Basin-wide and sector water resources management guidelines	ISH, AIP, FP, NAP, EP and other programmes	440009	Studies and Guidelines	Development of selected water resources management and sector guidelines	Guideline
	BDP07	By 2011	Dec-13	Study report on management of risks of on-going and committed water resources development projects	EP, ISH, IKMP	421004	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Management of risks of committed projects and mitigation measures	Study report
						427002	Integration of basin development planning considerations into national systems	Addressing identified risks early in project identification and preparation	Inst. capacity
	BDP08	Continuously	Oct-14	A network of national water resources management (WRM) agencies and river basin organisations/committees (RBOs/RBCs) established	ICBP, MIWRMP	433006	Strengthen basin management processes	Develop a network of national WRM agencies and RBOs	Inst. capacity
	BDP09	By 2014	Feb-14	Options identified for sharing the potential benefits and costs of identified development opportunities and facilitation of negotiated solutions	All other programmes	425001	Options for sharing the potential benefits and costs of development opportunities	Options for sharing the potential benefits and costs of development opportunities	Inst. capacity
						433008	Strengthen basin management processes	Development of guidelines or mechanisms to facilitate early resolution of disputes	Guideline
	BDP10	Continuously	Continuous	A system of comprehensive monitoring of project development in the basin using MRC Procedures and other tools developed and operational	IKMP, ICBP, MIWRMP	433005	Strengthen basin management processes	Develop and implement a system of comprehensive monitoring of project development in the basin	Monitoring system

BDP Basin Development Plan Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
BDP	BDP11	Continuously	Dec-14	A register of existing, ongoing and planned water resources development and water-related projects maintained at NMCSs and MRCS for monitoring and providing early advice on addressing transboundary risks associated with LMB water development	IKMP, ICBP	427003	Integration of basin development planning considerations into national systems	Maintain a register of existing, ongoing and planned water resources development and water-related projects at NMCSs and MRCS	Monitoring system
	BDP12	By 2011	Dec-13	Agreement reached among Member Countries to protect the baseline dry season flows on the Mekong mainstream	EP, ISH, IKMP, MIWRMP	421003	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Reach agreement to protect the baseline dry season flows on the Mekong mainstream	Procedure
	BDP13	By 2011	Nov-12	Strategy implementation monitoring system designed		530001	Monitoring, evaluation and reporting	Strategy implementation monitoring system design	Guideline
	BDP14	By 2012	Dec-12	Strategy implementation monitoring system operational		530002	Monitoring, evaluation and reporting	Strategy implementation monitoring system	Monitoring system

National Indicative Plan projects relevant to BDP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■
Cambodia	Project 1.6: Tonle Sap Lowland Rural Development Project	■
Cambodia	Project 1.7: Tonle Sap Smallholder Development project	■
Cambodia	Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■
Cambodia	Project 2.1: Capacity development in IWRM for Inter-Agency and cross-boundary coordination	□
Cambodia	Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■
Cambodia	Project 3.1: Enhancing institutional capacity for sustainable hydropower development (SHD) and climate change adaptation	□
Cambodia	Project 3.2: Assessing results of upstream and downstream development to support informed policy making processes	□
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 3.5: Strategic Program on Climate Resilience (SPCR)	■
Cambodia	Project 3.6: Cambodian Climate Change Alliance	■
Cambodia	Project 4.2: Development of Environmental and Socio-economic Baseline and development scenario impact assessment for Tonle Sap	□
Cambodia	Project 4.3: Study of impact on Cambodian inland fishery and sediment transport in the Mekong Floodplain and Tonle Sap Great Lake	□
Cambodia	Project 4.4: Water Governance and climate change in Tonle Sap	■
Cambodia	Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Thailand	PIN T-001 Capacity Building to RBC and Network	■
Thailand	PIN T-002 Database Management for Basin Development	■
Thailand	PIN T-003 Promote River Basin Organization Network and Information Dissemination	■
Lao PDR - priority project	Project 1.1: Improvements to irrigated agriculture along the Mekong River to increase crop and livestock productivity	□
Lao PDR - priority project	Project 1.2: Develop national fisheries law, create awareness on the law and regulations, as well as develop a fisheries management strategy and plans for Lao PDR	□
Lao PDR - new project	Project 1.4: Promote the development of aquaculture in Lao PDR	□
Lao PDR - new project	Project 1.5: Improvement of fisheries statistics in Lao PDR	□

Country	NIP Project title	Funding status
Lao PDR - priority project	Project 2.1: Strengthening hydropower management system under the framework of the RBCs	<input type="checkbox"/>
Lao PDR - new project	Project 2.2: Promotion of small to mid scale hydropower projects enhancing national energy security	<input type="checkbox"/>
Lao PDR - ongoing project	Project 2.3: Sub-basin hydropower development planning related to risk management during implementation	<input checked="" type="checkbox"/>
Lao PDR - ongoing project	Project 2.4: Water Resources Management and Least-cost Hydropower Development Planning	<input checked="" type="checkbox"/>
Lao PDR - ongoing project	Project 2.5: Hydropower planning and optimal integration and operation of renewable resources	<input checked="" type="checkbox"/>
Lao PDR - ongoing project	Project 2.6: Strengthening of governmental function on technical regulations in the power sector at the central and provincial levels	<input checked="" type="checkbox"/>
Lao PDR - ongoing project	Project 2.7: Hydropower Management and Implementation of the National Policy on Sustainable Hydropower (NPSH)	<input checked="" type="checkbox"/>
Lao PDR - priority project	Project 3.1: Strengthening of water resource procedures and guidelines	<input type="checkbox"/>
Lao PDR - priority project	Project 3.2: Strengthening of Nam Ou River basin management	<input type="checkbox"/>
Lao PDR - new project	Project 3.4: Strengthening of Sekong River basin management	<input type="checkbox"/>
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	<input type="checkbox"/>
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	<input checked="" type="checkbox"/>
Lao PDR - ongoing project	Project 4.2: Reducing Emission from Deforestation and Forest Degradation (REDD+) to reduce the rates of deforestation and forest degradation, in order to join international efforts in reducing greenhouse gas (GHG) emissions from forestry sector in developing countries to mitigate climate change	<input checked="" type="checkbox"/>
Lao PDR - ongoing project	Project 4.4: Forest Investment Program in Lao PDR: to reduce emissions from deforestation and forest degradation, while also helping the country to adapt to climate change impacts	<input checked="" type="checkbox"/>
Lao PDR - priority project	Project 5.1: Establishment of Lao National Mekong Basin Information System	<input type="checkbox"/>
Lao PDR - priority project	Project 5.2: Inventory of environmental hotspots in Lao PDR	<input type="checkbox"/>
Lao PDR - priority project	Project 5.3: Study on the social, economic and environmental benefits of hydropower development in Lao PDR	<input type="checkbox"/>
Lao PDR - new project	Project 5.6: Study on ecosystem services of wetlands and biodiversity	<input type="checkbox"/>
Lao PDR - new project	Project 5.7: Case study on impacts of climate change on agriculture	<input type="checkbox"/>
Lao PDR - new project	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)	<input type="checkbox"/>
Lao PDR - new project	Project 5.10: Riverbank protection master plan	<input type="checkbox"/>
Lao PDR - new project	Project 5.11: River dredging impact assessment	<input type="checkbox"/>

Country	NIP Project title	Funding status
Lao PDR - ongoing project	Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	■
Lao PDR - priority project	Project 6.2: Gender mainstreaming in integrated water resources management and planning	□
Lao PDR - priority project	Project 6.3: Capacity building for Monitoring, Evaluation and Learning (MEL) related to PINs implementation	□
Viet Nam - Mekong delta	FA.1.1 Establishment process and procedures for integration of national and sector planning into the IWRM-based Basin Development Strategy of MRC.	■
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■
Viet Nam - Mekong delta	FA.1.3 Preparation of procedure for notification of water resources infrastructure projects development and operation in the Mekong Delta	■
Viet Nam - Mekong delta	FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	■
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.	■
Viet Nam - Mekong delta	FA.2.2 Updating the water resources development scenarios for the Mekong Delta to be used for reviewing and improving the basin development scenarios	■
Viet Nam - Mekong delta	FA.2.3 Preparation of state of environment report for the Mekong Delta	■
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	■
Viet Nam - Mekong delta	FA.4.2 Development of Strategy for drought management and water supply.	■
Viet Nam - Mekong delta	FA.4.3 Diversification of agriculture production and rural development in the situation of upstream development, climate change and sea water rise.	■
Viet Nam - Mekong delta	FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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	■

Country	NIP Project title	Funding status
	the livelihood of people living in the Mekong	
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	FA.6.2 Preparation of the formulation of Integrated Water Resources Management Strategy taking into account of trans-boundary impacts.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	FA.6.5. Strengthening the operation of existing Srepok River Basin Council.	■
Viet Nam - Se San & Srepok	FA.6.6 Initial Preparations for the establishment of Se San River Basin Organization.	■
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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - capacity building	FA.9.1 Formulate a Program for raising awareness of the IWRM-based Basin Development Strategy and how to implement it.	■
Viet Nam - capacity building	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.	■

Project Identification Note - CCAI

Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy	BDP ref	PIN R-03
Responsible (lead) entity	CCAI	Start date	2012
Other entities involved	AIP, DMP, EP, FMMP, FP, IKMP, ISH, NAP, WMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the CCAI in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to CCAI is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to CCAI should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for CCAI against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to CCAI and its work plans. CCAI are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of CCAI.</p>
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Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy			BDP ref	PIN R-03
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <p>426000 Climate change adaptation</p> <p>433000 Strengthen basin management processes</p> <p>530000 Monitoring, evaluation and reporting</p>				
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC-SP Ref</p>	<p>MRC-SP planned date</p>	<p>Description</p>	<p>Updated target date</p>	
	ALL01	By 2014	Sector reviews updated by sector programmes	2013	
	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	June 2013	
	CCAI01	By 2015	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	By 2015	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	By 2015	Study report on the impacts of climate change on navigation and existing infrastructure	2015	
	CCAI04	By 2015	Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn	1st batch June 2013, 2nd batch Dec 2014	
	CCAI05	By 2013	A Climate Change Adaptation Strategy for the LMB prepared and approved	June 2015	
	EP05*	By 2013	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	2013/updated 2014	
	EP07*	By 2012	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	2015	
	EP15*	By 2015	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	2015	
	<p><i>Note: (*) Responsibility for milestone transferred by mutual consent from EP</i></p>				

Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy	BDP ref	PIN R-03
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to CCAI's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to CCAI.</p> <p>CCAI will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>CCAI will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan. In this revision of the PIN, the lead responsibility for three climate change related milestones formerly assigned to EP has been taken up by CCAI. For clarity the original descriptions and referencing has been kept for these milestones which are being implemented by CCAI : EP05, EP07 and EP15.</p>		

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable CCAI to contribute greater understanding of climate change and adaptation measures in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • 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: Adaptation planning and implementation are to be piloted and demonstrated throughout the region drawing lessons learned from existing practices and demonstration with feedback to improve performance and influence strategies and plans. The following outputs are required: <ol style="list-style-type: none"> 1. <i>Methods and Tools for assessment and adaptation planning</i> developed and the climate change database for the Mekong basin established; 2. <i>Local demonstration activities and projects</i> in adaptation are established and working; 3. <i>Basin-wide sector and trans-boundary adaptation plans/guides</i> are prepared and piloted building on existing activities where feasible; 4. <i>Lessons and outcomes of the CCAI adaptation demonstration activities</i>
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Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy	BDP ref	PIN R-03
	<p><i>replicated and up-scaled</i> through local, sector and national development planning;</p> <p>5: <i>Analysis of long-term flood management options for the whole Lower Mekong Basin including the Tonle Sap, Cambodian floodplains and Mekong Delta</i> to respond to growing pressures from climate change, sea level rise, land development and upstream development plans;</p> <p>6: <i>Drought risk and vulnerability analysis considering climate change</i> and options for climate change adaptation</p> <ul style="list-style-type: none"> • 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: This study is not in CCAI Programme Document or PIP as related to mitigation rather than adaptation. The study may be linked with NAP Output 1.3. • CCAI03 - Study report on the impacts of climate change on navigation and existing infrastructure: This study is covered under CCAI01 and is also linked to NAP Output 1.3 • CCAI04 - Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn: Improved capacity to manage and adapt to climate change at different levels in the LMB including in the use of tools for different adaptation planning stages and methods is central to CCAI and demonstration projects are being carried out in all MC. Includes the following outputs: 1: <i>Institutional capacity strengthened</i> in policy making and planning for climate change adaptation in the LMB Countries; 2: <i>Tools for adaptation planning and implementation are documented</i> and capacities built in their application; 3: <i>Capacity to monitor and report on progress and performance</i> on climate change and adaptation of LMB governments at all levels and of the MPCC members is built. • CCAI05 - A Climate Change Adaptation Strategy for the LMB prepared and approved : This includes two main components: <ul style="list-style-type: none"> A) Strategies and plans for adaptation at various levels are put in place and/or regularly updated and integrated with appropriate development plans, with implementation monitored and reported on a regular basis. This requires the following outputs: 1. <i>Policy frameworks</i> to facilitate and guide adaptation are in place; 2: <i>A system for monitoring and reporting</i> on the status of climate change and adaptation in the Mekong region is implemented; and, 3: <i>A CCAI communications plan</i> is prepared and implemented. B) Regional cooperation, exchange and learning are to be implemented through partnerships in a fully gender responsive initiative for at least three five-year phases with a developed longer-term sustainability strategy. This requires the following outputs: 1: <i>Partnership agreements</i> and working relations are established and maintained with the CCAI core implementing partner organisations; 2: <i>Appropriate institutional arrangements</i>, staffing and capacities are in place within the MRCS and NMCs; 3: <i>A harmonised system is set up for regular CCAI reporting</i> on progress and plans to the MRC JC and 		

Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy	BDP ref	PIN R-03
	<p>Council, donors and partners; 4: <i>Financing</i> for the CCAI is secured for the three five year cycles ; and, 5: <i>Regular review and revision</i> of the CCAI</p> <ul style="list-style-type: none"> • EP05 - Climate change impacts on water and related resources of LMB in medium to long term assessed and reported: Timely response to emerging issues is enabled through research and outreach activities engaging national and regional stakeholders. Includes 4 key outputs: 1. The MRC Climate Change and Adaptation Initiative addresses environmental and social sustainability in adaptation planning and implementation; 2. Early warning of negative environmental trends and identified issues are addressed; 3. The understanding of the Mekong River water resource in the future under a changing climate is improved to support impact assessments of basin developments; 4. Outreach to stakeholders and engagement in relevant national, regional and international fora. • EP07 - Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas: <i>EP proposes CCAI to be the main responsible programme for this activity.</i> See also CCAI01 project description. Adaptation planning and implementation is piloted and demonstrated throughout the region drawing lessons learned from existing practices and demonstration with feedback to improve performance and influence strategies and plans. Includes the following outputs: 1. <i>Methods and Tools for assessment and adaptation planning</i> developed and the climate change database for the Mekong basin established; 2: <i>Local demonstration activities and projects</i> in adaptation are established and working; 3: <i>Basin-wide sector and trans-boundary adaptation plans/guides</i> are prepared and piloted building on existing activities where feasible; 4: <i>Lessons and outcomes of the CCAI adaptation demonstration activities replicated and up-scaled</i> through local, sector and national development planning; 5: <i>Analysis of long-term flood management options for the whole basin and specifically for the Cambodian floodplain, Tonle Sap and Mekong Delta</i> to respond to growing pressures from climate change, sea level rise, land development and upstream development plans; 6: <i>Drought risk and vulnerability analysis considering climate change</i> and options for climate change adaptation. • EP15 - Monitoring and assessment programme developed to analyse implications of climate change on the basin’s long-term hydrology, agriculture, food security, ecological conditions and bio-diversity: <i>EP proposes CCAI to be the main responsible programme for this activity.</i> Climate change is one of the future factors expected to significantly affect the River Basin including the ecosystems, biodiversity and peoples livelihoods. This output considers the impact and vulnerability assessment of agriculture, food security, ecology and biodiversity in different future climate scenarios to support adaptation planning for mitigation of key impact as well as environmental and social sustainability of adaptation options planned to mitigate climate change impacts on economic and social systems. This output is implemented as an integrated part of the CCAI01 project on adaptation planning focusing on development of methods and tools for impact and vulnerability assessment for environmental systems and application of these methods in basin wide pilots and Outcome 3 on strategies and plans where the Environment 		

Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy	BDP ref	PIN R-03
	<p>Programme will consider integration of climate change into environmental management tools.</p> <ul style="list-style-type: none"> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, CCAI should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between CCAI and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, CCAI will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed and the development of a basin-wide adaptation plan will be a significant contribution. 		
Tasks and outputs	Detailed tasks and outputs will be developed by CCAI through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		
Implementation arrangements	As per CCAI Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principal risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans. This is particularly relevant to CCAI02 and CCAI03 though the misalignment on tasks included in CCAI work plan but previously assigned to Environment Programme EP06, EP07 and EP15 has been corrected; • Inadequate resources arising from delays in recruitment and contracting processes <p>CCAI will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management and other programmes.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above. Strong linkages with EP and inter programme activities with FMMP, DMP, IKMP, AIP and FP are necessary to address basin-wide climate related issues such as food security under climate change.

Project Title	Climate Change and Adaptation Initiative Actions to address Basin Development Strategy	BDP ref	PIN R-03
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Project funding

Existing funding	The funds required (\$15.9 m USD) will be provided through support provided by Australia (2009-2013), support from Denmark (2010-2015), Luxembourg (2011-2015), funding from Sweden through EP (2010 extension budget ending in 2011) and directly to CCAI (2012-2015), funding from Finland through IKMP (funding agreement from 2011), funding from Germany (2012-2014) and EU (2012-2015).
Additional funding required	The current funding gap is small though the approved programme implementation does not include for financing of navigation specific components of CCAI02 and CCAI03.

Work plan

Work plan	See CCAI Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

CCAI Climate Change and Adaptation Initiative

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
CCAI	CCAI01	By 2015	2014	Climate change adaptation studies of sub-basins to define climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	IKMP	440006	Studies and Guidelines	Climate change adaptation studies of sub-basins: Study of climate change trends, including extreme events, to incorporate in water-related sector plans, including hydropower	Study report
	CCAI02	By 2015	2015	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	NAP	426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
						426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
	CCAI03	By 2015	2015	Study report on the impacts of climate change on navigation and existing infrastructure	NAP	426001	Climate change adaptation	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report
CCAI04	By 2015	1st batch June 2013, 2nd batch Dec 2014	Pilot schemes for climate change adaptation implemented and lessons learned for replicating success withdrawn		426003	Climate change adaptation	Pilot schemes for climate change adaptation	Pilot schemes	

CCAI Climate Change and Adaptation Initiative

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
CCAI	CCAI05	By 2013	Jun-2015	A Climate Change Adaptation Strategy for the LMB prepared and approved	EP, FP, AIP, DMP, NAP, FMMP, ISH, WMP	426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
	CCAI06 <i>Formerly EP05</i>	By 2013	2013/updated 2014	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	IKMP, EP, FP, AIP, BDP	426001	Climate change adaptation	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report
	CCAI07 <i>Formerly EP07</i>	By 2012	2015	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	EP	426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
	CCAI08 <i>Formerly EP15</i>	By 2015	2015	Monitoring and assessment programme developed to analyze implications of climate change on basin's long-term hydrology, agriculture, food security, ecological conditions and biodiversity	EP, IKMP, and other programmes	440007	Studies and Guidelines	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 biodiversity	Monitoring system

National Indicative Plan projects relevant to CCAI

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.10: Climate Resilient Rice Commercialization Sector Development Program (SDP)	■
Cambodia	Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■
Cambodia	Project 3.1: Enhancing institutional capacity for sustainable hydropower development (SHD) and climate change adaptation	□
Cambodia	Project 3.3: Pilot Program for Climate Resilience (2011 – 2013), Phase-1	■
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 3.5: Strategic Program on Climate Resilience (SPCR)	■
Cambodia	Project 3.6: Cambodian Climate Change Alliance	■
Cambodia	Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented	□
Cambodia	Project 4.4: Water Governance and climate change in Tonle Sap	■
Cambodia	Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Lao PDR	Project 1.6: The Agro-Biodiversity Initiative (TABI) – Phase II: Sustainable management and use of Agro-biodiversity (ABD) in multi-functional landscapes in upland communities	■
Lao PDR - ongoing project	Project 2.5: Hydropower planning and optimal integration and operation of renewable resources	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - priority project	Project 4.1: Greater Mekong Subregion: Flood and Drought Management and Mitigation Project – Lao People's Democratic Republic	□
Lao PDR - ongoing project	Project 4.2: Reducing Emission from Deforestation and Forest Degradation (REDD+) to reduce the rates of deforestation and forest degradation, in order to join international efforts in reducing greenhouse gas (GHG) emissions from forestry sector in developing countries to mitigate climate change	■
Lao PDR - ongoing project	Project 4.3: Improving the Resilience of the Agriculture Sector to Climate Change Impacts	■
Lao PDR - ongoing project	Project 4.4: Forest Investment Program in Lao PDR: to reduce emissions from deforestation and forest degradation, while also helping the country to adapt to climate change impacts	■
Lao PDR - new project	Project 5.7: Case study on impacts of climate change on agriculture	□
Lao PDR - new project	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)	□

Country	NIP Project title	Funding status
Lao PDR - new project	Project 6.4: Enhancing capacity building of MONRE staff on Agro–Climate Modelling and Application	<input type="checkbox"/>
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.3.3 Effective implementation of the Navigation Agreement between Viet Nam and Cambodia in the context of upstream development and climate change.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.4.2 Development of Strategy for drought management and water supply.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.4.3 Diversification of agriculture production and rural development in the situation of upstream development, climate change and sea water rise.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - capacity building	FA.9.4 Development of methodology and approach to study measures to response to climate change.	<input checked="" type="checkbox"/>

