

**Mekong Integrated Water Resources Management Project Phase 1 Additional Financing  
Implementation Support Mission  
Lao PDR: Components 2 and 3  
February 12 – March 2, 2018**

## **A. Introduction**

1. A World Bank Implementation Support Mission for the Mekong Integrated Water Resources Management Project (MIWRMP) Additional Financing (AF) took place from February 12 – March 2, 2018.<sup>1</sup> Components 2 and 3 are implemented by the Lao PDR. This Aide Memoire (AM) covers Components 2 and 3, and will be sent to the Lao PDR Government<sup>2</sup>. Annex 1 summarizes project parameters.

2. The overall objectives of the mission were to work with the Ministry of Natural Resources and Environment (MONRE) and the Ministry of Agriculture and Forestry (MAF) on: (i) reviewing overall progress and challenges to the implementation of the MIWRM AF project, including finalization of project work programs and budgets; (ii) updating priority procurement and Green Growth actions; and (iii) supporting the green infrastructure works and water resources management analytics sub-components. The mission also had an opportunity to visit project sites for irrigation, green infrastructure and fisheries management. This AM summarizes the team's findings, discussions and recommendations. In accordance with the World Bank's Access to Information Policy, this AM will be publicly disclosed.

3. The World Bank team would like to thank the concerned officials of the MONRE Department of Planning and Cooperation (DPC), Department of Water Resources (DWR), Department of Meteorology and Hydrology (DMH), Natural Resources and Environment Research Institute (NRERI), and the MAF Department of Irrigation (DOI) and Department of Livestock and Fisheries (DLF) for the cooperation and courtesies extended. A list of individuals met is provided in Annex 2.

4. The World Bank would also like to thank the Government of Australia for its generous financial assistance which enables specialized World Bank contracted experts to support the overall Mekong IWRM program and facilitate transboundary water resources management.

## **B. Summary**

5. **Overall progress and key achievements:** The project has progressed since the last mission in November 2017. An initial advance of USD2.5 million was disbursed to the Designated Account in December 2017 and funds allocated to component leaders. Key project management staffing positions (particularly financial management (FM) positions) are now in place. After a series of reviews, the project work plan and procurement plan are close to finalization, which will expedite

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<sup>1</sup> Mission Members included: Daryl Fields (Task Team Leader, Senior Water-Energy Specialist), Viengsompasong Inthavong (Water and Sanitation Specialist), Iain Watson (Environmental Safeguard Specialist, Consultant), Nigel Hayball (Water Resources Management Specialist, Consultant), Chusit Apirumanekul (Hydromet Specialist, Consultant), Ashley Hall (Fisheries Specialist, Consultant), Zhijun Chen (Irrigation Specialist, Consultant), Khamphet Chanvongnaraz (Procurement Specialist), Siriphone Vanitsaveth (Senior Financial Management Specialist), Saysi Sayaseng (Financial Management Specialist, Consultant) and Thongkham Chanthavong (Program Assistant). The mission had two parts: (i) February 12-23 in Vientiane for government meetings, covering all components of the Project and including both the kick-off and wrap up meetings; and (ii) February 24-March 2 focused on fisheries management.

<sup>2</sup> Component 1 of the Project is implemented by the Mekong River Commission (MRC) for which the AM will be prepared separately.

important procurement.<sup>3</sup> Outstanding invoices (“payables”) have also been partially resolved, a general procurement notice has been published and safeguards issues identified in the previous mission addressed. Progress has been particularly strong in both the fisheries and irrigation sub-components, contributing to both disbursements and the Project Development Objectives (PDO) indicators. Cross-component collaboration and the role of community engagement in IWRM, which will be important in ensuring the sustainability of project results, were identified as an additional learning benefits of the project as lessons learned can be “exported” from the project to the rest of Lao PDR. The mission commends the Project Management Unit (PMU) for introducing a project-wide outreach activity. With close attention to timelines and efficient procurement, the project is on track to meet the PDO-level indicator associated with Component 2 and 3 of the project.

6. **Issues for management attention:** Since project approval, sub-components 2.3 (Modelling) and 3.1.1 (River Basin Planning) have undergone significant changes in programing, stimulated by a greater emphasis on green infrastructure works. The mission undertook a field visit to the proposed sites in Saravan Province for drought and flood management. Two of the three proposed components of the works should proceed with more detailed project design and feasibility assessments and scheduling. However, the Xe Don cascade of works is much more demanding, less well defined and would likely be classed as a Category A project; consequently, the mission recommends further definition and exploration of alternatives. The mission also noted that completing works for green infrastructure is highly challenging within the project timeline.

7. Notwithstanding good progress on staffing, clarifying work flow and roles and responsibilities in the new structure is urgently needed. A standard procedure for the project needs to be clearly set out and understood by all in order to ensure procurement and contract management does not slow project implementation.

8. **High priority actions:** The World Bank mission and GoL project team agreed to the following set of priority actions to be completed by May 2018 (see Annex 3). These will be tracked and reported on in the next mission. It should be noted that these are not the only actions that are important. Each sub-component has discussed the suite of pending actions. The next mission is being planned for mid-May 2018, possibly coupled with a field visit.

### C. Project Management

9. **Financial Management (FM):** The overall financial management performance of the project remained at “Moderately Satisfactory”. However, if agreed FM actions are not implemented by the target date for completion, the rating may be downgraded to Moderately Unsatisfactory. Original financing has been fully disbursed; however, the remaining Designated Account balance of US\$793,391.23 remains to be documented, an issue raised in November 2017