Project Identification Note - DMP

Project Title	Drought Management Programme Actions to address Basin Development Strategy	BDP ref	PIN R-04
Responsible (lead) entity	DMP	Start date	2012
Other entities involved	AIP, IKMP, EP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the DMP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to DMP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to DMP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for DMP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to DMP and its work plans. DMP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of DMP.</p>
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<p>Project Title</p>	<p>Drought Management Programme Actions to address Basin Development Strategy</p>			<p>BDP ref</p>	<p>PIN R-04</p>												
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>422000</td> <td>Expand and intensify irrigated agriculture for food security and poverty alleviation</td> </tr> <tr> <td>433000</td> <td>Strengthen basin management processes</td> </tr> <tr> <td>530000</td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					422000	Expand and intensify irrigated agriculture for food security and poverty alleviation	433000	Strengthen basin management processes	530000	Monitoring, evaluation and reporting						
422000	Expand and intensify irrigated agriculture for food security and poverty alleviation																
433000	Strengthen basin management processes																
530000	Monitoring, evaluation and reporting																
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC-SP Ref</p>	<p>MRC-SP planned date</p>	<p>Description</p>	<p>Updated target date</p>	<table border="0"> <tr> <td>ALL01</td> <td>By 2014</td> <td>Sector reviews updated by sector programmes</td> <td>2014</td> </tr> <tr> <td>ALL02</td> <td>By 2012</td> <td>Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes</td> <td>2013, 2014, 2015</td> </tr> <tr> <td>DMP01</td> <td>By 2013</td> <td>Drought mitigation strategies and mitigation options developed for rainfed areas</td> <td>2014</td> </tr> </table>	ALL01	By 2014	Sector reviews updated by sector programmes	2014	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2013, 2014, 2015	DMP01	By 2013	Drought mitigation strategies and mitigation options developed for rainfed areas	2014
ALL01	By 2014	Sector reviews updated by sector programmes	2014														
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2013, 2014, 2015														
DMP01	By 2013	Drought mitigation strategies and mitigation options developed for rainfed areas	2014														
<p>Linkages to other Projects</p>	<p>The National Indicative Plans set out a number of national projects of relevance to DMP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to DMP.</p> <p>DMP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>DMP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>																

Project Title	Drought Management Programme Actions to address Basin Development Strategy	BDP ref	PIN R-04
Description of the project			
Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable DMP to contribute greater understanding of the management of droughts in rainfed agriculture as an area of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others. The specific tasks required are:</p> <ul style="list-style-type: none"> • DMP01 - Drought mitigation strategies and adaptation options developed for rainfed areas: This requires the attainment of five key outcomes, each of which has a number of activities and outputs: <ol style="list-style-type: none"> 1) effective drought risk and vulnerability analysis considering future climate change and economic development for drought adaptation planning and implementation, conducted and used sustainably; 2) drought vulnerability assessment, mitigation/adaptation planning and implementation piloted and demonstrated at selected project sites for feedback to improve performance and influence strategies and plans; 3) land and water use and land suitability study studied and social economics analysis regarding land use application conducted; 4) capacity development for drought preparedness, planning and management in the LMB assessed and strengthened; 5) a regional integrated and comprehensive drought management and mitigation strategy developed and operational. • ALL01 - Stakeholder participation: in common with all other MRC Programmes, DMP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between DMP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, DMP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed. 		
Tasks and outputs	Detailed tasks and outputs will be developed by DMP through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		

Project Title	Drought Management Programme Actions to address Basin Development Strategy	BDP ref	PIN R-04
Implementation arrangements	As per DMP Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding: DMP is still having 34% of funding gap to be filled in from Development Partners • Inadequate resources arising from delays in recruitment and contracting processes. Professionals for DMP team including an internationally qualified consultant might be an issue for the Programme since there are not many skilled drought experts <p>DMP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	The budget for the DMP 2011-2015 is estimated at US\$ 3.76 million for the five year implementation period from 2011-2015. DMP had been operating by the MRC Reserve Fund from 2011 to 2012 due to delay of funding from Development Partners. The Programme is now running by a GIZ contribution with an amount of 130,000 US\$. Fund of US\$ 1.4 million has been committed by the Japan-ASEAN Integration Fund (JAIF) to implement the DMP for three years. Additional US\$ 1.0 million have recently been funded from the EU through MRC Climate Change Adaption Initiative (CCAI).
Additional funding required	The above reflects a potential funding gap of over US \$1.23 million for the period 2014-2015

Work plan

Work plan	See DMP Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

DMP Drought Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
DMP	DMP01	By 2013	2014	Drought mitigation strategies and mitigation options developed for rainfed areas	AIP, IKMP, EP	422001	Expand and intensify irrigated agriculture for food security and poverty alleviation	Drought mitigation strategies for rainfed areas	Sector plan

National Indicative Plan projects relevant to DMP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.1: Improvement of agricultural productivity and diversification	□
Cambodia	Project 1.2: Agricultural land classification and Soil Fertility Improvement in LMB	□
Cambodia	Project 1.4: Improvement and development of irrigation and drainage systems	□
Cambodia	Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■
Cambodia	Project 1.6: Tonle Sap Lowland Rural Development Project	■
Cambodia	Project 1.7: Tonle Sap Smallholder Development project	■
Cambodia	Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■
Cambodia	Project 1.9: Project for Agricultural Development and Economic Empowerment (PADEE)	■
Cambodia	Project 1.10: Climate Resilient Rice Commercialization Sector Development Program (SDP)	■
Cambodia	Project 2.3: Integrated flood and droughts risk management planning strengthened	□
Cambodia	Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 3.5: Strategic Program on Climate Resilience (SPCR)	■
Cambodia	Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Thailand	PIN T-001 Capacity Building to RBC and Network	■
Lao PDR - priority project	Project 1.1: Improvements to irrigated agriculture along the Mekong River to increase crop and livestock productivity	□
Lao PDR	Project 1.6: The Agro-Biodiversity Initiative (TABI) – Phase II: Sustainable management and use of Agro-biodiversity (ABD) in multi-functional landscapes in upland communities	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■
Lao PDR - priority project	Project 4.1: Greater Mekong Subregion: Flood and Drought Management and Mitigation Project – Lao People's Democratic Republic	□
Lao PDR - ongoing project	Project 4.3: Improving the Resilience of the Agriculture Sector to Climate Change Impacts	■

Country	NIP Project title	Funding status
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.4.2 Development of Strategy for drought management and water supply.	■

Project Identification Note - EP

Project Title	Environment Programme Actions to address Basin Development Strategy	BDP ref	PIN R-05
Responsible (lead) entity	EP	Start date	2012
Other entities involved	AIP, BDP, CCAI, DMP, FMMP, FP, IKMP, ISH, NAP, WMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the EP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to EP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to EP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for EP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to EP and its work plans. EP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of EP.</p>
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Project Title	Environment Programme Actions to address Basin Development Strategy		BDP ref	PIN R-05																
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>427000</td> <td>Integration of basin development planning considerations into national systems</td> <td></td> <td></td> </tr> <tr> <td>433000</td> <td>Strengthen basin management processes</td> <td></td> <td></td> </tr> <tr> <td>440000</td> <td>Studies and Guidelines</td> <td></td> <td></td> </tr> <tr> <td>530000</td> <td>Monitoring, evaluation and reporting</td> <td></td> <td></td> </tr> </table>				427000	Integration of basin development planning considerations into national systems			433000	Strengthen basin management processes			440000	Studies and Guidelines			530000	Monitoring, evaluation and reporting		
427000	Integration of basin development planning considerations into national systems																			
433000	Strengthen basin management processes																			
440000	Studies and Guidelines																			
530000	Monitoring, evaluation and reporting																			
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC-SP Ref</p>	<p>MRC-SP planned date</p>	<p>Description</p>	<p>Updated target date</p>																
	ALL01	By 2014	Sector reviews updated by sector programmes	...																
	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...																
	EP01	By 2013	Management plans for environmental hotspots impacted by changed flow regimes developed	2015																
	EP02	By 2013	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	...																
	EP03	By 2015	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	...																
	EP04	Continuously	Environmental impact assessments undertaken for proposed regional navigation developments	...																
	EP05*	By 2013	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	<i>See CCAI</i>																
	EP06	By 2012	Climate change impact and vulnerability assessment tools developed for biophysical and social systems	<i>Is part of EP07</i>																
	EP07*	By 2012	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas	<i>See CCAI</i>																
	EP08	By 2013	Study report on biodiversity changes	2015																
	EP09	By 2012	Guide to integrate climate change into SEA and EIA processes developed	2013																
	EP10	By 2013	Study report on social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	2014																

Project Title	Environment Programme Actions to address Basin Development Strategy			BDP ref	PIN R-05
	EP11	Continuously	Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts
	EP13	By 2014	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored		2015
	EP14	By 2012	Diagnostic study for toxic contaminants in the Mekong riverine environments
	EP15*	By 2015	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>See CCAI</i>
	EP16	By 2014	Environmental Outlook published
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to EP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to EP.</p> <p>EP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>EP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>				

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable EP to contribute greater understanding of the environment sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • EP01 - Management plans for environmental hotspots impacted by changed flow regimes developed: <i>This task is considered to be a subset of EP03</i> • EP02 - Guidance on existing and new wetlands, river flow variations and
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Project Title	Environment Programme Actions to address Basin Development Strategy	BDP ref	PIN R-05
	<p>related erosion impacts, and improvement of social conditions: This will be addressed through Outcome 1 of the EP. Environmental monitoring will cover water quality and ecological health (bio-monitoring) as well as biodiversity and wetland characteristics (EP output 1.1). The impact assessment exercises undertaken in connection with the BDP scenario assessments and the Strategic Environmental Assessment of Proposed Mainstream Dams demonstrated an additional need for more quantitative records of wetland characteristics/values and of biodiversity to be able to provide status and trends as well as basis and methods to assess potential impacts of developments. The second area of monitoring is monitoring people's dependence to the river resources and in particular the impacts of basin developments on people's livelihoods (EP output 1.2). This will follow up on the social impact monitoring and vulnerability assessment undertaken during 2009-2010, which has demonstrated the strong dependence of rural people on the Mekong River resources. This activity will be integrated with activities of the BDP, the FP and support the CCAI activities on socio-economic vulnerability assessment. A socio-economic package of activities will be designed engaging these Programmes to improve the MRC and Member Country ability to address potential impacts on people's livelihoods.</p> <p>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: See ISH01 project description. This requires two sequential but separate pieces of work, namely: (i) the development of a classification system for ecologically sensitive sub-basins in the Mekong, and (ii) an evaluation of what "limited development of hydropower" means in practice for each sub-basin, taking into account all existing, planned and potential hydropower schemes in the sub-basin, as currently identified in the MRC Hydropower Data Base. Following the identification of hotspots, guidance for management of such areas will be developed as part of the implementation of EP's out 1.4 on 'Environmental and socio-economic assessments of the basin development undertaken'.</p> <ul style="list-style-type: none"> • EP04 - Environmental impact assessments undertaken for proposed regional navigation developments: In the context of rapid economic development in the LMB, inland navigation can contribute to making transport more sustainable, particularly where it substitutes for road transport, but inland shipping can also have considerable environmental impacts. Concerns in the Mekong River include risks of water pollution from vessel accidents, from disposal of waste and from the operations of vessels, ports, and ferry crossings re-fuelling stations, petroleum, terminals and the transport and storage of dangerous goods along the Mekong River. The "hotspots" in terms of potential pollution sources from navigation and other economic development activities will be identified. Model simulations of navigation-related water quality incident scenarios will help Member Countries to assess pollution risks and potential impacts from navigation development. This will be implemented as part of EP's output 1.4 • EP05 - Climate change impacts on water and related resources of LMB in medium to long term assessed and reported: <i>EP proposes CCAI to be</i> 		

Project Title	Environment Programme Actions to address Basin Development Strategy	BDP ref	PIN R-05
	<p><i>the main responsible programme for this activity.</i></p> <ul style="list-style-type: none"> • EP06 - Climate change impact and vulnerability assessment tools developed for biophysical and social systems: Climate change is mainstreamed in environmental management efforts by integrating climate change impact and vulnerability assessments for wetlands and other key ecosystems in adaptation planning. Adaptation strategies and action identified through adaptation planning needs to consider possible environmental impacts and sustainability issues just as all other basin developments. The Environment Programme 2011-2015 will be responsible for these aspects of regional climate change adaptation planning through implementation of environment related activities of the CCAI. Implementation of this task will take place as part of EP's output 3.1. Also linked to EP09. • EP07 - Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas: <i>EP proposes CCAI to be the main responsible programme for this activity.</i> • EP08 - Study report on biodiversity changes: The State of the Basin Report 2010 for the Lower Mekong Basin (LMB) provides the status and past trends of water and related resources and describes the future management challenges for the Governments of the LMB including hydropower development, flood and drought management and climate change. It is clear from this comprehensive assessment that balancing the economic development, while sustaining the environment and the high productivity of the ecosystems, maintaining the biodiversity and allowing peoples livelihoods to flourish remains a key challenge, which needs to be addressed at the regional level. But it has also become clear that the complexity of the river, its ecosystem and the rich biodiversity are far from fully understood which threatens the robustness of environmental management decisions. Implementation of this task will take place as part of EP's output 1.1. • EP09 - Guide to integrate climate change into SEA and EIA processes developed: Climate change is one of the future factors expected to significantly affecting the River Basin including the ecosystems, biodiversity and peoples livelihoods. EP's Output 3.1 considers the impact and vulnerability assessment of ecosystems to support adaptation planning for mitigation of key impact as well as environmental and social sustainability of adaptation options planned to mitigate climate change impacts on economic and social systems. This task is implemented as an integrated part of EP's Output 3.1 (and CCAI's Outcome 3) where the Environment Programme will prepare guidance and recommendations for integration of climate change adaptation into environmental management tools such as SEA and EIA. • EP10 - Study report on social and livelihood impacts in the mainstream corridor and Tonle Sap: Monitoring of social aspects is usually undertaken as part of population census surveys or in connection with poverty alleviation monitoring and often implemented by the National Statistical Offices. The links between people's livelihoods and the monitoring activities were further emphasized in the social monitoring and vulnerability assessment methodologies initiated in 2006. A methodology has been developed and tested and results can be widely used to assess potential impacts of future 		

Project Title	Environment Programme Actions to address Basin Development Strategy	BDP ref	PIN R-05
	<p>developments. The main outcome from this task is that Member Countries have structured knowledge to address social issues with strong linkages to peoples' dependence on aquatic resources and to the implications on rural livelihoods. This task is implemented as part of EP's Output 1.2 'Socio-economic monitoring of development impacts on people's livelihoods and poverty reduction'.</p> <ul style="list-style-type: none"> • EP11&12 - Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts: This task is a cornerstone under EP's Outcome 1 'Environmental and socioeconomic data and information are used to assess and report on the state and developments in the basin and to support assessment and mitigation of potential impacts promoting sustainability of basin developments'. It includes five key outputs: 1. Monitoring of the environmental quality and ecological balance of the Mekong River; 2. Socio-economic monitoring of development impacts on peoples livelihood and poverty reduction; 3. Regional assessment and reporting of environmental and socio-economic status and trends published regularly; 4. Environmental and social impact assessments of basin developments undertaken; 5. Environmental and socio-economic monitoring systems updated to reflect the information needs for environmental cooperation and the capacity of the Member Countries. EP will work with IKMP (sediment monitoring) and CCAI (climate change impact monitoring) to ensure broadening and strengthening of the current monitoring efforts. • EP13 - Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored: Wetland inventories, classification and mapping have been a focus area for the Environment Programme right from the time of signing of the 1995 Mekong Agreement. The wetland maps have illustrated the extent and indicated the importance of the wetlands. Increasingly, and commensurate with the capacity at national level, biodiversity assessment and monitoring in wetlands will be done as part of a general effort to introduce and build capacity on biodiversity monitoring in the basin (integrated in EP Output 1.1). • EP14 - Diagnostic study for toxic contaminants in the Mekong riverine environments: Understanding the Mekong River Basin has further been supported by a range of diagnostic and other studies on toxic chemical pollution, the ecosystems dependence on the Mekong River flood pulse and characteristics of the river, the aquatic species and habitats. Results of previous toxic contaminant studies will be assessed, and future survey requirements determined, and survey(s) carried out. Part of EP Output 3.2 'Early warning of negative environmental trends and identified issues addressed'. • 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: EP proposes CCAI to be the main responsible programme for this activity. • EP16 - Environmental Outlook published: The rapid development pace as well as climate change are calling for continuous improvement of the 		

Project Title	Environment Programme Actions to address Basin Development Strategy BDP ref PIN R-05
	<p>knowledge base as well as for specific measures to adapt to climate change which should include considerations on environmental sustainability and effects on peoples' livelihoods. The approach taken will include not only the known future challenges (like climate change), but all emerging issues engaging early warning principles. The provision of environmental outlooks to support adaptive environmental management and increasing resilience among riparian women and men will increase the capacity to respond to the emerging issues. This is a huge task which can only be achieved if all forces are joined pointing at the importance of outreach and collaboration with other regional institutions and local partners. EP addresses this task as part of Output 3.3 'Understanding of the Mekong River ecosystems and environmental outlooks is improved to support impact assessments of basin developments'.</p> <ul style="list-style-type: none"> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, EP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between EP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, EP will cooperate with BDP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed.
Tasks and outputs	Detailed tasks and outputs will be developed by EP through their Annual Work Plans, which as required will be progressively aligned with the priorities above
Location	Basin-wide
Implementation arrangements	As per EP Programme Document or as otherwise amended through Annual Work Plans

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes <p>EP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
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Project Title	Environment Programme Actions to address Basin Development Strategy	BDP ref	PIN R-05
External coordination requirements	See “Linkages to other Projects” above		
Internal coordination requirements	See “Linkages to other Projects” above		
Project funding			
Existing funding	The proposed budget for 2011-2015 is US\$11m, of which \$8.0m is committed		
Additional funding required	A funding gap of \$3.0m exists		
Work plan			
Work plan	See EP Programme Implementation Plan and Annual Work Plan		

Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

EP Environment Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
EP	EP01	By 2013	2015	Management plans for environmental hotspots impacted by changed flow regimes developed	FP, WMP	423104	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Management plans for affected environmental hot spots	Study report
	EP02	By 2013	By 2013	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	IKMP	423205	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Guidance on existing and new wetlands, river flow variations and related erosion impacts, and improvement of social conditions	Guideline
	EP03	By 2015	By 2015	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	FP, ISH, AIP	440001	Studies and Guidelines	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	Study report

EP Environment Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
EP	EP04	Continuously	Continuously	Environmental impact assessments undertaken for proposed regional navigation developments	NAP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	EP05	By 2013	Transferred to CCAI	Climate change impacts on water and related resources of LMB in medium to long term assessed and reported	IKMP, CCAI, FP, AIP, BDP	426001	Climate change adaptation	Assess impacts of climate change on water and related resources of LMB in medium to long term	Study report
	EP06	By 2012	Is part of EP07	Climate change impact and vulnerability assessment tools developed for biophysical and social systems	CCAI	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	EP07	By 2012	Transferred to CCAI	Basin-wide climate change adaptation planning process developed for ecosystems and biodiversity in pilot areas		426002	Climate change adaptation	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	Sector plan
	EP08	By 2013	2015	Study report on biodiversity changes	FP, ISH	424003	Acquisition of essential knowledge to address uncertainties and minimise risk	Biodiversity changes	Study report
	EP09	By 2012	2013	Guide to integrate climate change into SEA and EIA processes developed	CCAI, ISH	433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system
	EP10	By 2013	2014	Study report on social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	FP, ISH	424004	Acquisition of essential knowledge to address uncertainties and minimise risk	Social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	Study report

EP Environment Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
EP	EP11 EP12	Continuously	Continuously	Broadened and strengthened national and basin scale monitoring systems including the monitoring of climate change impacts	Lead transferred to BDP, EP supports	434001	Development of environmental and social objectives and baseline indicators	Facilitated development of agreed basin-wide objectives or "baseline indicators"	Study report
	EP13	By 2014	2015	Biodiversity loss in wetlands with ecologically important areas with high dependence of local population monitored	IKMP	431006	Establish basin visions and management strategies for water-related sectors	Wetland management: Monitoring of biodiversity loss in wetlands with ecologically important areas with high dependence of local population	Monitoring system
						431007	Establish basin visions and management strategies for water-related sectors	Wetland management: Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population	Guideline
	EP14	By 2012	By 2012	Diagnostic study for toxic contaminants in the Mekong riverine environments	IKMP, NAP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	EP15	By 2015	Transferred to CCAI	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	CCAI, IKMP, and other programmes	440007	Studies and Guidelines	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	Monitoring system
	EP16	By 2014	By 2014	Environmental Outlook published		433004	Strengthen basin management processes	Strengthen State of Basin monitoring and reporting	Inst. capacity

National Indicative Plan projects relevant to EP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.3: Integration of Environmentally Friendly Practices in Agriculture and Water Management	□
Cambodia	Project 4.2: Development of Environmental and Socio-economic Baseline and development scenario impact assessment for Tonle Sap	□
Cambodia	Project 4.5: IWRM Multi Stakeholder Platform in Pursat Catchment, Tonle Sap	■
Cambodia	Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Thailand	PIN T-002 Database Management for Basin Development	■
Lao PDR	Project 1.6: The Agro-Biodiversity Initiative (TABI) – Phase II: Sustainable management and use of Agro-biodiversity (ABD) in multi-functional landscapes in upland communities	■
Lao PDR - ongoing project	Project 2.6: Strengthening of governmental function on technical regulations in the power sector at the central and provincial levels	■
Lao PDR - priority project	Project 3.3: Strengthening the Management of the Conservation and Protection Forest Areas Programme	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■
Lao PDR - ongoing project	Project 4.2: Reducing Emission from Deforestation and Forest Degradation (REDD+) to reduce the rates of deforestation and forest degradation, in order to join international efforts in reducing greenhouse gas (GHG) emissions from forestry sector in developing countries to mitigate climate change	■
Lao PDR - ongoing project	Project 4.4: Forest Investment Program in Lao PDR: to reduce emissions from deforestation and forest degradation, while also helping the country to adapt to climate change impacts	■
Lao PDR - priority project	Project 5.2: Inventory of environmental hotspots in Lao PDR	□
Lao PDR - priority project	Project 5.3: Study on the social, economic and environmental benefits of hydropower development in Lao PDR	□
Lao PDR - new project	Project 5.6: Study on ecosystem services of wetlands and biodiversity	□
Lao PDR - new project	Project 5.7: Case study on impacts of climate change on agriculture	□
Lao PDR - new project	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)	□
Lao PDR - new project	Project 5.10: Riverbank protection master plan	□
Lao PDR - new project	Project 5.11: River dredging impact assessment	□

Country	NIP Project title	Funding status
Lao PDR - new project	Project 5.12: Navigation channel improvement along the Mekong River in the section from Houayxai to Luang Prabang of Lao PDR	<input type="checkbox"/>
Lao PDR - ongoing project	Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	<input checked="" type="checkbox"/>
Lao PDR - priority project	Project 6.1: Strengthening NUOL's Curriculums on IWRM, Meteorology and Hydrology, Environmental Economics, and Engineering and Toxicology	<input type="checkbox"/>
Lao PDR - priority project	Project 6.2: Gender mainstreaming in integrated water resources management and planning	<input type="checkbox"/>
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.3 Preparation of state of environment report for the Mekong Delta	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.5.4 Assessment of tendency and change of biodiversity, environmental hotspots in the Mekong Delta and their impacts to the vulnerable communities.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>

Country	NIP Project title	Funding status
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	FA.7.3 Conservation of ecological and environmental hotspots through solutions forwards the sustainability for the Se San and Srepok sub-basins.	■
Viet Nam - Se San & Srepok	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.	■

Project Identification Note - FMMP

Project Title	Flood Management and Mitigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-06
Responsible (lead) entity	FMMP	Start date	2012
Other entities involved	AIP, BDP, CCAI, DMP, EP, FP, IKMP, ISH, MIWRMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the FMMP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to FMMP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to FMMP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for FMMP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to FMMP and its work plans. FMMP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of FMMP.</p>
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Project Title	Flood Management and Mitigation Programme Actions to address Basin Development Strategy			BDP ref	PIN R-06																																				
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>427000</td> <td>Integration of basin development planning considerations into national systems</td> <td></td> <td></td> </tr> <tr> <td>431000</td> <td>Establish basin visions and management strategies for water-related sectors</td> <td></td> <td></td> </tr> <tr> <td>433000</td> <td>Strengthen basin management processes</td> <td></td> <td></td> </tr> <tr> <td>440000</td> <td>Studies and Guidelines</td> <td></td> <td></td> </tr> <tr> <td>530000</td> <td>Monitoring, evaluation and reporting</td> <td></td> <td></td> </tr> </table>					427000	Integration of basin development planning considerations into national systems			431000	Establish basin visions and management strategies for water-related sectors			433000	Strengthen basin management processes			440000	Studies and Guidelines			530000	Monitoring, evaluation and reporting																		
427000	Integration of basin development planning considerations into national systems																																								
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440000	Studies and Guidelines																																								
530000	Monitoring, evaluation and reporting																																								
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<table border="0"> <thead> <tr> <th>MRC-SP Ref</th> <th>MRC-SP planned date</th> <th>Description</th> <th>Updated target date</th> </tr> </thead> <tbody> <tr> <td>ALL01</td> <td>By 2014</td> <td>Sector reviews updated by sector programmes</td> <td>...</td> </tr> <tr> <td>ALL02</td> <td>By 2012</td> <td>Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes</td> <td>...</td> </tr> <tr> <td>FMMP01</td> <td>By 2013</td> <td>IFRM incorporated into the BDP</td> <td>2014</td> </tr> <tr> <td>FMMP02</td> <td>By 2015</td> <td>IFRM process applied to flood prone areas</td> <td>2015</td> </tr> <tr> <td>FMMP03</td> <td>By 2015</td> <td>National Planning Processes reflect IFRM considerations</td> <td>2015</td> </tr> <tr> <td>FMMP04</td> <td>By 2014</td> <td>A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta</td> <td>2014</td> </tr> <tr> <td>FMMP05</td> <td>By 2015</td> <td>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</td> <td>2015</td> </tr> <tr> <td>FMMP06</td> <td>Continuously</td> <td>Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared</td> <td>Ongoing</td> </tr> <tr> <td>FMMP07</td> <td>By 2014</td> <td>Trans-boundary flood risk management tools developed</td> <td>2014</td> </tr> </tbody> </table>	MRC-SP Ref	MRC-SP planned date	Description	Updated target date	ALL01	By 2014	Sector reviews updated by sector programmes	...	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...	FMMP01	By 2013	IFRM incorporated into the BDP	2014	FMMP02	By 2015	IFRM process applied to flood prone areas	2015	FMMP03	By 2015	National Planning Processes reflect IFRM considerations	2015	FMMP04	By 2014	A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	2014	FMMP05	By 2015	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	Continuously	Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared	Ongoing	FMMP07	By 2014	Trans-boundary flood risk management tools developed	2014
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<p>Linkages to other Projects</p>	<p>The National Indicative Plans set out a number of national projects of relevance to FMMP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to FMMP.</p> <p>FMMP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of</p>																																								

Project Title	Flood Management and Mitigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-06
	planned outcomes. FMMP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.		

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable FMMP to contribute greater understanding of flood management in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • FMMP01 – IFRM incorporated into the BDP: the goal of FMMP is to facilitate the <i>inclusion of the Integrated Flood Risk Management (IFRM) considerations</i> in the MRC’s IWRM Basin Development Planning Process and related regional and national strategies. Through the BDP process, the importance of IFRM will be acknowledged in national planning processes. • FMMP02 – IFRM process applied to flood prone areas; The inclusion of Integrated Flood Risk Management considerations is applied for flood prone areas (one per country) and related IFRM Plans (representing a comprehensive land-use plan that incorporates flood risk management) are developed. • FMMP03 - National Planning Processes reflect IFRM considerations: Awareness-raising amongst the leadership within the relevant Line Agencies is a crucial element to achieve this outcome. Policy briefs, explanatory notes and recommendations will be provided to the leadership of relevant Line agencies on how to incorporate IFRM into national policies, strategies and plans. BPGs will be summarized, translated in national languages and disseminated for uptake by the relevant agencies. Capacity building and training in IFRM will be delivered to key personnel in Member Countries and MRCS. Greater use of relevant FMMP 2004-2010 products will be encouraged by Member Countries and other MRC Programmes through facilitation of <i>effective product dissemination and uptake</i> with special reference to key products. • FMMP04 - A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta: See ISH12 and FMMP06 project descriptions. The operation of hydropower storage reservoirs has the implications not only for dry season flow management but also for what is more commonly recognized as flood mitigation strategies. There are also potential implications for daily to weekly peaking operation. This activity is linked to ISH outputs indirectly in the sense that modelling is carried out by
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Project Title	Flood Management and Mitigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-06
	<p>other MRC Programmes (IKMP and BDP) using the MRC hydropower database as a starting point.</p> <ul style="list-style-type: none"> <li> <p>• 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: A strategic level multi-sector study is required of the Cambodian floodplain and the Viet Nam Mekong Delta taking into account growing pressures from land development, sea level rise, climate change, and upstream development plans. This will require a framework commitment from Cambodia and Viet Nam to cooperate on these trans-boundary development scenarios, modelling inputs exclusive and inclusive of climate change, as well as sea level rising. Account needs to be taken of the long term development ambitions of both countries and the potential impact of infrastructure and other developments (including sand mining, transport networks, land concessions, etc) both upstream and on the floodplains. The study will lead to a comprehensive understanding and guidance of how to manage the floodplains (including requirements for flood storage) in the mutual interests of both countries in the short, medium and long terms.</p> <li> <p>• FMMP06 - Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared : Key goals of FMMP are to: provide accurate and relevant <i>flood forecasts and flood warning information</i> to the region and member countries. Develop and use <i>flood simulation models</i> to assess flood behaviour and flood risk in the LMB and disseminate models and results to member countries. This includes improving the <i>monitoring, collection, management, dissemination and sharing</i> by Member Countries of relevant flood-related data and information in the LMB.</p> <li> <p>• FMMP07 - Trans-boundary flood risk management tools developed: IFRM is aimed at better managing the existing, future and residual risks of flooding. Any change to land-use in flood-prone areas has the potential to affect or be affected by flood behaviour and flood risk. Many major infrastructure projects affect or are affected by flood behaviour and flood risk, e.g. road and railway embankments, major water storages, floodplain reclamation. A significant flood risk currently exists in the LMB, principally across the Mekong floodplains of Cambodia and the Cuu Long Delta of Viet Nam. Unless properly managed, this flood risk will intensify in the future through population growth in flood-prone areas. Proposed future water resource developments in the LMB, especially the construction of hydropower dams, have the potential to affect flood behaviour and flood risk. Of key importance is to improve the <i>exchange and management of knowledge</i> concerning flood risk management within Member Countries and other MRC Programmes through regular scientific meetings and publications. Facilitate the resolution of <i>trans-boundary flood issues</i> through mediation and the provision of technical assistance to member countries and other MRC Programmes. This also includes the following: Assess the <i>likely impact of possible future climate change</i> on flood behaviour and flood risk in the LMB. Provide hydro-meteorological analyses to MRC's <i>Drought Management Programme</i>.</p> 		

Project Title	Flood Management and Mitigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-06
	<ul style="list-style-type: none"> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, FMMP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between FMMP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, FMMP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed. 		
Tasks and outputs	Detailed tasks and outputs will be developed by FMMP through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		
Implementation arrangements	As per FMMP Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans. <p><i>The FMMP 2011-2015 Document has been developed alongside the development of the MRC programme format. Due to adjustments made by FMMP to adhere to the new format, adjustments will need to be gradually incorporated. The FMMP01, FMMP02 and FMMP03 are examples. The present formulation and narrative is more coherent and reflect better the FMMP implementation processes.</i></p> <ul style="list-style-type: none"> • Inadequate funding limiting what can be achieved within the time allowed <p><i>FMMP 2011-2015 presently has received USD 4.78 M of the FMMP 2011-2015 budget of USD 16.08 M. The impact of that mismatch will be felt in delays and limited outputs.</i></p> <ul style="list-style-type: none"> • Inadequate resources arising from delays in recruitment and contracting processes <p><i>FMMP is in the process of recruiting one Operations Manager, one Meteorologist, and two programme managers. The recruitment process is substantially delayed for various reasons.</i></p>
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Project Title	Flood Management and Mitigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-06
	FMMP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management..		
External coordination requirements	See “Linkages to other Projects” above		
Internal coordination requirements	See “Linkages to other Projects” above		
Project funding			
Existing funding	See FMMP Programme document. FMMP 2011-2015 presently has received USD 4.78 M of the FMMP 2011-2015 budget of USD 16.08 M.		
Additional funding required	Funding gap stands currently at USD 11.3 M.		
Work plan			
Work plan	See FMMP Programme Implementation Plan and Annual Work Plan		

Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

FMMP Flood Management and Mitigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
FMMP	FMMP01	By 2013	2014	A regional IFRM strategy and implementation Roadmap prepared		440004	Studies and Guidelines	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	Study report
						530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	FMMP02	By 2015	2015	District or comparable level IFRM and Land-use Management Plans prepared for flood focal areas (one in each Member Country)	BDP, AIP, WMP, MIWRMP	431007	Establish basin visions and management strategies for water-related sectors	Wetland management: Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population	Guideline
	FMMP03	By 2015	2015	Country specific roadmaps developed to formulate IFRM policies and strategies	BDP, WMP, AIP, MIWRMP, EP	530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan

FMMP Flood Management and Mitigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
FMMP	FMMP04	By 2014	2014	A detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	BDP, EP, FP, AIP, IKMP and other programmes	431005	Establish basin visions and management strategies for water-related sectors	Flood and drought risk management: Detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	Study report
	FMMP05	By 2015	2015	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		440005	Studies and Guidelines	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	Study report
	FMMP06	Continuously	Ongoing	Real-time and forecast rainfall, stream flows and soil moisture deficits for the LMB prepared	IKMP, DMP, CCAI	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	FMMP07	By 2014	2014	Trans-boundary flood risk management tools developed	IKMP, ISH, CCAI	427002	Integration of basin development planning considerations into national systems	Addressing identified risks early in project identification and preparation	Inst. capacity

National Indicative Plan projects relevant to FMMP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.2: Agricultural land classification and Soil Fertility Improvement in LMB	□
Cambodia	Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■
Cambodia	Project 1.6: Tonle Sap Lowland Rural Development Project	■
Cambodia	Project 1.7: Tonle Sap Smallholder Development project	■
Cambodia	Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■
Cambodia	Project 2.3: Integrated flood and droughts risk management planning strengthened	□
Cambodia	Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■
Cambodia	Project 2.5: River depth/water level monitoring (Navigability)	■
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented	□
Cambodia	Project 4.2: Development of Environmental and Socio-economic Baseline and development scenario impact assessment for Tonle Sap	□
Cambodia	Project 4.5: IWRM Multi Stakeholder Platform in Pursat Catchment, Tonle Sap	■
Cambodia	Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Thailand	PIN T-001 Capacity Building to RBC and Network	■
Lao PDR - priority project	Project 4.1: Greater Mekong Subregion: Flood and Drought Management and Mitigation Project – Lao People's Democratic Republic	□
Lao PDR - priority project	Project 5.2: Inventory of environmental hotspots in Lao PDR	□
Lao PDR - new project	Project 5.10: Riverbank protection master plan	□
Lao PDR - new project	Project 5.11: River dredging impact assessment	□
Lao PDR - new project	Project 5.13: Updating chart datum of UHA 1996 of the Lower Mekong	□
Lao PDR - ongoing project	Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	■
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■

Country	NIP Project title	Funding status
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.	■
Viet Nam - Mekong delta	FA.2.2 Updating the water resources development scenarios for the Mekong Delta to be used for reviewing and improving the basin development scenarios	■
Viet Nam - Mekong delta	FA.2.3 Preparation of state of environment report for the Mekong Delta	■
Viet Nam - Mekong delta	FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	■
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	■
Viet Nam - Mekong delta	FA.4.2 Development of Strategy for drought management and water supply.	■
Viet Nam - Mekong delta	FA.4.3 Diversification of agriculture production and rural development in the situation of upstream development, climate change and sea water rise.	■
Viet Nam - Mekong delta	FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.5.2 Study of flood impacts to the quality and efficiency of fluvial land use in the Mekong Delta, Viet Nam.	■
Viet Nam - Mekong delta	FA.5.4 Assessment of tendency and change of biodiversity, environmental hotspots in the Mekong Delta and their impacts to the vulnerable communities.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - capacity building	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.	■

Project Identification Note - FP

Project Title	Fisheries Programme Actions to address Basin Development Strategy	BDP ref	PIN R-07
Responsible (lead) entity	FP	Start date	2012
Other entities involved	AIP, EP, ISH, WMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the FP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to FP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to FP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for FP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to FP and its work plans. FP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of FP.</p>
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Project Title	Fisheries Programme Actions to address Basin Development Strategy			BDP ref	PIN R-07																												
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>422000</td> <td></td> <td>Expand and intensify irrigated agriculture for food security and poverty alleviation</td> </tr> <tr> <td>424000</td> <td></td> <td>Acquisition of essential knowledge to address uncertainties and minimise risk</td> </tr> <tr> <td>431000</td> <td></td> <td>Establish basin visions and management strategies for water-related sectors</td> </tr> <tr> <td>433000</td> <td></td> <td>Strengthen basin management processes</td> </tr> <tr> <td>530000</td> <td></td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					422000		Expand and intensify irrigated agriculture for food security and poverty alleviation	424000		Acquisition of essential knowledge to address uncertainties and minimise risk	431000		Establish basin visions and management strategies for water-related sectors	433000		Strengthen basin management processes	530000		Monitoring, evaluation and reporting													
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Project Title	Fisheries Programme Actions to address Basin Development Strategy	BDP ref	PIN R-07
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Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable FP to contribute greater understanding of the fisheries sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • FP01 - Guidelines for fish-friendly development of irrigation schemes: Mekong fisheries are presently under pressure from a wide array of impacts from basin development. Such impacts stem from construction of hydropower dams, expansion of irrigated agriculture, and infrastructure development. The type and scale of impacts of irrigation dams and reservoirs vary greatly depending on baseline conditions, the nature and size of the scheme, and management and mitigation measures adopted. However, it can be concluded from LMB experiences that irrigation dams which are small and shallow and weirs offer significant opportunities for conservation and enhancement of fisheries, because they provide dry-season refuges, potentially high productivity, an extended fishing season, and allow efficient fishing activities by small-scale fishers. Guidelines are therefore required to promote fish-friendly development of irrigation schemes. This activity will be conducted in close coordination and cooperation with AIP. • FP02 - A comprehensive, basin-wide fisheries management strategy developed: A regional cooperation framework for fisheries management and development will be drafted in close collaboration and interaction with the BDP. Activities and outputs leading to this outcome basically need to focus on two aspects: 1) the importance, in addition to improved information, of good relationships between actors on all levels for sustainable fisheries management and development, which is being fostered by the many events held by FP 2011-2015 for that purpose; and 2) the need for an overarching, regional cooperation framework for basin fisheries management and development which may critically contribute to the BDP process. While the Technical Advisory Body for Fisheries Management and Development in the LMB (TAB) and other regional partners and initiatives will play an important role in the formulation of such a regional framework, particular attention will be paid to national fisheries strategies existing in the four countries (such as Cambodia's 'Ten Year National Fisheries Strategy'). Dissemination of FP information and previous studies is also a key component of developing an effective fisheries management strategy for the basin. Platforms for regional and international consultation on sustainable Mekong fisheries management and development are
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Project Title	Fisheries Programme Actions to address Basin Development Strategy BDP ref PIN R-07
	<p>maintained and functioning well. Technical and administrative skills and knowledge of fisheries managers need to be further developed, and fisheries management institutions strengthened. A first comprehensive outline of the basin-wide fisheries management strategy was discussed with TAB in November 2012 for further refinement and development of a road map for action.</p> <ul style="list-style-type: none"> • FP03 - Study report on reduction of capture fisheries and its social implications: See also ISH03, ISH06 and ISH11 project descriptions. The inland fisheries of the LMB are among the world's largest, with surveys indicating that the total production is now in the order of 3.6 million tonnes per year. It is estimated that about 2.1 million tonnes is from capture fisheries and 1.5 million tonnes from aquaculture, of which about one million tonnes is exported. While there are some data for the commercial fish catches, conclusions regarding the status of the entire capture fishery are tentative at best because of the lack of national data for subsistence catches, which form the largest component of the catch. The economic and nutritional benefits of capture fisheries therefore need to be considered alongside other uses of the river (such as hydropower development) in national and regional planning. A key goal is that improved information on capture fisheries and aquaculture is made available, and disseminated to basin planners and other concerned agencies. Information on Fisheries and Aquaculture Status and Trends (FST) and Fisheries Valuation (FV) also needs to be provided regularly at national and regional levels. • FP04 - Study report on classification of LMB habitats and their fish, threats and opportunities: Lower Mekong basin habitats and their fisheries and threats and opportunities will be classified under FP2011-2015. This project is closely linked to FP03, as well as ISH03, ISH08 and ISH11. • ALL01 - Stakeholder participation: A common activity with all other MRC Programmes. During 2012 FP conducted two regional consultation meetings to review and refresh its stakeholder participation and communication plan, with particular emphasis on strengthening linkages between FP and relevant national line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, FP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed.
Tasks and outputs	Detailed tasks and outputs will be developed by FP through their Annual Work Plans, which as required will be progressively aligned with the priorities above
Location	Basin-wide
Implementation arrangements	As per FP Programme Document or as otherwise amended through Annual Work Plans

Project Title	Fisheries Programme Actions to address Basin Development Strategy	BDP ref	PIN R-07
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Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes; staff constraints may become an issue due to crowding of activities and labour intensive procurement processes <p>FP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	See up-dated FP Programme document
Additional funding required	FP to review and identify any funding gaps and report to these to TCU

Work plan

Work plan	See FP Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

FP Fisheries Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
FP	FP01	By 2013	2013	Guidelines for fish-friendly development of irrigation schemes	AIP	422003	Expand and intensify irrigated agriculture for food security and poverty alleviation	Guidelines for fish-friendly development of irrigation schemes	Guideline
	FP02	By 2014	2015	A comprehensive, basin-wide fish management strategy developed	AIP, EP, WMP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	FP03	By 2013	2013	Study report on reduction of capture fisheries and its social implications	EP, ISH	424002	Acquisition of essential knowledge to address uncertainties and minimise risk	Reduction of capture fisheries and social implications	Study report
	FP04	to be updated	2013	Study report on classification of LMB habitats and their fish, threats and opportunities	EP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan

National Indicative Plan projects relevant to FP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.3: Integration of Environmentally Friendly Practices in Agriculture and Water Management	□
Cambodia	Project 1.6: Tonle Sap Lowland Rural Development Project	■
Cambodia	Project 1.7: Tonle Sap Smallholder Development project	■
Cambodia	Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■
Cambodia	Project 4.3: Study of impact on Cambodian inland fishery and sediment transport in the Mekong Floodplain and Tonle Sap Great Lake	□
Cambodia	Project 4.5: IWRM Multi Stakeholder Platform in Pursat Catchment, Tonle Sap	■
Cambodia	Project 5.1: Strategic direction preparation for sustainable development and management of the TLS basin, 3S Rivers and Cambodian Mekong Delta Areas	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Lao PDR - priority project	Project 1.2: Develop national fisheries law, create awareness on the law and regulations, as well as develop a fisheries management strategy and plans for Lao PDR	□
Lao PDR - new project	Project 1.3: Improve fisheries management system in reservoirs and irrigation systems	□
Lao PDR - new project	Project 1.4: Promote the development of aquaculture in Lao PDR	□
Lao PDR - new project	Project 1.5: Improvement of fisheries statistics in Lao PDR	□
Lao PDR - priority project	Project 5.2: Inventory of environmental hotspots in Lao PDR	□
Lao PDR - new project	Project 5.10: Riverbank protection master plan	□
Lao PDR - new project	Project 5.11: River dredging impact assessment	□
Lao PDR - new project	Project 5.12: Navigation channel improvement along the Mekong River in the section from Houayxai to Luang Prabang of Lao PDR	□
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■
Viet Nam - Mekong delta	FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	■

Country	NIP Project title	Funding status
Viet Nam - Mekong delta	FA.2.3 Preparation of state of environment report for the Mekong Delta	■
Viet Nam - Mekong delta	FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	■
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	■
Viet Nam - Mekong delta	FA.4.1 Improvement of water use efficiency for irrigated agriculture and fishery development in the Mekong Delta.	■
Viet Nam - Mekong delta	FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	■
Viet Nam - Mekong delta	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	■
Viet Nam - Mekong delta	FA.5.4 Assessment of tendency and change of biodiversity, environmental hotspots in the Mekong Delta and their impacts to the vulnerable communities.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■

Project Identification Note - ICBP

Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
Responsible (lead) entity	ICBP	Start date	2012
Other entities involved	MIWRMP and other Programmes	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the ICBP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to ICBP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to ICBP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for ICBP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to ICBP and its work plans. ICBP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of ICBP.</p>
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Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy		BDP ref	PIN R-08																					
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>432000</td> <td>Strengthen national level water resources management processes</td> </tr> <tr> <td>433000</td> <td>Strengthen basin management processes</td> </tr> <tr> <td>435000</td> <td>Implement a targeted IWRM capacity building programme</td> </tr> <tr> <td>530000</td> <td>Monitoring, evaluation and reporting</td> </tr> </table>				432000	Strengthen national level water resources management processes	433000	Strengthen basin management processes	435000	Implement a targeted IWRM capacity building programme	530000	Monitoring, evaluation and reporting													
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Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy			BDP ref	PIN R-08
	ICBP05	By 2012	An IWRM competency framework developed		May 2012
	ICBP06	By 2012	IWRM training materials updated		2013
	ICBP07	By 2012	Leadership capacity development needs/gaps assessed		...
	ICBP08	Continuously	Networks of capacity building institutions in the sub-region and region established		...
	ICBP09	By 2011	Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity		2011 - 2013
			<i>In line with the Riparianisation, Decentralisation processes and implementation of the Capacity Development Action Plan (CDAP) for better implementation of MRC Procedures</i>		
	ICBP10	By 2012	Capacity development plans for the MRCS and targeted national agencies prepared		2011-2013
			<i>In line with the Riparianisation, Decentralisation processes and implementation of the Capacity Development Action Plan (CDAP) for better implementation of MRC Procedures</i>		
	ICBP11	By 2012	IWRM competency framework developed and applied for the MRCS and targeted national agencies		2012 onwards
	ICBP12	Continuously	MRC, MDBA, and AusAID Strategic Liaison Partnership established		2012 - 2016
	ICBP13	Continuously	Internships, professional work exchange opportunities, and provision of scholarship-related information updated		On-going
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to ICBP's work. Further information on relevant projects is set out in the attached table on National Indicative Plan projects relevant to ICBP.</p> <p>ICBP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>ICBP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>				

Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
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Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable ICBP to contribute strengthening institutional capacity in areas of strategic importance to the MRC, and as part of this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • ICBP01 - Gender audits undertaken for all MRC programmes and major policy documents to ensure gender responsive approaches are mainstreamed: A key goal is to ensure gender is mainstreamed within the MRCS and national agencies integrate gender aspects more effectively into their IWRM work. ICBP will continue to review and apply different updated gender mainstreaming toolkits, guidelines, and checklists to help MRCS and the member countries to mainstream gender equality in different IWRM processes at different levels either in the community, in IWRM policy system, or in daily practices at the Line Agencies. <ul style="list-style-type: none"> - Gender Audit has not been conducted - however, some activity to identify gender issues in the MRC Organisation and Programme Levels was taken place in the form of gender analysis and gender study, specifically, this activity was carried out in ISH, CCAI, FMMP, ICCS in 2011 - further work on gender outcomes/outputs/ activities within each sectoral programme; - Draft Anti-sexual harassment guideline; - Gender Policy and Strategy translated in to 4 riparian languages; - Draft Gender Tool Kits, English version completed. • ICBP02 - Gender tools (gender analysis, gender statistic, gender budgeting, etc.) are applied in each stage of the project management cycle: The ICBP has updated the MRC Gender toolkits and will make them into a resource for gender mainstreaming with concrete guidelines, case studies and checklist for easy application. <ul style="list-style-type: none"> - Draft Gender Tool Kit - Volume 2: consist of necessary gender tools needed for the project cycle e.g. gender analysis, gender statistic/sex-disaggregated data, gender budgeting, gender in planning, etc. - List of Gender Capacities/Competencies is in the progress - the Gender Capacity Need Assessment will be conducted for MRC staff - for further develop the Gender Capacity Building Plan for the Programme Staff.
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Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
	<ul style="list-style-type: none"> - Training on Gender in IWRM and PCM was provided to the JRP. - Through the Gender Working Group Meeting, and working with individual programme the 2 gender related indicators (Indicator Ref.1406 and Indicator Ref. 4303) in the MRC SP 2011-2015 were introduced - further work with individual programme to align their gender activities to the mentioned gender indicators are on-going e.g. CCAI. • 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: Gender mainstreaming has been a special focus, with many rounds of training and workshops taking place in the Member Countries, and more planned for the period 2011-2015. Further to the TOT provided in 2009, national gender team received continuous advice on development, implementation and reviewing of gender action plan. Further activities have included: <ul style="list-style-type: none"> - Pilot project on GM in Community Water Resources Management in Kandal Province; - Training and Practical Exercise on GM in IWRM for the CNMC; - Training on GM in PCM and M&E for CNMC; - Pilot project of LNMC on GM in Nam Xong River Basin Management (2011-2012); - Training and Practical exercise on GM in IWRM for LNMC; - Training on GM in IWRM for the Leadership of MONRE, Laos; - Training on GM in Watershed and River Basin Management for the Junior Technical Staff of MONRE, Laos; - Training on Promotion of Gender Equality and the Advancement of Women for newly formed gender units and gender focal points of all departments of MONRE, Laos; - Support gender focal points form the Ministry of Information, Cultural and Tourism to conduct training on Promotion of Gender Equality in Decentralisation to media agencies from 17 provinces in Laos. - Advise and coach the junior staff of Department of Water Resources, MONRE, Laos on Case Study Writing - the case of GM in Namxong was published. - Support VNMC to organise training on Gender Issues for the Trade Union of the MONRE, Vietnam; - Support VNMC to organise training on GM in IWRM for technical officers of VNMC; - Support VNMC to conduct training on GM in PCM, emphasised on gender 		

Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
	<p>in M&E for VNMC;</p> <ul style="list-style-type: none"> - Support Exchange visit between Lao and Thai gender teams. - Organised Basin-Wide Gender Workshop. <ul style="list-style-type: none"> • ICBP05 - An IWRM competency framework developed: The Strategic Plan 2011-2015 requires an increase in IWRM Human Resources capacity with the full complement of knowledge and skills in the IWRM policy development and implementation process and related work areas⁹. It also requires organisational and institutional capacities for the effective adoption and implementation of the IWRM principles, policies and plans in the member countries, as well as the effective implementation of MRC Procedures. <ul style="list-style-type: none"> - The MRC module based IWRM Competency Framework has been made available in May 2012 for the MRC. • ICBP06 - IWRM training materials updated: A key outcome of ICBP is to ensure the MRC, NMCs and prioritized national agencies have the necessary technical competencies to integrate IWRM principles into policy making, planning and implementation. ICBP will assist programmes to finalise the IWRM training materials and having it further used and elaborated in different IWRM training in member countries and at related regional training centres. <ul style="list-style-type: none"> - The IWRM Training Manual developed and printed, shared with member countries and training institutions. The TOT training conducted at regional and national level with a case study documented. The national trainer team to be further enhanced with support from ICBP. • ICBP07 - Leadership capacity development needs/gaps assessed: ICBP will assist in preparation of national and regional IWRM training and capacity development programmes focusing on core competencies for transboundary water governance with negotiation, mediation and basin wide assessment skills to strengthen institutional and human capacity for BDP. • ICBP08 - Networks of capacity building institutions in the sub-region and region established: Networks and mentoring groups established and implemented for the professional staff of MDBA and MRC to strengthen communication, coordination and IWRM application amongst National Mekong Committees (NMCs), line agencies and MRC Secretariat (MRCS) with a list of professional staff with clear roles/responsibilities and discussion topics. Also includes networking with regional and international training institutions such as the Asian Institute of Technology (AIT), the Mekong Institute (MI), and the international network for capacity building e.g. IWRM CAP-NET, International Centre of Excellence for Water Resources Management (ICE WaRM), UNESCO-IHE, and others. and establishing a network of educational institutions to increase the formal and long-term education in IWRM in the region. 		

⁹ The policy process includes policy analysis, development, advocacy, implementation and evaluation.

Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
	<ul style="list-style-type: none"> • ICBP09 - Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity <ul style="list-style-type: none"> - The MRC module based IWRM Competency Framework has been made available in May 2012 for the MRC. - Further application of the framework is to support the Riparianisation, Decentralisation processes and implementation of the Capacity Development Action Plan (CDAP) for better implementation of MRC Procedures - The MRC competency framework for MRC will be updated later after having lessons learnt from the initial application (2014). • ICBP10 - Capacity development plans for the MRCS and targeted national agencies prepared: National capacity-building plans (covering NMCs and prioritized national agencies) will be prepared and implementation monitored by NMCSs. National ICBP Coordinators' capacity will be strengthened over time in designing, planning, implementing, and M&E of capacity building and capacity development plans. • ICBP11 - IWRM competency framework developed and applied for the MRCS and targeted national agencies: see ICBP09 project description. <ul style="list-style-type: none"> - The MRC IWRM Competency Framework after developed in May 2012 has been translated into three riparian languages for convenient application at national level. - The framework has been promoted via national workshops in member countries - MONRE in Vietnam has been supported further in guiding the application of the framework into developing job classification and job profile at the ministry via a national workshop in November 2012. • ICBP12 - MRC, MDBA, and AusAID Strategic Liaison Partnership established: Resulted from the revitalised collaboration between MRC and MDBA and the direct linkages and communication between MRC and MDBA facilitated by AusAID offices in Vientiane, Laos and in Canberra, Australia, the mission on basin planning theme now has been rescheduled to February 2013 with initial preparation. Further activities will be identified after the first mission. • ICBP13 - Internships, professional work exchange opportunities, and provision of scholarship-related information updated: The ICBP will facilitate the hosting of interns who will undertake programme assignments at the MRCS. Guidelines for this have been under reviewing and will be available on the internet. There will be annual updates based on lessons learned. The ICBP will work with regional universities, and the AIT for providing internships to promising graduates. Full-time education as a means of developing capacity is important and should continue for the MRC to operate as a "world class, best practice" river basin organisation. The ICBP will serve as 		

Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
	<p>an information exchange centre for IWRM scholarships and disseminate information to the MRCS and the member countries through the ICBP network. The ICBP will actively seek information on available scholarships for full-time study or short-term courses, and liaise with relevant institutions and agencies to ensure that the information is available and timely. A process for this sharing scholarship information will be established.</p> <ul style="list-style-type: none"> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, ICBP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between ICBP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, ICBP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed. 		
Tasks and outputs	Detailed tasks and outputs will be developed by ICBP through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		
Implementation arrangements	As per ICBP Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes <p>ICBP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project Title	Integrated Capacity Building Programme Actions to address Basin Development Strategy	BDP ref	PIN R-08
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Project funding

Existing funding	See ICBP Programme document
Additional funding required	ICBP to review and identify any funding gaps and report to these to TCU

Work plan

Work plan	See ICBP Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

ICBP Integrated Capacity Building Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
ICBP	ICBP01	Continuously	2013	Gender audits undertaken for all MRC programmes and major policy documents to ensure gender responsive approaches are mainstreamed		433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	ICBP02	Continuously	2013-2014	Gender tools (gender analysis, gender statistic, gender budgeting, etc.) are applied in each stage of the project management cycle.		433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	ICBP03	Continuously	2013-2015	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		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP05	By 2012	41030	An IWRM competency framework developed	MIWRMP	435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

ICBP Integrated Capacity Building Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ICBP	ICBP06	By 2012	2013	IWRM training materials updated		432003	Strengthen national level water resources management processes	Capacity building in water information system	Inst. capacity
						435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP07	By 2012	2012	Leadership capacity development needs/gaps assessed		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP08	Continuously	Continuously	Networks of capacity building institutions in the sub-region and region established		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
ICBP09	By 2011		2011 - 2013	Competency needs assessments undertaken, focusing on the core river basin management functions and trans-boundary water management capacity		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

ICBP Integrated Capacity Building Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ICBP	ICBP10	By 2012	2011-2013	Capacity development plans for the MRCS and targeted national agencies prepared		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP11	By 2012	2012 onwards	IWRM competency framework developed and applied for the MRCS and targeted national agencies		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP12	Continuously	2012 - 2016	MRC, MDBA, and AusAID Strategic Liaison Partnership established		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	ICBP13	Continuously	On-going	Internships, professional work exchange opportunities, and provision of scholarship-related information updated		435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

National Indicative Plan projects relevant to ICBP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.3: Integration of Environmentally Friendly Practices in Agriculture and Water Management	□
Cambodia	Project 1.4: Improvement and development of irrigation and drainage systems	□
Cambodia	Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■
Cambodia	Project 2.1: Capacity development in IWRM for Inter-Agency and cross-boundary coordination	□
Cambodia	Project 2.2: Strengthening institutional and human capacity building in sustainable hydropower development at national, subnational, and community levels.	□
Cambodia	Project 2.3: Integrated flood and droughts risk management planning strengthened	□
Cambodia	Project 3.5: Strategic Program on Climate Resilience(SPCR)	■
Thailand	PIN T-001 Capacity Building to RBC and Network	■
Lao PDR - priority project	Project 3.1: Strengthening of water resource procedures and guidelines	□
Lao PDR - priority project	Project 3.2: Strengthening of Nam Ou River basin management	□
Lao PDR - priority project	Project 3.3: Strengthening the Management of the Conservation and Protection Forest Areas Programme	■
Lao PDR - new project	Project 3.4: Strengthening of Sekong River basin management	□
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■
Lao PDR - priority project	Project 5.1: Establishment of Lao National Mekong Basin Information System	□
Lao PDR - new project	Project 5.9: Hydro-meteorology network enhancement	□
Lao PDR - priority project	Project 6.1: Strengthening NUOL's Curriculums on IWRM, Meteorology and Hydrology, Environmental Economics, and Engineering and Toxicology	□
Lao PDR - priority project	Project 6.2: Gender mainstreaming in integrated water resources management and planning	□
Lao PDR - priority project	Project 6.3: Capacity building for Monitoring, Evaluation and Learning (MEL) related to PINs implementation	□

Country	NIP Project title	Funding status
Lao PDR - new project	Project 6.4: Enhancing capacity building of MONRE staff on Agro–Climate Modelling and Application	<input type="checkbox"/>
Lao PDR - new project	Project 6.5: Strengthening capacities in forest Information Management	<input type="checkbox"/>
Viet Nam - Mekong delta	FA.1.1 Establishment process and procedures for integration of national and sector planning into the IWRM-based Basin Development Strategy of MRC.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	FA.6.5. Strengthening the operation of existing Srepok River Basin Council.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	FA.6.6 Initial Preparations for the establishment of Se San River Basin Organization.	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
Viet Nam - capacity building	FA.9.1 Formulate a Program for raising awareness of the IWRM-based Basin Development Strategy and how to implement it.	<input checked="" type="checkbox"/>
Viet Nam - capacity building	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.	<input checked="" type="checkbox"/>

Project Identification Note - ICCS

Project Title	International Cooperation and Communication Section Actions to address Basin Development Strategy	BDP ref	PIN R-09
Responsible (lead) entity	ICCS	Start date	2012
Other entities involved	BDP, ICBP, MIWRMP and all Programmes	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the ICCS in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to ICCS is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to ICCS should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for ICCS against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to ICCS and its work plans. ICCS are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of ICCS.</p>
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<p>Project Title</p>	<p>International Cooperation and Communication Section Actions to address Basin Development Strategy</p> <p style="text-align: right;">BDP ref PIN R-09</p>											
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">433000</td> <td style="width: 15%;">Strengthen basin management processes</td> <td style="width: 60%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>530000</td> <td>Monitoring, evaluation and reporting</td> <td></td> <td></td> </tr> </table>				433000	Strengthen basin management processes			530000	Monitoring, evaluation and reporting		
433000	Strengthen basin management processes											
530000	Monitoring, evaluation and reporting											
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC-SP Ref</p>	<p>MRC-SP planned date</p>	<p>Description</p>	<p>Updated target date</p>								
	ALL01	By 2014	Sector reviews updated by sector programmes	...								
	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...								
	ICCS01	Continuously	Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy	Continuous								
	ICCS02	By 2013	MRC-wide stakeholder analysis and structured engagement process developed	2013								
<p>Linkages to other Projects</p>	<p>The National Indicative Plans set out a number of national projects of relevance to ICCS's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to ICCS.</p> <p>ICCS will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>ICCS will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>											

Project Title	International Cooperation and Communication Section	BDP ref	PIN R-09
	Actions to address Basin Development Strategy		

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable ICCS to contribute to improved communications in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • ICCS01 - Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy: The MRC Secretariat has prepared a communications strategy for the MRC to guide its communications work for the coming years. Broader but more structured stakeholder involvement will enhance ownership and regional coordination among a wider group of stakeholders and the Member Countries. During this Strategic Plan period, the MRC will continue to strengthen those existing mechanisms for the involvement of members of the public, civil society organisations and local communities in MRC activities. These include the implementation of the MRC Communications Strategy and Policy on Data Disclosure, Information and Knowledge, the Basin Development Plan, the Stakeholder Participation and Communication Plan, participatory programme planning, and other mechanisms for increased stakeholder involvement in MRC's policy and strategy development. • ICCS02 - MRC-wide stakeholder analysis and structured engagement process developed : See ICCS01 project description. • ALL01 - Stakeholder participation: in common with all other MRC Programmes, ICCS should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between ICCS and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, ICCS will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed.
Tasks and outputs	Detailed tasks and outputs will be developed by ICCS through their Annual Work Plans, which as required will be progressively aligned with the priorities above
Location	Basin-wide

Project Title	International Cooperation and Communication Section Actions to address Basin Development Strategy	BDP ref	PIN R-09
Implementation arrangements	As per ICCS Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes <p>ICCS will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	See ICCS Programme document
Additional funding required	ICCS to review and identify any funding gaps and report to these to TCU

Work plan

Work plan	See ICCS Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

ICCS International Cooperation and Communication Section

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
ICCS	ICCS01	Continuously	Continuously	Enhanced implementation of the MRC Communication Strategy and Information Disclosure Policy	ICBP, MIWRMP, BDP	433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
	ICCS02	By 2013	2013	MRC-wide stakeholder analysis and structured engagement process developed	All programmes	433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity

National Indicative Plan projects relevant to ICCS

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 3.6: Cambodian Climate Change Alliance	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - priority project	Project 6.3: Capacity building for Monitoring, Evaluation and Learning (MEL) related to PINs implementation	□
Viet Nam - capacity building	FA.9.1 Formulate a Program for raising awareness of the IWRM-based Basin Development Strategy and how to implement it.	■
Viet Nam - capacity building	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.	■

Project Identification Note - IKMP

Project Title	Information and Knowledge Management Programme Actions to address Basin Development Strategy	BDP ref	PIN R-10
Responsible (lead) entity	IKMP	Start date	2012
Other entities involved	AIP, BDP, DMP, EP, FMMP, FP, ICBP, ISH, MIWRMP, NAP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the IKMP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to IKMP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to IKMP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for IKMP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to IKMP and its work plans. IKMP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of IKMP.</p>
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Project Title	Information and Knowledge Management Programme			BDP ref	PIN R-10															
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>424000</td> <td></td> <td>Acquisition of essential knowledge to address uncertainties and minimise risk</td> </tr> <tr> <td>432000</td> <td></td> <td>Strengthen national level water resources management processes</td> </tr> <tr> <td>433000</td> <td></td> <td>Strengthen basin management processes</td> </tr> <tr> <td>440000</td> <td></td> <td>Studies and Guidelines</td> </tr> <tr> <td>530000</td> <td></td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					424000		Acquisition of essential knowledge to address uncertainties and minimise risk	432000		Strengthen national level water resources management processes	433000		Strengthen basin management processes	440000		Studies and Guidelines	530000		Monitoring, evaluation and reporting
424000		Acquisition of essential knowledge to address uncertainties and minimise risk																		
432000		Strengthen national level water resources management processes																		
433000		Strengthen basin management processes																		
440000		Studies and Guidelines																		
530000		Monitoring, evaluation and reporting																		
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC-SP Ref</p>	<p>MRC-SP planned date</p>	<p>Description</p>	<p>Updated target date</p>																
	ALL01	By 2014	Sector reviews updated by sector programmes	2014																
	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2013,14,15																
	IKMP01	By 2015	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	Continuously	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ongoing																
	IKMP02	Continuously	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ongoing																
	IKMP03	By 2013	Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures	2013																
	IKMP04	Continuously	National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies	2015																
	IKMP05	Continuously	Tools developed to analyse and assess impacts of water use in different sectors	2015																
	IKMP06	to be updated	Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures	ongoing																
<p>Linkages to other Projects</p>	<p>The National Indicative Plans set out a number of national projects of relevance to IKMP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to IKMP.</p> <p>IKMP will explore with each country through the relevant NMC opportunities to</p>																			

Project Title	<p>Information and Knowledge Management Programme</p> <p>Actions to address Basin Development Strategy</p> <p style="text-align: right;">BDP ref PIN R-10</p>
	<p>cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>IKMP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable IKMP to contribute to strengthened information systems and knowledge management in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • 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): see also AIP01 project description. The goal is to establish the potential for groundwater development within the LMB to expand and intensify agricultural production and to minimise the impact of droughts, in doing so creating appropriate databases to support national and regional planning. In relation to drought studies, the ground water database will be set up and regularly updated which provides inputs for other assessment and analysis on land use planning as well as supports the implementation of the procedure on Water Use Monitoring (PWUM). • IKMP02 - Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised: A key goal of the MRC-SP related to IKMP is to develop and disseminate operational systems for basin-wide monitoring, impact assessment, modelling, forecasting and knowledge management to support effective decision making, requiring close collaboration with other MRC Programmes. Outcomes include: 1. Information and data on the full range of water and related resources parameters are systematically monitored and used in basin and sub-basin planning and management, and the state and developments in the Basin are reported; 2. MRC analysis, modelling and assessment tools are effectively used at appropriate
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Project Title	Information and Knowledge Management Programme Actions to address Basin Development Strategy BDP ref PIN R-10
	<p>levels of planning, decision-making and operational management. 3. Key water and water use parameters, trans-boundary impacts and other sustainability issues of water utilisation and management, and threats to livelihoods posed by climate change and other emerging environmental issues are researched, analysed, and assessed for national and regional responses; 4. Key water and water use parameters, trans-boundary impacts and other sustainability issues of water utilisation and management, and threats to livelihoods posed by climate change and other emerging environmental issues are researched, analysed, and assessed for national and regional responses; 5. Knowledge management systems and processes are developed, applied, and effectively shared with MRC partner agencies via sustainable knowledge networks. Of critical importance it to have a basin-wide river monitoring network which is well functioning and linked with other MRC monitoring systems to provide accurate, reliable and timely hydro-meteorological and related data at basin level while strengthening relevant national and regional capacity.</p> <ul style="list-style-type: none"> • IKMP03 - Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures: A network and database for sediment monitoring (mapping and analysis etc.) will be developed and implemented. A “Virtual Mekong Basin” will be developed and maintained for understanding the main balances of river parameters of flow, sediment, nutrition and carbon cycle, etc. • IKMP04 - National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies: A key outcome for IKMP is development of an Information System of the MRC (MRC-IS) which comprehensively integrates MRC data and information, is consolidated, regularly updated and made available for internal and external uses. This includes implementation of a National Information Systems (NIS) at NMCS and Line Agencies. A development plan for relevant agencies is produced and discussed in TACT to ensure consistency with the MRCS-IS strategy and standards for metadata, data exchange and the cooperation between agencies and IKMP. The implementation of the development plan is scheduled according to the required capacity building. Each NIS can be established by either joining the MRCS-IS or to setup a replica at national level. The latter requires substantial human and financial resources. • IKMP05 - Tools developed to analyse and assess impacts of water use in different sectors: The Information System of the MRC (MRC-IS) which comprehensively integrates MRC data and information, will be consolidated, regularly updated and made available for internal and external uses. The major need for data is for Water Use Monitoring (WUM) and for work at MRCS and Line Agencies. The IKMP modelling team is responsible for conducting modelling activities or providing technical assistance to other programmes in modelling, assessment and analysis, including irrigation model improvements for water use modelling. • IKMP06 - Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures: As

Project Title	<p>Information and Knowledge Management Programme</p> <p>BDP ref PIN R-10</p> <p>Actions to address Basin Development Strategy</p>
	<p>part of the MRC's River Basin Monitoring Network, IKMP is responsible for the following outputs: 1. An appropriate and effective hydro-meteorological network covering mainstream and tributaries, upgraded and strengthened; 2. A system for acquiring real-time hydro-meteorological data (water level, rainfall) for flood monitoring and forecast in place and regularly upgraded; 3: A network and database for sediment monitoring (mapping and analysis etc.) developed and implemented; 4. Drought management studies and ground water monitoring in place to provide data and information for monitoring and forecasting water use; 5. The MRC's Programmes and national project adequately and timely supported with the required hydro-meteorological and related data; 6. Critical hydrological situations in the basin monitored and explained in a timely manner; 7: Procedures on Water Use Monitoring effectively implemented in cooperation with NMCS and national line agencies; 8: Effective Capacity Building related to the operation and maintenance of the system in a long run.</p> <ul style="list-style-type: none"> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, IKMP will review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between IKMP and relevant line agencies and RBO/RBCs. <p>ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, IKMP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed.</p>
Tasks and outputs	Detailed tasks and outputs will be developed by IKMP through their Annual Work Plans, which as required will be progressively aligned with the priorities above
Location	Basin-wide
Implementation arrangements	As per IKMP Programme Document or as otherwise amended through Annual Work Plans

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed
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Project Title	Information and Knowledge Management Programme Actions to address Basin Development Strategy	BDP ref	PIN R-10
	<ul style="list-style-type: none"> Inadequate resources arising from delays in recruitment and contracting processes <p>IKMP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>		
External coordination requirements	See “Linkages to other Projects” above		
Internal coordination requirements	See “Linkages to other Projects” above		
Project funding			
Existing funding	See IKMP Programme document		
Additional funding required	IKMP to review and identify any funding gaps and report to these to TCU		
Work plan			
Work plan	See IKMP Programme Implementation Plan and Annual Work Plan		

Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

IKMP Information and Knowledge Management Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
IKMP	IKMP01	By 2015	2015	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)	BDP, AIP, DMP	440008	Studies and Guidelines	Groundwater: Inventory of groundwater throughout the Basin including development and management plans	Study report
	IKMP02	Continuously	ongoing	Methods, tools and quality assurance systems relating to water resources management strengthened and harmonised	ICBP, MIWRMP, NAP	432001	Strengthen national level water resources management processes	Capacity building in surface water and groundwater monitoring	Inst. capacity
						433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	IKMP03	By 2013	2013	Analysis report on impacts of the changes in sediment transport, identification of avoidance, mitigation and enhancement measures	ISH, EP	424001	Acquisition of essential knowledge to address uncertainties and minimise risk	Sediment and nutrient trapping and their consequent risks	Study report
	IKMP04	Continuously	2015	National Information Systems (NIS) operated and maintained by the NMCSs and Line Agencies		433004	Strengthen basin management processes	Strengthen State of Basin monitoring and reporting	Inst. capacity
IKMP05	Continuously	2015	Tools developed to analyse and assess impacts of water use in different sectors	AIP, BDP, DMP, EP, FP, ISH, NAP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity	

IKMP Information and Knowledge Management Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
IKMP	IKMP06	to be updated	ongoing	Real-time monitoring system of flood and drought condition for agricultural farming to prepare and implement emergency measures	AIP, FMMP, DMP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity

National Indicative Plan projects relevant to IKMP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 2.5: River depth/water level monitoring (Navigability)	■
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented	□
Cambodia	Project 4.3: Study of impact on Cambodian inland fishery and sediment transport in the Mekong Floodplain and Tonle Sap Great Lake	□
Thailand	PIN T-001 Capacity Building to RBC and Network	■
Thailand	PIN T-002 Database Management for Basin Development	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - priority project	Project 5.1: Establishment of Lao National Mekong Basin Information System	□
Lao PDR - priority project	Project 5.2: Inventory of environmental hotspots in Lao PDR	□
Lao PDR - priority project	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	□
Lao PDR - new project	Project 5.9: Hydro-meteorology network enhancement	□
Lao PDR - new project	Project 5.10: Riverbank protection master plan	□
Lao PDR - new project	Project 5.11: River dredging impact assessment	□
Lao PDR - new project	Project 5.12: Navigation channel improvement along the Mekong River in the section from Houayxai to Luang Prabang of Lao PDR	□
Lao PDR - new project	Project 5.13: Updating chart datum of UHA 1996 of the Lower Mekong	□
Lao PDR - ongoing project	Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	■
Lao PDR - priority project	Project 6.1: Strengthening NUOL's Curriculums on IWRM, Meteorology and Hydrology, Environmental Economics, and Engineering and Toxicology	□
Lao PDR - new project	Project 6.4: Enhancing capacity building of MONRE staff on Agro–Climate Modelling and Application	□

Country	NIP Project title	Funding status
Lao PDR - new project	Project 6.5: Strengthening capacities in forest Information Management	<input type="checkbox"/>
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.1.4 Preparation of Guidelines for data and information sharing for the Mekong Delta	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	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.	<input checked="" type="checkbox"/>
Viet Nam - Mekong delta	FA.5.2 Study of flood impacts to the quality and efficiency of fluvial land use in the Mekong Delta, Viet Nam.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>
Viet Nam - Se San & Srepok	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.	<input checked="" type="checkbox"/>

Country	NIP Project title	Funding status
Viet Nam - Se San & Srepok	FA.7.2 Defining the potential of flow contribution and its impacts to the change of flow in the main stream of Mekong river	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - capacity building	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.	■

Project Identification Note - ISH

Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy	BDP ref	PIN R-11
Responsible (lead) entity	ISH	Start date	2012
Other entities involved	AIP, BDP, DMP, EP, FMMP, FP, IKMP, MIWRM, WMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the ISH in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to ISH is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to ISH should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for ISH against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to ISH and its work plans. ISH are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of ISH.</p>
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Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy			BDP ref	PIN R-11															
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>421000</td> <td></td> <td>Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin</td> </tr> <tr> <td>423000</td> <td></td> <td>Improve sustainability of hydropower development</td> </tr> <tr> <td>433000</td> <td></td> <td>Strengthen basin management processes</td> </tr> <tr> <td>440000</td> <td></td> <td>Studies and Guidelines</td> </tr> <tr> <td>530000</td> <td></td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					421000		Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	423000		Improve sustainability of hydropower development	433000		Strengthen basin management processes	440000		Studies and Guidelines	530000		Monitoring, evaluation and reporting
421000		Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin																		
423000		Improve sustainability of hydropower development																		
433000		Strengthen basin management processes																		
440000		Studies and Guidelines																		
530000		Monitoring, evaluation and reporting																		
<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<p>MRC SP Ref</p>	<p>MRC SP milestone date</p>	<p>Output description (SP Milestone)</p>	<p>Updated target date</p>																
	ALL01	By 2014	Sector reviews updated by sector programmes	2014																
	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2012,13,14																
	ISH01	By 2013	Ecologically sensitive sub-basins identified for limited development of hydropower on tributaries	2013																
	ISH02	By 2013	Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams	2013/14																
	ISH03	By 2013	Negative impact mitigation measures for tributary dams	2014																
	ISH04	By 2013	Design guidance for mainstream dams	2013																
	ISH05	By 2013	Study report on evaluated options of mainstream power development in context of national and regional power strategies	2013																
	ISH06	By 2013	Guidelines on risk mitigation options for possible mainstream dams	2014																
	ISH07	By 2015	<p>a) Mainstream and tributary hydropower potential and alternative power options assessed and reported, including</p> <p>b) innovative hydropower schemes that do not affect connectivity in the lower basin</p>	a)2014																
				b)2013																
	ISH08	By 2013	Essential knowledge acquired to minimize uncertainty of possible mainstream dams	2014																
	ISH09	By 2015	Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools	2013																

Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy			BDP ref	PIN R-11
	ISH10	By 2014	Guidance on Sustainable Management of Reservoir Watersheds prepared		2014
	ISH11	Continuously	Environmental baseline information improved for hydropower planning		2014/15
	ISH12	By 2015	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	By 2013	Benefit-sharing options for hydropower on tributaries evaluated and reported		2013
	ISH14	Continuously	Technical assistance provided to hydropower developers on safeguards and compliance monitoring		Ongoing
	ISH15	By 2011	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
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to ISH's work. Further information on relevant projects is set out in the attached table on National Indicative Plan projects relevant to ISH.</p> <p>ISH will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>ISH will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>				

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work to be undertaken by ISH is intended to contribute greater understanding of the hydropower sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others. The specific tasks required are:</p>
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Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy	BDP ref	PIN R-11
	<ul style="list-style-type: none"> <li>• ISH01 - Ecologically sensitive sub-basins identified to assist hydropower planning on tributaries : This requires two sequential but separate pieces of work, namely: (i) the development of a classification system for ecologically sensitive sub-basins in the Mekong, and (ii) an evaluation of what “limited development of hydropower” means in practice for each sub-basin, taking into account all existing, planned and potential hydropower schemes in the sub-basin, as currently identified in the MRC Hydropower Data Base. The focus of the ISH01 is nonetheless is on plans regarding the development of new hydropower projects. ISH01 links to ISH Output 4.2a concerning the adoption of the RSAT sub-basin hydropower sustainability assessment tool. <li>• ISH02 - Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams: Two separate pieces of work are also implied by ISH02, namely: (i) the preparation of guidelines for multi-purpose evaluation of hydropower projects, and (ii) undertaking a regional macro-evaluation evaluation of mainstream dams. ISH02 is already elaborated in the ISH 2011-2015 planning documents as: (i) ISH Output 3.1a: SEA and Regional Macroeconomic Evaluation of proposed LMB Mainstream Dams and (ii) ISH Output 3.4: Multipurpose functionality of hydropower projects identified. Initiatives by regional Development Partners which MRCS has co-hosted workshops that will be considered (e.g. CIGAR, Challenge Programme on Water and Food). For the macroeconomic assessment component of ISH02, the approach to develop the RFP will include starting with a review the existing BDP documentation on the macroeconomic aspects of hydropower and the SEA Baseline Phase Working paper on economics, and then proceed to a collaborative review, update and synthesis of these documents. <li>• ISH03 - Negative impact mitigation measures for tributary dams: a generic approach necessarily will be adopted for assessment of impact mitigation for all existing and proposed LMV tributary dams by 2013, since there are over 120 tributary hydropower projects in the MRC hydropower data base. ISH03 will now be combined with ISH06 below and will cover comprehensive assessment of generic and specific mitigation option for tributary and mainstream hydropower. In addition the study will commission research into particular aspects of these that require research to ensure regional applicability of these methods.. A TOR has been prepared in 2012 and the study will commence late 2012 early 2013. <li>• ISH04 - Design guidance for mainstream dams: MRC already has developed the Preliminary Design Guidance (PDG) for propose LMB mainstream hydropower, as part of a MRCS-wide process coordinated by the ISH and approved by the Joint Committee in September 2009. An update for the PDG is proposed in ISH work plan 2011-2015 aiming to draw lessons from the first MRC PNPCA process on the Xayaburi proposal. ISH04 is linked to ISH Work Plan Outputs dealing with the PDG update, namely (i) ISH Output 1.3: Hydropower Technical Inputs Provided to the PNPCA Process, and (ii) ISH Output 2.1: Technical assistance provided to hydropower developers on safeguards and compliance monitoring. This update of the PDG is now 		

Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy	BDP ref	PIN R-11
	<p>proposed to be completed after majority of the findings from ISH03 and 06 have been gathered.</p> <ul style="list-style-type: none"> • ISH05 - Study report on evaluated options of mainstream power development in context of national and regional power strategies: The analysis that ISH05 requires is broadly contained in various GMS Region Power Planning studies undertaken by Mekong countries in past with ADB RETA support. The last ADB RETA 6440 concerning the consolidation of information on national power sector planning in each GMS country and the overall regional power planning approach was completed in Sept 2011. The MRCS cooperated with the RETA 6440 process by providing the MRC hydropower database which contains parameters for the potential LMB mainstream hydropower projects. Under ISH Outputs, MRCS participates in those regional-based energy studies to provide linkage and feedback between regional power sector development and the regional River basin plan (the MRC mandate), but does not provide the lead. It is necessary to first verify the status of ongoing ADB RETA work on regional power integration and plug into that activity as part of normal ISH cooperation on this topic. Only if needed will ISH commission a study and seek ADB cooperation in 2013. • ISH06 - Guidelines on risk mitigation options for possible mainstream dams: As discussed under ISH03 this will focus on the risk mitigation options and strategies for LMB mainstream development and will include considerations for the avoidance of impacts, as well as mitigation of impacts if LMB mainstream hydropower projects go ahead in future, which is normally part of any SEA-type analysis and project level EIAs. ISH06 broadly links to several ISH Outputs, such as gathering environmental and social baseline data (ISH Output 2c) and studies of policies and strategies to fund long-term mitigation measures and otherwise to equitably share the direct and indirect cost of adverse impacts on riverine communities, such as through national to local and regional forms of benefit sharing (i.e. various Outputs Under ISH Outcome 4). A TOR has been prepared in 2012 and the study will commence late 2012 early 2013 • 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: This activity will investigate the role that different conventional power technologies as well as emerging RE technologies can play in power supply-demand optimization, particularly with regard to improving electricity access and services in power markets that LMB mainstream dams would serve, including demand-side management in Thailand and Vietnam, and to balance competing views of what is feasible and practical in the Mekong power supply mix. A TOR for ISH07 is complete and agreed. The TOR will require a process of collaborative review and update of earlier documents/studies, assessment of the resource available for each of the technologies and an assessment of the policy and institutional environment that may need to be put in place. One main sub-task will be a desk review of the current status of hydrokinetic technologies that may be suited for larger Mekong tributaries, or sections of the Mekong mainstream. 		

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	<ul style="list-style-type: none"> • ISH08 - Essential knowledge acquired to minimize uncertainty of possible mainstream dams: This is a broad-based activity that is linked closely to the Output3.1b the follow-up on technical knowledge gaps concerning proposed mainstream dams. This work takes the form of a review of existing studies (e.g. PNPCA review, SEA process) and distilling the key knowledge gaps that are detailed there. Through a cross disciplinary consultation, a list of these “knowledge gaps” is compiled. Several studies are already embedded in the BDP and the MRC Strategic Plan to cover some of these areas and these will be highlighted against the gaps. Any further work will focus on practical field data collection, analysis and study rather than pure research. A TOR has been drafted and agreed. • ISH09 - Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools: Targeted application of sustainability assessments at the base and project levels is an important, integral component of the existing ISH strategy and is embedded in the ISH Output structure and related to rollout of RSAT on the Mekong. ISH09 is specifically related to the following ISH Outputs: (i) ISH Output 4.2a: Environmental Considerations for Sustainable Hydropower Development (ECSHD) hydropower sustainability assessment tools tested , and (ii) ISH Output 4.2b: Targeted application of Hydropower Sustainability Assessment /Dialogue tools at basin / sub-basin and project levels ISH Output 2.1: Technical assistance provided to hydropower developers on safeguards and compliance monitoring. A robust plan is also needed to coordinate the Mekong implementation of RSAT through the basin and to coordinate with other assessments using IHA Hydropower Sustainability Protocol. • ISH10 - Guidance on Sustainable Management of Reservoir Watersheds prepared: This is concerned with sustainable management of land-water resources in the immediate catchment of hydropower reservoirs, which relates to sustainable management and performance of the hydropower assets in the Mekong on a number of levels, including: (a) protecting the reservoir from excessive sedimentation and consequent degradation of power output over time, such as by ensuring headwater forests are planted and maintained together with sustainable cultivation and animal husbandry practices in the catchment area around the reservoir to reduce soil erosion, (b) protecting water quality in terms of surface run off and minimize diffuse pollution sources over the longer-term as use of chemical fertilizers becomes a more common practice, and (c) linking to the introduction of benefit sharing mechanisms to ensure that local communities have an opportunity not only to address adverse impacts of hydropower but also to enhance development opportunities resource transformations from hydropower create in the reservoir area (for example, the potential for new opportunities for ecotourism from the wetland areas created by the reservoir, as well as fisheries and river transport and opening up new opportunities for payment for ecological services that will improve local incomes and help to tackle relative and absolute poverty). ISH10 is specifically related to ISH Output 4.3: Guidance Provided on Sustainable Management of 		

Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy	BDP ref	PIN R-11
	<p>Reservoir Watersheds.</p> <ul style="list-style-type: none"> • ISH11 - Environmental baseline information improved for hydropower planning: this important cross-cutting task underpins efforts to address the environment sustainability of both existing and potential hydropower projects in the LMB and is linked with different ISH Outputs, including ISH Output O2.3: Improved Environmental Baseline Information for Hydropower Planning. The study is to commence in 2012 as a priority to cover the critical information that allows research into impacts and mitigation. • 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: The operation of hydropower storage reservoirs has the implications not only dry season flow management but also for what is more commonly recognized as flood mitigation strategies. There are also potential implications for daily to weekly peaking operation. This activity is linked to ISH outputs indirectly in the sense that modelling is carried out by other MRC Programmes (IKMP and BDP) using the MRC hydropower database as a starting point. The ISH is responsible to update and provide the content of the hydropower database and project parameters used for the analysis required for ISH12 as well as many other tasks that are required for the implementation of the BDS. • ISH13 - Benefit-sharing options for hydropower on tributaries evaluated and reported: Benefit sharing is increasingly recognized as central to advance forms sustainable hydropower. It is important to recognize that benefit sharing is at different scales (i.e. regional, national and local scales) and thus the two main categories in the Mekong situation are (i) national-to-local benefit sharing (i.e. sharing among designated groups within each Member Country based on a national policy, laws and relevant regulations), and (ii) transboundary benefit sharing (i.e. mutually beneficial sharing between two or more Countries, based on agreement and negotiated outcomes). This activity has a number of links with different ISH Output especially to ISH Output 4.1c: Benefit-Sharing Mechanisms Elaborated at Regional, National and Community Levels and Network Established. • ISH14 - Technical assistance provided to hydropower developers on safeguards and compliance monitoring: An assessment will be made at the outset of the current capacities of hydropower developers and operators as well as their awareness and interest to implement MRC approaches and agreements in order to establish clearly what form of tactical assistance and which safeguards and compliance monitoring tools MRC can best assist national line agencies and regulators in developing or making accessible bringing to developers and operators. This activity has a number of links with different ISH Outputs, in particular ISH Output O2.1: Technical assistance provided to hydropower developers on safeguards and compliance monitoring. It also links to ISH Outputs that bring developers together with government and multi-stakeholder processes such as through RSAT and knowledge gathering and dissemination activities concerned with innovative finance and benefit sharing 		

Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy	BDP ref	PIN R-11
	<p>focused on the sustainable components of hydropower (under ISH Outcome 4).</p> <ul style="list-style-type: none"> <p>• 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: There are two tracks for MRC engagement with China: (a) a focus on technical exchanges related to sustainable hydropower considerations, engaging with the Ecosystem Study Commission for International Rivers, which is mostly a platform for technical exchange rather than a negotiating platform and a priority output for the ISH, and (b) concerning MRC engagement with China through the PRC Ministry of Water Resources. The latter embraces more sensitive issues such as the exchange information on dry season flows and other hydrological aspects that PRC counterparts suggest may legal implications. While the two activities are complementary, the actual task of negotiating information exchange that has legal implications and on hydropower operations impacting on dry season flow regimes in the LMB is a separate to the technical exchanges with ESCIR arranged through the ISH. This activity has links with ISH Output O3.1d: Ongoing technical cooperation with China on hydropower sustainability concerns. However, further clarification from MRCS management is needed to fully define ISH role.</p> <p>• ALL01 - Stakeholder participation: in common with all other MRC Programmes, ISH should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between ISH and relevant line agencies and RBO/RBCs.</p> <p>• ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, ISH will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed.</p> 		
Tasks and outputs	Detailed tasks and outputs will be developed by ISH through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		
Implementation arrangements	As per ISH Programme Document or as otherwise amended through Annual Work Plans		
<h3>Risks, mitigation and coordination</h3>			
Principal risks and means of mitigating risks	<p>The principle risks and means of mitigating these are as follows:</p> <ul style="list-style-type: none"> <p>• Misalignment between activities above and current Programme document and work plans – ISH has prepared a new Programme document which embeds these studies in to existing Outputs. In addition, ISH have merged and</p> 		

Project Title	Initiative on Sustainable Hydropower Actions to address Basin Development Strategy	BDP ref	PIN R-11
	focused the scopes of these studies to better meet the needs of the current context. The preparation of successive Annual Work Plans will enable further adjustments to be made over time. <ul style="list-style-type: none"> • Inadequate funding – ISH anticipate having adequate funding • Inadequate resources – ISH anticipate that staff constraints will be a major issue particularly due to the very labour intensive procurement process for the Consultant Teams. Resources will need to can be mobilised without delay with support from FAS and relevant NMCs. In addition, ISH will seek to employ an Expert Panel to further boost the technical review capacity and ensure Outputs are Quality assured. 		
External coordination requirements	See “Linkages to other Projects” above		
Internal coordination requirements	See “Linkages to other Projects” above		
Project funding			
Existing funding	See ISH Programme document		
Additional funding required	ISH currently have sufficient funding to cover the projects highlighted. However, the further components of some studies (e.g environmental baselines) may require more extensive field research which could require additional funding.		
Work plan			
Work plan	See ISH Programme Implementation Plan and Annual Work Plan		

Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

ISH Initiative on Sustainable Hydropower

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
ISH	ISH01	By 2013	2013	Ecologically sensitive sub-basins identified for limited development of hydropower on tributaries	EP, FP	423101	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Identification of ecologically sensitive sub-basins	Guideline
	ISH02	By 2013	2013/14	Guidelines on multi-purpose evaluation of hydropower projects including SEA and regional macro-economic evaluation of mainstream hydropower dams	EP, FP, BDP, FMMP, IKMP	423102	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Multi-purpose evaluation of hydropower projects	Guideline
	ISH03	By 2013	2014	Negative impact mitigation measures for tributary dams	EP, FP	423103	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Negative impact mitigation measures for tributary dams	Guideline
	ISH04	By 2013	2013	Design guidance for mainstream dams	EP, FP, IKMP, BDP, FMMP	423204	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Design guidance for mainstream dams	Guideline
	ISH05	By 2013	2013	Study report on evaluated options of mainstream power development in context of national and regional power strategies	BDP	423301	Improve sustainability of hydropower development: (c) Assess power options, including alternatives to mainstream hydropower	Evaluation of mainstream power development options in context of national and regional power strategies	Study report

ISH Initiative on Sustainable Hydropower

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ISH	ISH06	By 2013	2014	Guidelines on risk mitigation options for possible mainstream dams	EP, FP	423202	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Identification of risk mitigation options	Guideline
						440002	Studies and Guidelines	Mainstream dams: Mitigation of the impacts of converting much of the mainstream to a series of slow moving waters	Guideline
	ISH07	By 2015	#N/A	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		440002	Studies and Guidelines	Mainstream dams: Mitigation of the impacts of converting much of the mainstream to a series of slow moving waters	Guideline
	ISH08	By 2013	2014	Essential knowledge acquired to minimize uncertainty of possible mainstream dams	EP, FP, BDP	423201	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Acquire essential knowledge to minimize uncertainty	Study report
	ISH09	By 2015	2013	Targeted application of project-specific Hydropower Sustainability Assessments and Basin-wide Hydropower Rapid Assessment / Dialogue tools	EP	423101	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Identification of ecologically sensitive sub-basins	Guideline
	ISH10	By 2014	a)2014 b)2013	Guidance on Sustainable Management of Reservoir Watersheds prepared	WMP, AIP, MIWRMP	423103	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Negative impact mitigation measures for tributary dams	Guideline

ISH Initiative on Sustainable Hydropower

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ISH	ISH11	Continuously	2014/15	Environmental baseline information improved for hydropower planning	EP, IKMP	433005	Strengthen basin management processes	Develop and implement a system of comprehensive monitoring of project development in the basin	Monitoring system
	ISH12	By 2015	2015	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	IKMP, FMMP	440003	Studies and Guidelines	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	Study report
	ISH13	By 2013	2013	Benefit-sharing options for hydropower on tributaries evaluated and reported	BDP, EP, AIP, WMP	423105	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	Evaluation of benefit-sharing options	Study report
	ISH14	Continuously	Ongoing	Technical assistance provided to hydropower developers on safeguards and compliance monitoring		440009	Studies and Guidelines	Development of selected water resources management and sector guidelines	Guideline
	ISH15	By 2011	2012-14	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	IKMP, ICCS	421001	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Strengthen cooperation with China	Inst. capacity

National Indicative Plan projects relevant to ISH

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 2.2: Strengthening institutional and human capacity building in sustainable hydropower development at national, subnational, and community levels.	□
Cambodia	Project 3.1: Enhancing institutional capacity for sustainable hydropower development (SHD) and climate change adaptation	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Lao PDR - priority project	Project 2.1: Strengthening hydropower management system under the framework of the RBCs	□
Lao PDR - new project	Project 2.2: Promotion of small to mid scale hydropower projects enhancing national energy security	□
Lao PDR - ongoing project	Project 2.3: Sub-basin hydropower development planning related to risk management during implementation	■
Lao PDR - ongoing project	Project 2.4: Water Resources Management and Least-cost Hydropower Development Planning	■
Lao PDR - ongoing project	Project 2.5: Hydropower planning and optimal integration and operation of renewable resources	■
Lao PDR - ongoing project	Project 2.6: Strengthening of governmental function on technical regulations in the power sector at the central and provincial levels	■
Lao PDR - ongoing project	Project 2.7: Hydropower Management and Implementation of the National Policy on Sustainable Hydropower (NPSH)	■
Lao PDR - priority project	Project 3.2: Strengthening of Nam Ou River basin management	□
Lao PDR - new project	Project 3.4: Strengthening of Sekong River basin management	□
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■
Lao PDR - priority project	Project 4.1: Greater Mekong Subregion: Flood and Drought Management and Mitigation Project – Lao People's Democratic Republic	□
Lao PDR - priority project	Project 5.2: Inventory of environmental hotspots in Lao PDR	□
Lao PDR - priority project	Project 5.3: Study on the social, economic and environmental benefits of hydropower development in Lao PDR	□
Lao PDR - new project	Project 5.10: Riverbank protection master plan	□

Country	NIP Project title	Funding status
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	FA.7.2 Defining the potential of flow contribution and its impacts to the change of flow in the main stream of Mekong river	■
Viet Nam - Se San & Srepok	FA.7.3 Conservation of ecological and environmental hotspots through solutions forwards the sustainability for the Se San and Srepok sub-basins.	■
Viet Nam - Se San & Srepok	FA.7.4 Upgrade and preparation of the standards for sustainable hydropower development for the Se San and Srepok basin rivers.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■

Project Identification Note - MIWRMP

Project Title	Mekong IWRM Project (MIWRMP) Actions to address Basin Development Strategy	BDP ref	PIN R-12
Responsible (lead) entity	MIWRMP	Start date	2012
Other entities involved	AIP, BDP, EP, FMMP, FP, ICCS, IKMP, WMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the MIWRMP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to MIWRMP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to MIWRMP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for MIWRMP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to MIWRMP and its work plans. MIWRMP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of MIWRMP.</p>
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Project Title	Mekong IWRM Project (MIWRMP) Actions to address Basin Development Strategy			BDP ref	PIN R-12																												
<p>Relevant Strategic Priorities</p> <p><i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i></p>	<p>The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:</p> <table border="0"> <tr> <td>421000</td> <td>Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin</td> </tr> <tr> <td>423000</td> <td>Improve sustainability of hydropower development</td> </tr> <tr> <td>432000</td> <td>Strengthen national level water resources management processes</td> </tr> <tr> <td>433000</td> <td>Strengthen basin management processes</td> </tr> <tr> <td>435000</td> <td>Implement a targeted IWRM capacity building programme</td> </tr> <tr> <td>530000</td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	423000	Improve sustainability of hydropower development	432000	Strengthen national level water resources management processes	433000	Strengthen basin management processes	435000	Implement a targeted IWRM capacity building programme	530000	Monitoring, evaluation and reporting																
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<p>Key outputs and milestone dates</p> <p><i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i></p> <p><i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i></p> <p><i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i></p>	<table border="1"> <thead> <tr> <th>MRC-SP Ref</th> <th>MRC-SP planned date</th> <th>Description</th> <th>Updated target date</th> </tr> </thead> <tbody> <tr> <td>ALL01</td> <td>By 2014</td> <td>Sector reviews updated by sector programmes</td> <td>...</td> </tr> <tr> <td>ALL02</td> <td>By 2012</td> <td>Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes</td> <td>To be determined</td> </tr> <tr> <td>MIWRM01</td> <td>By 2013</td> <td>Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation</td> <td>2015</td> </tr> <tr> <td>MIWRM02</td> <td>By 2011</td> <td>Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams</td> <td>2016</td> </tr> <tr> <td>MIWRM03</td> <td>Continuously</td> <td>Strengthened implementation of MRC Procedures</td> <td>Ongoing (2015)</td> </tr> <tr> <td>MIWRM04</td> <td>Continuously</td> <td>A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented</td> <td>End 2013...</td> </tr> <tr> <td>MIWRM05</td> <td>By 2011</td> <td>Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken</td> <td>2011</td> </tr> </tbody> </table>	MRC-SP Ref	MRC-SP planned date	Description	Updated target date	ALL01	By 2014	Sector reviews updated by sector programmes	...	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	To be determined	MIWRM01	By 2013	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	2015	MIWRM02	By 2011	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	2016	MIWRM03	Continuously	Strengthened implementation of MRC Procedures	Ongoing (2015)	MIWRM04	Continuously	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	End 2013...	MIWRM05	By 2011	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	2011
MRC-SP Ref	MRC-SP planned date	Description	Updated target date																														
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MIWRM01	By 2013	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	2015																														
MIWRM02	By 2011	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	2016																														
MIWRM03	Continuously	Strengthened implementation of MRC Procedures	Ongoing (2015)																														
MIWRM04	Continuously	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	End 2013...																														
MIWRM05	By 2011	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	2011																														
<p>Linkages to other Projects</p>	<p>The National Indicative Plans set out a number of national projects of relevance to MIWRMP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to MIWRMP.</p> <p>MIWRMP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project</p>																																

Project Title	Mekong IWRM Project (MIWRMP) Actions to address Basin Development Strategy BDP ref PIN R-12
	<p>and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>MIWRMP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>

Description of the project

Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable MIWRMP to contribute strengthened processes and procedures and related institutional capacity in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • MIWRM01 - Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation: This includes finalization of PWQ and preparation of PWQ technical guidelines including environmental emergencies and sediment transport guidelines; the finalization of technical guidelines to implement the PMFM; and other regional guidelines for socio economic and environmental impact assessment are also early requirements for regular updating of the socio-economic and environment baseline of the LMB, gathered by BDP. • MIWRM02 - Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams: A key outcome of MIWRM for 2011-2015 is to ensure that Water utilisation procedures and technical guidelines are finalised and implemented on all LMB levels. This includes the following key outcomes: 1. Set-up of an operational mechanism to support the implementation of the PNPCA; 2. Implementation of PDIES towards basin-wide IWRM; 3. PWUM implementation – monitoring of water resources initiatives in LMB countries; 4. Finalize technical guidelines to implement PMFM; 5. Reach agreement and implement PWQ; 6. Prepare technical guidelines to support implementation of the PWQ; 7. Implementation of the PWQ technical guidelines, adaptation of related monitoring guidelines/manuals/procedures. • MIWRM03 - Strengthened implementation of MRC Procedures: Covered by MIWRM02 above
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Project Title	Mekong IWRM Project (MIWRMP) Actions to address Basin Development Strategy BDP ref PIN R-12
	<ul style="list-style-type: none"> • MIWRM04 - A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented: The goal is to build capacity to implement IWRM at both national and MRCS levels. In addition, outputs also derived from reporting system/mechanism to the MRC Joint Committee for supervise results against indicators to monitor the implementation performance. This includes: 1. Build capacity to implement the MRC procedures, technical guidelines and MRC toolbox; 2. Prepare annual progress reporting mechanism to strengthen IWRM basis; 3. Establish mechanism to translate lessons learnt in the report on implementing procedures and technical guidelines; and, 4. Notify JC on issues material to implementation of the procedures and technical guidelines. • MIWRM05 - Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken: this includes strengthening policies, institutional arrangements and capacity for IWRM in LMB countries. 1. Cambodia: Improved aquatic resources management in regionally significant areas; Mekong Water Resources Management Strategy supported and implemented through South-Eastern Mekong delta utilization; Investment on a hydro-meteorological network. 2, Lao PDR: Water resource management policy developed and institutions strengthened. 3.Thailand: IWRM policy and institutions are strengthened; priority investment implemented to meet national and local needs. 4. Viet Nam: River Basin Organisation for Sesan River Basin will be established and operational. Priority investment for WRM monitoring network will be strengthened and effectively implemented. • ALL01 - Stakeholder participation: in common with all other MRC Programmes, MIWRMP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between MIWRMP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, MIWRMP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed.
Tasks and outputs	Detailed tasks and outputs will be developed by MIWRMP through their Annual Work Plans, which as required will be progressively aligned with the priorities above
Location	Basin-wide
Implementation arrangements	As per MIWRMP Programme Document or as otherwise amended through Annual Work Plans

Project Title	Mekong IWRM Project (MIWRMP) Actions to address Basin Development Strategy	BDP ref	PIN R-12
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Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate resources arising from delays in recruitment and contracting processes • The Member States are unable to reach a common understanding of the Procedures, or consensus on key pending issues. <p>MIWRMP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	See MIWRMP Programme document
Additional funding required	MIWRMP to review and identify any funding gaps and report to these to TCU

Work plan

Work plan	See MIWRMP Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

MIWRM Mekong Integrated Water Resources Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
MIWRM	MIWRM01	By 2013	2015	Technical guidelines of the PMFM and PWQ on water flows and water quality monitoring prepared and approved for implementation	BDP, EP, IKMP	423203	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Strengthening PNPCA process	Procedure
		By 2013				433001	Strengthen basin management processes	Strengthening implementation of MRC Procedures	Procedure
	MIWRM02	By 2011	2016	Improved implementation of the MRC Procedures for enhanced coordination among the LMB countries on the operation of tributary dams	ISH, IKMP, EP	421002	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	Enhance coordination among the LMB countries on the operation of tributary dams by improving the implementation of the MRC Procedures	Inst. capacity
	MIWRM03	Continuously	Ongoing (2015)	Strengthened implementation of MRC Procedures	ICBP, IKMP, EP, BDP	433001	Strengthen basin management processes	Strengthening implementation of MRC Procedures	Procedure

MIWRM Mekong Integrated Water Resources Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
MIWRM	MIWRM04	Continuously	2013	A targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities developed and implemented	ICBP and other programmes	432002	Strengthen national level water resources management processes	Capacity building in water use permitting (of withdrawals and pollution discharges) and compliance assurance of permit conditions and regulations	Inst. capacity
						435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity
	MIWRM05	By 2011	2011	Capacity Needs Assessments for the implementation of the MRC Procedures in Member Countries designed and undertaken	ICBP, BDP, EP, IKMP, ICCS	435001	Implement a targeted IWRM capacity building programme	Targeted IWRM capacity building programme linked to the MRC's overall initiatives and complementary to national capacity building activities	Inst. capacity

National Indicative Plan projects relevant to MIWRMP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.4: Improvement and development of irrigation and drainage systems	□
Cambodia	Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■
Cambodia	Project 1.6: Tonle Sap Lowland Rural Development Project	■
Cambodia	Project 1.7: Tonle Sap Smallholder Development project	■
Cambodia	Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■
Cambodia	Project 2.1: Capacity development in IWRM for Inter-Agency and cross-boundary coordination	□
Cambodia	Project 2.2: Strengthening institutional and human capacity building in sustainable hydropower development at national, subnational, and community levels.	□
Cambodia	Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■
Cambodia	Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■
Cambodia	Project 4.1: Water Resources Studies in the Cambodia Mekong Delta Developed and Implemented	□
Cambodia	Project 4.4: Water Governance and climate change in Tonle Sap	■
Cambodia	Project 4.5: IWRM Multi Stakeholder Platform in Pursat Catchment, Tonle Sap	■
Thailand	PIN T-001 Capacity Building to RBC and Network	■
Thailand	PIN T-002 Database Management for Basin Development	■
Thailand	PIN T-003 Promote River Basin Organization Network and Information Dissemination	■
Lao PDR - new project	Project 2.2: Promotion of small to mid scale hydropower projects enhancing national energy security	□
Lao PDR - ongoing project	Project 2.6: Strengthening of governmental function on technical regulations in the power sector at the central and provincial levels	■
Lao PDR - priority project	Project 3.1: Strengthening of water resource procedures and guidelines	□
Lao PDR - priority project	Project 3.2: Strengthening of Nam Ou River basin management	□
Lao PDR - new project	Project 3.4: Strengthening of Sekong River basin management	□

Country	NIP Project title	Funding status
Lao PDR - ongoing project	Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■
Lao PDR - ongoing project	Project 3.7: Promote sustainable forest management by scaling up the Sustainable Forestry for Rural Development (SUFORD) Project, including REDD+ mechanisms	■
Lao PDR - priority project	Project 5.1: Establishment of Lao National Mekong Basin Information System	□
Lao PDR - priority project	Project 5.3: Study on the social, economic and environmental benefits of hydropower development in Lao PDR	□
Lao PDR - priority project	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	□
Lao PDR - new project	Project 5.9: Hydro-meteorology network enhancement	□
Lao PDR - ongoing project	Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	■
Lao PDR - priority project	Project 6.1: Strengthening NUOL's Curriculums on IWRM, Meteorology and Hydrology, Environmental Economics, and Engineering and Toxicology	□
Lao PDR - priority project	Project 6.2: Gender mainstreaming in integrated water resources management and planning	□
Lao PDR - new project	Project 6.4: Enhancing capacity building of MONRE staff on Agro–Climate Modelling and Application	□
Viet Nam - Mekong delta	FA.1.1 Establishment process and procedures for integration of national and sector planning into the IWRM-based Basin Development Strategy of MRC.	■
Viet Nam - Mekong delta	FA.1.3 Preparation of procedure for notification of water resources infrastructure projects development and operation in the Mekong Delta	■
Viet Nam - Mekong delta	FA.1.4 Preparation of Guidelines for data and information sharing for the Mekong Delta	■
Viet Nam - Mekong delta	FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	■
Viet Nam - Mekong delta	FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	FA.6.5. Strengthening the operation of existing Srepok River Basin Council.	■

Country	NIP Project title	Funding status
Viet Nam - Se San & Srepok	FA.6.6 Initial Preparations for the establishment of Se San River Basin Organization.	■
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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - Se San & Srepok	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.	■
Viet Nam - capacity building	FA.9.1 Formulate a Program for raising awareness of the IWRM-based Basin Development Strategy and how to implement it.	■
Viet Nam - capacity building	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.	■
Viet Nam - capacity building	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.	■
Viet Nam - capacity building	FA.9.4 Development of methodology and approach to study measures to response to climate change.	■

Project Identification Note - NAP

Project Title	Navigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-13
Responsible (lead) entity	NAP	Start date	2012
Other entities involved	BDP, EP, FP, IKMP, ISH, MIWRMP and others	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the NAP in making efforts to align their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans, provided additional funding is provided to the Navigation Programme as the current NAP 2013-2015 does not hold any reserves to do so.</p> <p>The required strategic actions within the BDS have been shown to be in line with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to NAP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Provided new funds are available, set out how the MRC SP milestones ascribed to NAP could be interpreted in the context of the BDS; and (b) Provided new funds are available, propose the milestones and related target dates for NAP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to NAP and its work plans. NAP is encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of NAP.</p>
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Project Title	Navigation Programme Actions to address Basin Development Strategy		BDP ref	PIN R-13
Relevant Strategic Priorities <i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i>	The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows:			
Key outputs and milestone dates <i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i> <i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i> <i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i>	MRC-SP Ref	MRC-SP planned date	Description	Updated target date
	423000	Improve sustainability of hydropower development		
	431000	Establish basin visions and management strategies for water-related sectors		
	433000	Strengthen basin management processes		
	530000	Monitoring, evaluation and reporting		
	ALL01	By 2014	Sector reviews updated by sector programmes	2014
	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	2012,13,14
	NAP01	By 2013	Regional Master Plan for the overall navigation development in the LMB prepared	2014-2015
	NAP02	By 2012	Provision of technical inputs : incorporation of ship locks in planned mainstream dams , including standards for lock design and operations formulated	2013-2014
	NAP03	By 2014	Regional Feasibility Study for Mekong Waterway Improvement prepared	Not in NAP programme
	NAP04	By 2013	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 States	2014
	NAP05	By 2014	Significance of the tributaries of the LMB for navigation identified	2015
	NAP06	By 2014	Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established	Ongoing
	NAP07	By 2015	Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups	2014-2015
	NAP08	By 2014	Trans-boundary environmental impact assessment of physical navigation improvement conducted	2015
	NAP09	to be updated	Risk analysis prepared leading to a scope for prevention and contingency of spills and navigation disasters, and management strategy	Ongoing

Project Title	Navigation Programme Actions to address Basin Development Strategy		BDP ref	PIN R-13
		for prevention, management and combating pollution from navigation developed		
	NAP10	By 2014	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	By 2014	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	to be updated	Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism	2014
	NAP13	By 2014	Aids to navigation as per priority needs, including landing facilities for tourists installed	Ongoing + 2013
	NAP14	By 2014	River surveys: Comprehensive analysis of the river by multi-beam echo-sounding conducted: the feasibility for conducting a comprehensive assessment of the river's bathymetry will be examined, including such technologies as echo-sounding.	Ongoing + 2013
	NAP15	By 2014 and continuously later	Information on Navigation accidents published and disseminated to regional, dialogue and Development Partners	2014
	NAP16	By 2013	Standards for waterway classifications developed	2014
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to NAP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to NAP.</p> <p>NAP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>NAP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>			
Description of the project				
Outline description	The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will			

Project Title	Navigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-13
	<p>demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable NAP to contribute greater understanding of the navigation sector in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • NAP01 - Regional Master Plan for the overall navigation development in the LMB prepared: Based on the earlier <i>Design of the Master Plan for Waterborne Transportation on the Mekong River System in Cambodia</i>, the NAP will prepare a Regional Master Plan for the overall navigation development in the LMB. • NAP02 - Provision of technical inputs : incorporation of ship locks in planned mainstream dams , including standards for lock design and operations formulated : In the event of mainstream dams being constructed, changes in water depths will make navigation possible over more than 700 km for 1000 tonne barges. Coordinated planning for ship locks is therefore a prerequisite. MRC has already committed to take this role, if the Lao Government decides to proceed with hydropower developments. • NAP03: Regional Feasibility Study for Mekong Waterway Improvement prepared – not currently within NAP programme • 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 States: Standardising and harmonising rules and regulations dealing with all aspects. Can be part of the Legal Frameworks. • NAP05 - Significance of the tributaries of the LMB for navigation identified: • NAP06 - Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established: To develop and strengthen Article 9 of the MRC Agreement on freedom of navigation through the establishment of an appropriate legal regime ensuring effective freedom of regional and international cross-border navigation on the Mekong and to ensure its implementation and sustainability. This will ensure the countries’ commitment to increase international trade by identifying coordination and cooperation mechanisms. • NAP07 - Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups: this study will help assist in developing rural waterborne transportation to improve access to markets, schools, hospitals, and remote 		

Project Title	Navigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-13
	<p>areas as well as to protect and promote the interest of the people that live directly with the river.</p> <ul style="list-style-type: none"> • NAP08 - Trans-boundary environmental impact assessment of physical navigation improvement conducted: this project has 2 key objectives: 1. To promote and realise the concept of environmental standards for clean river transportation, focusing on strategic prevention of environmental damage; and, 2. To balance the environmental consequences of projects against their economic and social significance. • 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: This includes risk analysis leading to a scope for prevention and contingency of spills and navigation disasters . First outputs are the Risk Analysis, the Recommendations, and the Safety Manuals produced for Chiang Saen Commercial Port. Next step is the formulation and implementation of the Regional Action Plan. • NAP10 - Operational Automatic Identification System for the Mekong Delta in Viet Nam established and a communication system for navigation in Lao PDR and Thailand developed: Technical sustainability has been considered when selecting programme outputs. An example is the introduction of Electronic Navigation Charts (ENC). These charts will replace hard copies used so far and will be so much easier to be updated. The installation of the Automatic Identification System will enable the administration to carefully follow the routes of the vessels and monitor transport of dangerous goods, and be able to intervene when things go wrong. More complex and innovative technologies, such as mathematical modelling and GIS applications, are being used at MRC mainly for decision-making purposes and governmental use. However it is foreseen that even these more complex products will soon be used at the local level as an aid in developing bottom up planning and implementation of improved river navigation. • 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: this includes establishing and maintaining a Regional Data Management Center: includes statistics on trade and transport, navigation accidents and oil spills, etc.). • NAP12 - Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism: The importance of public participation, coordination and the formation of partnerships is an essential working principle for the MRC. Implementation of the Navigation Programme and its associated activities cannot be done by the National Mekong Committees (NMC's) and the Secretariat alone. Strong involvement and commitment from government line agencies, the public, and national and regional initiatives is fundamentally 		

Project Title	Navigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-13
	<p>required for an effective MRC Navigation Programme. Strong involvement by the private sector and local/national ownership of activities must be ensured throughout every aspect of the Navigation Programme implementation. Decisive steps will be taken towards establishing close partnerships between public and private stakeholders.</p> <ul style="list-style-type: none"> • NAP13 - Aids to navigation as per priority needs, including landing facilities for tourists installed: Supply and installation of buoys and beacons on selected stretches of the waterways. As part of the key NAP output <i>Improved Traffic Safety, Efficiency, and Environmental Sustainability</i> which includes Aids to Navigation (Channel marking), it is foreseen that 45% more traffic will be using newly marked reaches of the river, once all aids to navigation are in place, especially in Viet Nam. Night navigation will also be possible allowing vessel movements 24 hours per day. Once channel markers are installed, international ship operators using the channel will contribute to maintenance through payment of light dues. Tourism development has been identified as a significant driver for economic expansion on the river. The introduction of modern passenger jetties at selected tourist sites along the river will therefore benefit both waterway-related tourism sector as well as improve the livelihood of the rural communities. • NAP14 - River surveys: Comprehensive analysis of the river by multi-beam echo-sounding conducted: the feasibility for conducting a comprehensive assessment of the river's bathymetry will be examined, including such technologies as echo-sounding. • NAP15 - Information on Navigation accidents published and disseminated to regional, dialogue and Development Partners: A core objective of the NAP is To increase the efficiency of domestic and cross-border waterborne transport in the LMB and to reduce accidents in ports, on vessels and on the waterways. • NAP16 - Standards for waterway classifications developed: Standards are needed for different classes of waterways in the Mekong basin. This will also require providing training courses for relevant staff members of the waterways department of each country and training of experts at the MRC Secretariat on specialised topics such as safety rules/regulations, best practices for the transport of dangerous goods, waterway design, waterway classification, IWT promotion, charting tools including ARCGIS/ARCMAP, Electronic Navigation Charts, aids to navigation maintenance, piloting skills. • ALL01 - Stakeholder participation: in common with all other MRC Programmes, NAP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between NAP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, NAP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed. 		

Project Title	Navigation Programme Actions to address Basin Development Strategy	BDP ref	PIN R-13
Tasks and outputs	Detailed tasks and outputs will follow the implementation of the NAP 2013-2015.		
Location	Basin-wide		
Implementation arrangements	As per NAP Programme Document		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes <p>NAP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with ICCS, TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	See NAP Programme document
Additional funding required	NAP to review and identify any funding gaps and report to these to TCU

Work plan

Work plan	See NAP Programme
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

NAP Navigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
ALL	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
NP	NAP01	By 2013	2014-2015	Regional Master Plan for the overall navigation development in the LMB prepared	And other programmes	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
				Regional Master Plan for the overall navigation development in the LMB prepared	And other programmes	431003	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a master plan for navigation in Cambodia	Sector plan
	NAP02	By 2012	2013-2014	Overall Strategy for incorporation of ship locks in planned mainstream dams , including standards for lock design and operations formulated	ISH	423204	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	Design guidance for mainstream dams	Guideline
	NAP03	By 2014	Not in NAP programme	Regional Feasibility Study for Mekong Waterway Improvement prepared	All other programmes	431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP04	By 2013	2014	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 States		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
		By 2013	433002			Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity	

NAP Navigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
NP	NAP05	By 2014	2015	Significance of the tributaries of the LMB for navigation identified		431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	NAP06	By 2014	Ongoing	Cross-border navigation legal regime established and a mechanism for the effective implementation and monitoring of the legal framework is established		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP07	By 2015	2014-2015	Specific strategy designed to support small scale activities related to the development of rural waterborne transport specifically targeting vulnerable groups	BDP, FP, EP	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	NAP08	By 2014	2015	Trans-boundary environmental impact assessment of physical navigation improvement conducted	EP, MIWRMP	431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP09	to be updated	Ongoing	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	EP, IKMP, ISH	431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP10	By 2014	2014- 2015	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		433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity
	NAP11	By 2014	2015	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	IKMP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity

NAP Navigation Programme

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
NP	NAP12	to be updated	2014	Recommendations provided for coordinated frameworks for public-private partnerships in Mekong waterborne transportation and tourism	EP, ISH	431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan
	NAP13	By 2014	Ongoing + 2013	Aids to navigation as per priority needs, including landing facilities for tourists installed		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP14	By 2015	Ongoing + 2013	River scan: Comprehensive analysis of the river by multi-beam echosounding conducted		431004	Establish basin visions and management strategies for water-related sectors	Navigation: Preparation of a navigation improvement plan	Sector plan
	NAP15	By 2014 and continuously later	2014	Information on Navigation accidents published and disseminated to regional, dialogue and development partners		433003	Strengthen basin management processes	Broaden and strengthen national and basin scale monitoring systems including impacts of climate change impacts	Monitoring system
	NAP16	By 2013	2014	Standards for waterway classifications developed		431001	Establish basin visions and management strategies for water-related sectors	Fisheries management: Development of a comprehensive, basin-wide fish management strategy	Sector plan

National Indicative Plan projects relevant to NAP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 2.5: River depth/water level monitoring (Navigability)	■
Lao PDR - priority project	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	□
Lao PDR - new project	Project 5.11: River dredging impact assessment	□
Lao PDR - new project	Project 5.12: Navigation channel improvement along the Mekong River in the section from Houayxai to Luang Prabang of Lao PDR	□
Lao PDR - new project	Project 5.13: Updating chart datum of UHA 1996 of the Lower Mekong	□
Lao PDR - ongoing project	Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	■
Viet Nam - Mekong delta	FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■
Viet Nam - Mekong delta	FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	■
Viet Nam - Mekong delta	FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Mekong delta	FA.3.3 Effective implementation of the Navigation Agreement between Viet Nam and Cambodia in the context of upstream development and climate change.	■
Viet Nam - Mekong delta	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.	■
Viet Nam - Se San & Srepok	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.	■

Project Identification Note - WMP

Project Title	Watershed Management Project Actions to address Basin Development Strategy	BDP ref	PIN R-14
Responsible (lead) entity	WMP	Start date	2012
Other entities involved	IKMP	End date	2015
Principal beneficiaries	National planners, line agencies, river basin organisations/committees, research institutions and other related organisations		

Objectives and key performance indicators

Aims and objectives	<p>The aim of this Project Identification Note is to assist the WMP in aligning their activities with the requirements of the Basin Development Strategy (BDS), approved by MRC Council in January 2011.</p> <p>The BDS acknowledges that there may be some inconsistencies between its stated strategic priorities and related required strategic actions and the currently approved Programme documents. The BDS foresees that, where necessary, Programme activities will be progressively aligned with the BDS through appropriate development of successive Annual Work Plans.</p> <p>The required strategic actions within the BDS have been shown to be consistent with the milestones for each Programme as set out in Annex B of the MRC Strategic Plan for 2011-15 (MRC SP), which has been approved by the MRC Joint Committee. The consistency of milestones with the BDS Strategic Priorities and Actions relevant to WMP is demonstrated in the table attached to this PIN. Thus achievement of the MRC SP milestones will lead not only to implementation of the MRC SP, but also to the BDS.</p> <p>The objectives of this Project Identification Note are therefore to:</p> <ol style="list-style-type: none"> (a) Set out how the MRC SP milestones ascribed to WMP should be interpreted in the context of the BDS; and (b) To firm up the milestones and related target dates for WMP against which progress will be monitored as part of the MRC SP. <p>In addition, this Project Identification Note includes reference to projects planned in each country as part of their National Indicative Plans that are seen to be relevant to WMP and its work plans. WMP are encouraged to explore potential synergies with these national projects to enrich outcomes and promote greater efficiency in implementing both the national projects and those of WMP.</p>
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Project Title	Watershed Management Project Actions to address Basin Development Strategy			BDP ref	PIN R-14												
Relevant Strategic Priorities <i>Note: Further details of relevant Strategic Priorities are given in the table attached to this PIN. The referencing system used aligns with para and sub-para numbering given in the BDS.</i>	The Strategic Priorities in the Basin Development Strategy towards which this PIN is addressed are as follows: <table border="0"> <tr> <td>433000</td> <td></td> <td>Strengthen basin management processes</td> </tr> <tr> <td>530000</td> <td></td> <td>Monitoring, evaluation and reporting</td> </tr> </table>					433000		Strengthen basin management processes	530000		Monitoring, evaluation and reporting						
433000		Strengthen basin management processes															
530000		Monitoring, evaluation and reporting															
Key outputs and milestone dates <i>Note: The milestone(s) of each PIN are taken from Annex B of the MRC Strategic Plan 2011-15. The milestone descriptions are treated as defined outputs for the purpose of this PIN.</i> <i>Progress monitoring of PIN implementation (and thus of the BDS) will be against these milestones on a six-monthly basis (ref CEO memos).</i> <i>Monitoring of outcomes resulting from achievement of these milestones will be undertaken through the MRC SP mid-term review in 2013 and a further review expected in late 2014.</i>	<table border="1"> <thead> <tr> <th>MRC-SP Ref</th> <th>MRC-SP planned date</th> <th>Description</th> <th>Updated target date</th> </tr> </thead> <tbody> <tr> <td>ALL01</td> <td>By 2014</td> <td>Sector reviews updated by sector programmes</td> <td>...</td> </tr> <tr> <td>ALL02</td> <td>By 2012</td> <td>Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes</td> <td>...</td> </tr> <tr> <td>WMP01</td> <td>to be updated</td> <td>Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework</td> <td><i>Under review</i></td> </tr> </tbody> </table>	MRC-SP Ref	MRC-SP planned date	Description	Updated target date	ALL01	By 2014	Sector reviews updated by sector programmes	...	ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...	WMP01	to be updated	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	<i>Under review</i>
MRC-SP Ref	MRC-SP planned date	Description	Updated target date														
ALL01	By 2014	Sector reviews updated by sector programmes	...														
ALL02	By 2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	...														
WMP01	to be updated	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	<i>Under review</i>														
Linkages to other Projects	<p>The National Indicative Plans set out a number of national projects of relevance to WMP's work. Further information on relevant projects are set out in the attached table on National Indicative Plan projects relevant to WMP.</p> <p>WMP will explore with each country through the relevant NMC opportunities to cooperate with relevant agencies to enhance delivery of both this regional project and the relevant national projects, to exchange information and project outputs, create efficiencies in output delivery and contribute towards mutual enrichment of planned outcomes.</p> <p>WMP will further cooperate with other MRC Programmes in attaining their milestones as highlighted in Appendix B in the Regional Action Plan.</p>																

Project Title	Watershed Management Project Actions to address Basin Development Strategy	BDP ref	PIN R-14
Description of the project			
Outline description	<p>The key features of this project are associated with responding to the strategic priorities for basin development and management as set out in the IWRM-based Basin Development Strategy. The attainment of the SP milestones above will demonstrate that these strategic priorities are being addressed.</p> <p>The scope of work is designed to enable WMP to contribute greater understanding of watershed management in areas of strategic importance to the MRC, and through this to inform and enhance future updates of the Basin Development Strategy. This approach is intended to support the overall aims of the MRC and its Member States in promoting sustainable socio-economic development across the LMB, whilst protecting key environmental assets and minimising harm to others.</p> <p>The specific tasks required are:</p> <ul style="list-style-type: none"> • WMP01 - Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework: The regional part will engage and work closely with MONRE and Nam Ton Pilot watershed area in Lao PDR. The project is consisted of two parts: <ul style="list-style-type: none"> (A) The regional part (Project Part 2 - PP2) will be directly managed by MRCS. (B) The national pilot Project (Project part 1 - PP1) will be managed by WREA/MAF/Local stakeholders with the support from the Technical Assistant/Consultant team and will be oversight, facilitated and supported by PP2 in the areas that capture regional interests/relevance. <p>Project Part 2 (regional), Watershed Management Project (WSMP)/MRC-KfW Focal Point reporting to the Director of the MRCS Planning Division (PLD) has been established. The WSMP will manage the implementation of the regional part (PP2) as well as facilitate and coordinate technical assistance to the Nam Ton Pilot project upon the request by PP1.</p> • ALL01 - Stakeholder participation: in common with all other MRC Programmes, WMP should review and refresh their stakeholder participation and communication plan, with particular emphasis on strengthening linkages between WMP and relevant line agencies and RBO/RBCs. • ALL02 - Basin Development Strategy update: also in common with all other MRC Programmes, WMP will cooperate with BDP/EP in updating firstly the State of the Basin Report and secondly the updating of the Basin Development Strategy. The nature of this cooperation will be mutually agreed. 		
Tasks and outputs	Detailed tasks and outputs will be developed by WMP through their Annual Work Plans, which as required will be progressively aligned with the priorities above		
Location	Basin-wide		

Project Title	Watershed Management Project Actions to address Basin Development Strategy	BDP ref	PIN R-14
Implementation arrangements	As per WMP Programme Document or as otherwise amended through Annual Work Plans		

Risks, mitigation and coordination

Principal risks and means of mitigating risks	<p>The principle risks associated with not being able to achieve the MRC-SP milestones are:</p> <ul style="list-style-type: none"> • Misalignment between activities above and current Programme document and work plans, requiring adjustment to funding agreements in order to make significant changes to the work plans • Inadequate funding limiting what can be achieved within the time allowed • Inadequate resources arising from delays in recruitment and contracting processes <p>WMP will assess the significance of these risks and devise, where needed, appropriate mitigation strategies in consultation with TCU and MRCS management.</p>
External coordination requirements	See “Linkages to other Projects” above
Internal coordination requirements	See “Linkages to other Projects” above

Project funding

Existing funding	See WMP Programme document
Additional funding required	WMP to review and identify any funding gaps and report to these to TCU

Work plan

Work plan	See WMP Programme Implementation Plan and Annual Work Plan
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Summary of strategic milestones to be met and relevance to IWRM-based Basin Development Strategy

WMP Watershed Management Project

Lead Prog.	MRC Strategic Plan milestone				Supporting Progs.	IWRM-based Basin Development Strategy			
	Ref	Priority	Updated	Description		BDS para ref	Strategic Priority	Strategic Action	Primary product
ALL	ALL01	By 2014	2014	Sector reviews updated by sector programmes		530003	Monitoring, evaluation and reporting	Basin development strategy updated	Sector plan
	ALL02	By 2012	2012	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes		433007	Strengthen basin management processes	Strengthen and support regional and national stakeholder participation	Inst. capacity
WMP	WMP01	to be updated	to be updated	Concept for a Watershed Management Decision Support System updated, and integrated with the Basin-wide MRC Decision Support Framework	IKMP	433002	Strengthen basin management processes	Development and promotion of harmonized methods and tools	Inst. capacity

National Indicative Plan projects relevant to WMP

■ Funded/partially funded activities □ Unfunded activities

Country	NIP Project title	Funding status
Cambodia	Project 1.2: Agricultural land classification and Soil Fertility Improvement in LMB	□
Cambodia	Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□
Lao PDR	Project 1.6: The Agro-Biodiversity Initiative (TABI) – Phase II: Sustainable management and use of Agro-biodiversity (ABD) in multi-functional landscapes in upland communities	■
Lao PDR - priority project	Project 3.3: Strengthening the Management of the Conservation and Protection Forest Areas Programme	■
Lao PDR - new project	Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□
Lao PDR - ongoing project	Project 3.7: Promote sustainable forest management by scaling up the Sustainable Forestry for Rural Development (SUFORD) Project, including REDD+ mechanisms	■
Lao PDR - ongoing project	Project 4.2: Reducing Emission from Deforestation and Forest Degradation (REDD+) to reduce the rates of deforestation and forest degradation, in order to join international efforts in reducing greenhouse gas (GHG) emissions from forestry sector in developing countries to mitigate climate change	■
Lao PDR - ongoing project	Project 4.4: Forest Investment Program in Lao PDR: to reduce emissions from deforestation and forest degradation, while also helping the country to adapt to climate change impacts	■
Lao PDR - new project	Project 6.5: Strengthening capacities in forest Information Management	□

Appendix D Potential linkages between National Indicative Plans and MRC Programme activities

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Linkage between National Indicative Plan projects and MRC Programme activities

■ Funded/partially funded activities □ Unfunded activities

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Cambodia														
<i>Outcome 1: Irrigated agriculture for food security and poverty alleviation expanded and intensified</i>														
Project 1.1: Improvement of agricultural productivity and diversification	□	▪	▪	□	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 1.2: Agricultural land classification and Soil Fertility Improvement in LMB	□	▪	▪	□	▪	□	▪	▪	▪	▪	▪	▪	▪	□
Project 1.3: Integration of Environmentally Friendly Practices in Agriculture and Water Management	□	▪	▪	▪	□	▪	□	□	▪	▪	▪	▪	▪	▪
Project 1.4: Improvement and development of irrigation and drainage systems	□	▪	▪	□	▪	▪	▪	□	▪	▪	▪	□	▪	▪
Project 1.5: Cambodia Agricultural Value Chain (CAVAC)	■	■	▪	■	▪	■	▪	■	▪	▪	▪	■	▪	▪
Project 1.6: Tonle Sap Lowland Rural Development Project	■	■	▪	■	▪	■	■	▪	▪	▪	▪	■	▪	▪
Project 1.7: Tonle Sap Smallholder Development project	■	■	▪	■	▪	■	■	▪	▪	▪	▪	■	▪	▪
Project 1.8: Rural Irrigation and Agricultural Productivity Improvement project	■	■	▪	■	▪	■	■	▪	▪	▪	▪	■	▪	▪
Project 1.9: Project for Agricultural Development and Economic Empowerment (PADEE)	■	▪	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 1.10: Climate Resilient Rice Commercialization Sector Development Program (SDP)	■	▪	■	■	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
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	▪	▣	▪	▪	▪	▪	▪	▣	▪	▪	▪	▣	▪	▪
Project 2.2: Strengthening institutional and human capacity building in sustainable hydropower development at national, subnational, and community levels.	▪	▪	▪	▪	▪	▪	▪	▣	▪	▪	▣	▣	▪	▪
Project 2.3: Integrated flood and droughts risk management planning strengthened	▪	▪	▪	▣	▪	▣	▪	▣	▪	▪	▪	▪	▪	▪
Project 2.4: GMS: Flood and Drought Risk Management and Mitigation Project	■	■	■	■	▪	■	▪	▪	▪	▪	▪	■	▪	▪
Project 2.5: River depth/water level monitoring (Navigability)	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪	■	▪
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	▪	▣	▣	▪	▪	▪	▪	▪	▪	▪	▣	▪	▪	▪
Project 3.2: Assessing results of upstream and downstream development to support informed policy making processes	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 3.3: Pilot Program for Climate Resilience (2011 – 2013), Phase-1	▪	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 3.4: Water Resources Management Sector Development Program (WRMSDP)	■	■	■	■	▪	■	▪	▪	▪	■	▪	■	▪	▪
Project 3.5: Strategic Program on Climate Resilience (SPCR)	▪	■	■	■	▪	▪	▪	■	▪	▪	▪	▪	▪	▪
Project 3.6: Cambodian Climate Change Alliance	▪	■	■	▪	▪	▪	▪	▪	■	▪	▪	▪	▪	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
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	■	■	□	□	■	□	■	■	■	□	■	□	■	■
Project 4.2: Development of Environmental and Socio-economic Baseline and development scenario impact assessment for Tonle Sap	■	□	■	■	□	□	■	■	■	■	■	■	■	■
Project 4.3: Study of impact on Cambodian inland fishery and sediment transport in the Mekong Floodplain and Tonle Sap Great Lake	■	□	■	■	■	■	□	■	■	□	■	■	■	■
Project 4.4: Water Governance and climate change in Tonle Sap	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Project 4.5: IWRM Multi Stakeholder Platform in Pursat Catchment, Tonle Sap	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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	■	□	□	■	□	□	□	■	■	■	■	■	■	■
Project 5.2: Promotion of multi-purpose uses for water storage infrastructure in key sub-basins in the Tonle Sap	□	□	□	□	□	□	□	■	■	■	□	■	■	□
Thailand														
PIN T-001 Capacity Building to RBC and Network	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PIN T-002 Database Management for Basin Development	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PIN T-003 Promote River Basin Organization Network and Information Dissemination	■	■	■	■	■	■	■	■	■	■	■	■	■	■

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Lao PDR														
Focus Area 1. Sustainable agriculture and fisheries development for food security and poverty reduction														
<i>Priority projects</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 1.1: Improvements to irrigated agriculture along the Mekong River to increase crop and livestock productivity	▣	▣	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 1.2: Develop national fisheries law, create awareness on the law and regulations, as well as develop a fisheries management strategy and plans for Lao PDR	▪	▣	▪	▪	▪	▪	▣	▪	▪	▪	▪	▪	▪	▪
Project 1.3: Improve fisheries management system in reservoirs and irrigation systems	▪	▪	▪	▪	▪	▪	▣	▪	▪	▪	▪	▪	▪	▪
Project 1.4: Promote the development of aquaculture in Lao PDR	▪	▣	▪	▪	▪	▪	▣	▪	▪	▪	▪	▪	▪	▪
Project 1.5: Improvement of fisheries statistics in Lao PDR	▪	▣	▪	▪	▪	▪	▣	▪	▪	▪	▪	▪	▪	▪
<i>On-going projects with secured funding</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 1.6: The Agro-Biodiversity Initiative (TABI) – Phase II: Sustainable management and use of Agro-biodiversity (ABD) in multi-functional landscapes in upland communities	■	▪	■	■	■	▪	▪	▪	▪	▪	▪	▪	▪	■
Focus Area 2. Energy and Sustainable Hydropower Development														
<i>Priority projects</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 2.1: Strengthening hydropower management system under the framework of the RBCs	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▣	▪	▪	▪
<i>New projects</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Project 2.2: Promotion of small to mid scale hydropower projects enhancing national energy security	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▣	▣	▪	▪
<i>On-going projects with secured funding</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 2.3: Sub-basin hydropower development planning related to risk management during implementation	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	■	▪	▪	▪
Project 2.4: Water Resources Management and Least-cost Hydropower Development Planning	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	■	▪	▪	▪
Project 2.5: Hydropower planning and optimal integration and operation of renewable resources	▪	■	■	▪	▪	▪	▪	▪	▪	▪	■	▪	▪	▪
Project 2.6: Strengthening of governmental function on technical regulations in the power sector at the central and provincial levels	▪	■	▪	▪	■	▪	▪	▪	▪	▪	■	■	▪	▪
Project 2.7: Hydropower Management and Implementation of the National Policy on Sustainable Hydropower (NPSH)	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	■	▪	▪	▪
Focus Area 3. Natural resource management, particularly water resources management														
<i>Priority projects</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 3.1: Strengthening of water resource procedures and guidelines	▪	▣	▪	▪	▪	▪	▪	▣	▪	▪	▪	▣	▪	▪
Project 3.2: Strengthening of Nam Ou River basin management	▪	▣	▪	▪	▪	▪	▪	▣	▪	▪	▣	▣	▪	▪
Project 3.3: Strengthening the Management of the Conservation and Protection Forest Areas Programme	▪	▪	▪	▪	■	▪	▪	■	▪	▪	▪	▪	▪	■
<i>Project New:</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 3.4: Strengthening of Sekong River basin management	▪	▣	▪	▪	▪	▪	▪	▣	▪	▪	▣	▣	▪	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Project 3.5: Developing Land Policy and Master Plan for Land Use Planning	□	□	□	□	□	•	•	•	□	□	•	•	•	□
<i>Project On-:</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Project 3.6: National Integrated Water Resources Management (IWRM) Support Program	■	■	•	■	■	•	•	■	•	•	■	■	•	•
Project 3.7: Promote sustainable forest management by scaling up the Sustainable Forestry for Rural Development (SUFORD) Project, including REDD+ mechanisms	•	•	•	•	•	•	•	•	•	•	•	■	•	■
Focus Area 4. Climate change adaptation and mitigation														
<i>Priority projects</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Project 4.1: Greater Mekong Subregion: Flood and Drought Management and Mitigation Project – Lao People’s Democratic Republic	•	•	□	□	•	□	•	•	•	•	□	•	•	•
<i>On-going projects with secured funding</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Project 4.2: Reducing Emission from Deforestation and Forest Degradation (REDD+) to reduce the rates of deforestation and forest degradation, in order to join international efforts in reducing greenhouse gas (GHG) emissions from forestry sector in developing countries to mitigate climate change	•	■	■	•	■	•	•	•	•	•	•	•	•	■
Project 4.3: Improving the Resilience of the Agriculture Sector to Climate Change Impacts	■	•	■	■	•	•	•	•	•	•	•	•	•	•
Project 4.4: Forest Investment Program in Lao PDR: to reduce emissions from deforestation and forest degradation, while also helping the country to adapt to climate change impacts	•	■	■	•	■	•	•	•	•	•	•	•	•	■

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Focus Area 5. Human resource development for natural resources management														
<i>Priority projects</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 5.1: Establishment of Lao National Mekong Basin Information System	▪	▣	▪	▪	▪	▪	▪	▣	▪	▣	▪	▣	▪	▪
Project 5.2: Inventory of environmental hotspots in Lao PDR	▪	▣	▪	▪	▣	▣	▣	▪	▪	▣	▣	▪	▪	▪
Project 5.3: Study on the social, economic and environmental benefits of hydropower development in Lao PDR	▪	▣	▪	▪	▣	▪	▪	▪	▪	▪	▣	▣	▪	▪
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	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▣	▪
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	▪	▪	▪	▪	▪	▪	▪	▪	▪	▣	▪	▣	▪	▪
<i>New projects</i>	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 5.6: Study on ecosystem services of wetlands and biodiversity	▪	▣	▪	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 5.7: Case study on impacts of climate change on agriculture	▣	▣	▣	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▪
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)	▣	▣	▣	▪	▣	▪	▪	▪	▪	▪	▪	▪	▪	▪
Project 5.9: Hydro-meteorology network enhancement	▪	▪	▪	▪	▪	▪	▪	▣	▪	▣	▪	▣	▪	▪
Project 5.10: Riverbank protection master plan	▪	▣	▪	▪	▣	▣	▣	▪	▪	▣	▣	▪	▪	▪
Project 5.11: River dredging impact assessment	▪	▣	▪	▪	▣	▣	▣	▪	▪	▣	▪	▪	▣	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Project 5.12: Navigation channel improvement along the Mekong River in the section from Houayxai to Luang Prabang of Lao PDR	•	•	•	•	☐	•	☐	•	•	☐	•	•	☐	•
Project 5.13: Updating chart datum of UHA 1996 of the Lower Mekong	•	•	•	•	•	☐	•	•	•	☐	•	•	☐	•
<i>On-going projects with secured funding</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Project 5.14: Set up the GPS instrument for navigation safety at hot spots and the installation of alert system for navigation during lowest water level (in dry season) along the Mekong River from Houayxai to Luang Prabang of Lao PDR	•	■	•	•	■	■	•	•	•	■	•	■	■	•
Focus Area 6. Research and development														
<i>Priority projects</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Project 6.1: Strengthening NUOL's Curriculums on IWRM, Meteorology and Hydrology, Environmental Economics, and Engineering and Toxicology	•	•	•	•	☐	•	•	☐	•	☐	•	☐	•	•
Project 6.2: Gender mainstreaming in integrated water resources management and planning	•	☐	•	•	☐	•	•	☐	•	•	•	☐	•	•
Project 6.3: Capacity building for Monitoring, Evaluation and Learning (MEL) related to PINs implementation	•	☐	•	•	•	•	•	☐	☐	•	•	•	•	•
<i>New projects</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Project 6.4: Enhancing capacity building of MONRE staff on Agro–Climate Modelling and Application	•	•	☐	•	•	•	•	☐	•	☐	•	☐	•	•
Project 6.5: Strengthening capacities in forest Information Management	•	•	•	•	•	•	•	☐	•	☐	•	•	•	☐

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MWRMP	NAP	WMP
Viet Nam														
<i>A. Mekong Delta</i>														
<i>Focus Area 1. Integration and strengthening of national planning and management processes with Basin Development Strategy</i>														
FA.1.1 Establishment process and procedures for integration of national and sector planning into the IWRM-based Basin Development Strategy of MRC.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.1.2 Study of the solutions for strengthening water resources management in the Mekong Delta	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.1.3 Preparation of procedure for notification of water resources infrastructure projects development and operation in the Mekong Delta	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.1.4 Preparation of Guidelines for data and information sharing for the Mekong Delta	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.1.5 Preparation of Guidelines for water use, water quality management and prevention of water pollution in the Mekong Delta	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Focus Area 2. Development of vision, updated sector management strategies and environmental, economic and social objectives for base line for monitoring</i>														
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.2.2 Updating the water resources development scenarios for the Mekong Delta to be used for reviewing and improving the basin development scenarios	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.2.3 Preparation of state of environment report for the Mekong Delta	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.2.4 Upgrading and Expansion of monitoring system to monitor water resources and environmental management in the Mekong Delta and upstream development.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.2.5 Improve Knowledge Base in the VNMC Secretariat and concerned line agencies	■	■	■	■	■	■	■	■	■	■	■	■	■	■

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
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.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.3.3 Effective implementation of the Navigation Agreement between Viet Nam and Cambodia in the context of upstream development and climate change.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.3.5 Mekong Delta Study on the impacts of upstream hydropower and water infrastructure development	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Focus Area 4. Improvement of water use efficiency for irrigated agriculture to serve for national food security and poverty alleviation policy														
FA.4.1 Improvement of water use efficiency for irrigated agriculture and fishery development in the Mekong Delta.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.4.2 Development of Strategy for drought management and water supply.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.4.3 Diversification of agriculture production and rural development in the situation of upstream development, climate change and sea water rise.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.4.4 Integrated flood plain management for Viet Nam and Cambodia.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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.	■	■	■	■	■	■	■	■	■	■	■	■	■	■

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
Focus Area 5. Assessment of uncertainties and risks caused by developments and climate change														
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.	▪	■	▪	▪	■	■	▪	▪	▪	■	■	▪	▪	▪
FA.5.2 Study of flood impacts to the quality and efficiency of fluvial land use in the Mekong Delta, Viet Nam.	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪	▪	▪
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	▪	■	▪	▪	■	▪	■	▪	▪	▪	▪	▪	▪	▪
FA.5.4 Assessment of tendency and change of biodiversity, environmental hotspots in the Mekong Delta and their impacts to the vulnerable communities.	▪	▪	▪	▪	■	■	■	▪	▪	▪	▪	▪	▪	▪
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.	▪	▪	■	▪	▪	■	▪	▪	▪	▪	▪	▪	▪	▪
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														
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.	▪	■	▪	▪	■	▪	■	▪	▪	■	■	▪	▪	▪
FA.6.2 Preparation of the formulation of Integrated Water Resources Management Strategy taking into account of trans-boundary impacts.	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
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.	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪
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.	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪
FA.6.5. Strengthening the operation of existing Srepok River Basin Council.	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MWRMP	NAP	WMP
FA.6.6 Initial Preparations for the establishment of Se San River Basin Organization.	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪
FA.6.7 Development a suitable mechanism for cooperation with Cambodia to successfully implement the IWRM-based Basin Development Strategy.	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪	■	▪	▪
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.	▪	■	▪	▪	▪	▪	■	▪	▪	■	▪	■	■	▪
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.	▪	■	▪	▪	■	▪	▪	▪	▪	■	▪	■	▪	▪
Focus Area 7: Enhancement of the sustainability of tributaries' hydropower development through mitigation of negative impacts and cost and benefit sharing														
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.	▪	■	■	▪	■	■	■	▪	▪	■	■	▪	▪	▪
FA.7.2 Defining the potential of flow contribution and its impacts to the change of flow in the main stream of Mekong river	▪	▪	▪	▪	▪	▪	▪	▪	▪	■	■	▪	▪	▪
FA.7.3 Conservation of ecological and environmental hotspots through solutions forwards the sustainability for the Se San and Srepok sub-basins.	▪	▪	▪	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪
FA.7.4 Upgrade and preparation of the standards for sustainable hydropower development for the Se San and Srepok basin rivers.	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	■	▪	▪	▪
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.	▪	■	▪	▪	▪	▪	▪	▪	▪	▪	■	■	▪	▪
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														
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.	▪	▪	■	▪	▪	▪	▪	▪	▪	■	▪	▪	▪	▪
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.	▪	■	■	▪	■	▪	▪	▪	▪	▪	■	▪	▪	▪

	AIP	BDP	CCAI	DMP	EP	FMMP	FP	ICBP	ICCS	IKMP	ISH	MIWRMP	NAP	WMP
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														
FA.9.1 Formulate a Program for raising awareness of the IWRM-based Basin Development Strategy and how to implement it.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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.	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FA.9.4 Development of methodology and approach to study measures to response to climate change.	■	■	■	■	■	■	■	■	■	■	■	■	■	■

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Appendix E Pro forma for quarterly reporting of milestone achievement

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Mekong River Commission

Progress monitoring of implementation of MRC Strategic Plan and the Basin Development Strategy

Introduction

This spreadsheet enables the monitoring of implementation of progress of activities contributing to achievement of the goals and outcomes of the MRC Strategic Plan and the Strategic Priorities and Strategic Actions of the Basin Development Strategy, based upon the progress reports of MRC Programmes in meeting their milestones as set out in Annex B of the MRC Strategic Plan 2011-15.

Each MRC Programme will have developed its own monitoring system appropriate to its needs and in line with its individual Programme document and log frame. Different approaches are being adopted according to individual preferences (eg Excel-based, MS Project, etc), but a common requirement should be that progress towards MRC-SP milestones is included, as called for by MRC management.

All MRC Programmes have to do on a quarterly basis is submit summary progress data relating to MSP-milestones (drawn from their own systems or in the absence of such systems by best judgement) and send this to TCU in MSWord or MS EXcel format according to preference.

As described below, TCU is responsible for setting up the linkages embedded within this spreadsheet between MRC-SP milestones and the MRC-SP goals and outcomes and the BDS Strategic Priorities and Strategic Actions. Thereafter, each quarter TCU enters the data from each MRC Programme and copies the result tables into their management report.

It is estimated that the time required for each Programme to complete and submit their data to TCU each quarter should be less than one hour each quarter and for TCU to compile the results no more than two hours.

Structure of the spreadsheet

The basis for the linkages between the milestones and the MSP goals and outcomes and the BDS strategic priorities and actions is elaborated in the Regional Action Plan. These linkages are embedded in this spreadsheet with facility to adjust the relative weights of the different parameters in contributing to the higher level estimates.

There are ten worksheets in four main colour coded sections. The **two blue tabs** contain this introduction and the data input sheet, labelled as "Prog reports". The **three red tabs** contain three reports which are automatically generated from the data input from the Programme reports. The **four green tabs** provide the set up data, which create the linkages between the parameters and allow weights to be varied. The final **black tab** contains listings of the MSP milestones, activities, outcomes and goals together with the those for the Basin Development Strategy Strategic Priorities and Strategic Actions.

Setting up the spreadsheet

The initial set up of the spreadsheet requires three main steps. Firstly, the milestones needed to be entered in each MRC Programme's reporting sheet in the "Prog Reports" tab. The spreadsheet reads these codes and enters related data from the "Look up" tab. Secondly, in the "Look up" tab the milestones dates are to be updated in the yellow highlighted cells (if needed). Thirdly, the linkages and weights need to be entered in the four green tabs. Detailed instructions are provided in each green tab.

All of the above has been done to establish an initial set up consistent with the MSP and Regional Action Plan documents. The only remaining task, if wished, is to change the weightings in the green tabs, The initial set up has all relationships set up as averages of the contributing parameters.

Operating the spreadsheet

Each MRC Programme should be given a separate reporting sheet to complete on a quarterly basis and return to TCU for processing. The data from the returned sheets should be then copy-pasted (values only) into the relevant form in the report forms in the Prog reports worksheet. The BDS Summary and MSP Summary reports will automatically generate the weighted progress percentages.

The summary graph functionality has not been set up yet. This will be done once the milestones have been updated and the adjustment of weightings (if needed) is completed.

A complete progress report can then be generated by printing the BDS Summary, the MSP Summary and the Prog reports worksheets.

Mekong River Commission

Quarterly report on achievement of milestones

AIP Agriculture and Irrigation Programme

Month **September**

Year **2015**

Milestone Code	Milestone Description	Target date	Start Date	Completed Date	Percentage Completed	Supporting Evidence
ALL01	Sector reviews updated by sector programmes	By 2014			5.0%	
ALL02	Stakeholder Participation and Communication Plans prepared, reviewed and updated by individual MRC programmes	By 2012			5.0%	
ALL03	Programme transition plans prepared for decentralised core functions in line with the overall MRC Transition Roadmap	By 2013			7.0%	
AIP01	Study report on groundwater development potential	By 2013			25.0%	
AIP02	Guidelines for promoting integrated pest management (IPM) to reduce risks to water quality	By 2013			90.0%	
AIP03	Guidelines for improved irrigation management	By 2013			28.0%	
AIP04	Monitoring data on irrigation water use collected to feed the basin-wide scenario analysis	Continuously			45.0%	
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	to be updated			55.0%	

Sample data only

Submitted by

Date

Basin Development Strategy

Progress of MRC Programme activities related to Strategic Priorities and Strategic Actions

Based on reported achievement of milestones in MRC Strategic Plan

June, 2012

Strategic Priority		Weighted completion	Strategic Action		Weighted completion
421000	Address opportunities & consequences of on-going developments incl. development in Upper Mekong Basin	7%	421001	Strengthen cooperation with China	5.0%
			421002	Enhance coordination among the LMB countries on the operation of tributary dams by improving the implementation of the MRC Procedures	10.0%
			421003	Reach agreement to protect the baseline dry season flows on the Mekong mainstream	6.0%
			421004	Management of risks of committed projects and mitigation measures	5.0%
422000	Expand and intensify irrigated agriculture for food security and poverty alleviation	37.6%	422001	Drought mitigation strategies for rainfed areas	25.0%
			422002	Study of groundwater development potential	25.0%
			422003	Guidelines for fish-friendly development of irrigation schemes	10.0%
			422004	Guidelines for promoting integrated pest management (IPM)	100.0%
			422005	Guidelines for improved irrigation management	28.0%
423100	Improve sustainability of hydropower development: (a) Move towards sustainable development of hydropower on tributaries	25.0%	423101	Identification of ecologically sensitive sub-basins	20.0%
			423102	Multi-purpose evaluation of hydropower projects	10.0%
			423103	Negative impact mitigation measures for tributary dams	55.0%
			423104	Management plans for affected environmental hot spots	25.0%
			423105	Evaluation of benefit-sharing options	15.0%
423200	Improve sustainability of hydropower development: (b) Address the uncertainty and risk of possible mainstream dams	13.5%	423201	Acquire essential knowledge to minimize uncertainty	15.0%
			423202	Identification of risk mitigation options	12.0%
			423203	Strengthening FNPCA process	10.0%
			423204	Design guidance for mainstream dams	7.5%
423300	Improve sustainability of hydropower development: (c) Assess power options, including alternatives to mainstream hydropower	30.0%	423301	Evaluation of mainstream power development options in context of national and regional power strategies	30.0%
			423205	Guidance on water and wetlands, river flow variations and related ecosystem impacts, and improvement of social conditions	23.0%
424000	Acquisition of essential knowledge to address uncertainties and minimise risk	35.8%	424001	Sediment and nutrient trapping and their consequent risks	10.0%
			424002	Reduction of capture fisheries and social implications	25.0%
			424003	Biodiversity changes	90.0%
			424004	Social and livelihood impacts in the mainstream corridor, Tonle Sap, and 3S system	18.0%
425000	Options for sharing the potential benefits and costs of development opportunities	6.0%	425001	Options for sharing the potential benefits and costs of development opportunities	6.0%
426000	Climate change adaptation	49.9%	426001	Assess impacts of climate change on water and related resources of LMB in medium to long term	21.5%
			426002	Prepare and negotiate a Climate Change Adaptation Strategy for the LMB	83.3%
			426003	Pilot schemes for climate change adaptation	45.0%
427000	Integration of basin development planning considerations into national systems	27.8%	427001	Alignment of national water resources development planning and project identification	55.0%
			427002	Addressing identified risks early in project identification and preparation	22.5%
			427003	Maintain a register of existing, ongoing and planned water resources development and water-related projects at NMCSs and MRCS	6.0%
			431000	Establish basin visions and management strategies for water-related sectors	24.5%
431000	Establish basin visions and management strategies for water-related sectors	24.5%	431002	Navigation: Preparation of a master plan for regional waterborne transport and development of rural water transport	19.4%
			431003	Navigation: Preparation of a master plan for navigation in Cambodia	10.0%
			431004	Navigation: Preparation of a navigation improvement plan	35.8%
			431005	Flood and drought risk management: Detailed analysis of flow and flood changes along the mainstream from northern Thailand to the Delta	40.0%
			431006	Wetland management: Monitoring of biodiversity loss in wetlands with ecologically important areas with high dependence of local population	25.0%
			431007	Wetland management: Promotion of integrated wetland management and supporting implementation of the Ramsar Convention in wetlands with ecologically important areas with high dependence of local population	21.0%

MRC Strategic Plan 2011-15

Progress of MRC Programme activities related to MSP outcomes and goals

Based on reported achievement of milestones in MRC Strategic Plan

June, 2012

Ref No.	MSP goal	Weighted completion	Ref No.	MSP outcome	Weighted completion
1	Application of IWRM-based basin development and related sector strategies and guidance	32%	11	The IWRM-based Basin Development Strategy is applied in planning and decision making on Mekong water and related sector development in the LMB countries through an institutionalised basin development planning process.	41.0%
			12	The required management plans, sector strategies, guidance and guidelines are developed to support the implementation of sector-specific elements of the IWRM-based Basin Development Strategy in relation to the mainstream and significant tributary systems.	23.4%
			13	Sector and cross-sector strategies and plans incorporate climate change adaptation planning and implementation at various levels and in priority locations throughout the Lower Mekong Basin.	35.5%
			14	National, sub-basin and basin planning and management systems incorporate economic, environmental and social implications of on-going and proposed developments in the Basin and considerations of sustainability and equitable development.	26.1%
2	Operational systems for basin-wide monitoring, impact assessment, modelling, forecasting and knowledge management to support effective decision making	20%	21	Information and data on the full range of water and related resources parameters are systematically monitored and used in basin and sub-basin planning and management, and the state and developments in the Basin are reported.	20.6%
			22	MRC analysis, modelling and assessment tools are effectively used at appropriate levels of planning, decision-making and operational management.	19.2%
			23	Strengthened and improved forecasting, warning and emergency response systems provide timely information on short and medium term regional forecasts, and increasingly assist the Basin countries in flood and drought forecasting, operational forecasts for shipping and contingency planning for pollution incidents.	24.3%
			24	Key water and water use parameters, trans-boundary impacts and other sustainability issues related to water utilisation and management, and threats to livelihoods posed by climate change and other emerging environmental issues are researched, analysed, and assessed for national and regional responses.	24.1%
			25	Knowledge management systems and processes are developed, applied, and effectively shared with MRC partner agencies via sustainable knowledge networks.	14.0%
3	Efficient dialogue and coordination processes between basin countries and other stakeholders for effective regional cooperation	16%	31	Implementation of MRC Procedures by the MRC and Member Countries are strengthened in an open and transparent manner.	9.3%
			32	Dialogue and coordination between the MRC, Government agencies, civil society organisations and the private sector in basin planning and management, and decision-making on Mekong water related resources are enhanced.	22.0%
			33	Cooperation with upstream riparian countries and other regional initiatives for an integrated approach to the sustainable management of the Basin are enhanced.	8.3%
			34	Resolution of trans-boundary issues at sub-basin level is effectively facilitated by MRC.	18.5%
			35	Knowledge of the basin is available and accessible for more informed decision-making processes.	12.8%
			36	The MRC is a responsive organisation providing objective, independent and timely information to Member Countries and the general public.	27.0%
4	Capacity developed for IWRM policy adoption and implementation within the framework of the MRC mandate	15%	41	Organisational and institutional capabilities are strengthened at relevant levels in Member Countries and the MRC for the adoption and implementation of the IWRM-based Basin Development Strategy, related sector strategies and guidance, and the overall management of the basin's water and related resources.	21.5%
			42	Sound leadership and strengthened management capacities are in place for the effective adoption of IWRM policy and its implementation in Member Countries and the MRC.	15.0%
			43	Staff capabilities in Member Countries and the MRC for the adoption, integration and application of MRC Procedures and IWRM-related policies and strategies at national, trans-boundary and regional levels are improved.	19.9%
			44	Capacity for knowledge sharing on IWRM principles, MRC Procedures and MRC products is enhanced and relevant to groups involved in the utilisation and management of the basin's water and related resources in Member Countries.	5.0%
5	Efficient organisational transition of the MRC for implementation of its core functions and full riparianisation of its Secretariat	21%	51	The transition of the MRC to a decentralised modality of selected core functions is well prepared and progressively initiated during this Strategic Plan period of 2011-2015.	11.7%
			52	An operational and transparent performance management system is in place.	36.3%
			53	The MRC Secretariat is staffed by qualified riparian professionals.	18.8%
			54	Improved organisational management and reporting systems, a functional mechanism for coordinated programme planning and management of the MRC and sustainability considerations of the MRC's operations are in place.	16.7%
			55	National Mekong Committee Secretariats (NMCSs), relevant line agencies and designated stakeholders have sufficient capacity to carry out the selected core river basin management functions within the agreed timeframe of the transition.	23.6%

Sample data only

END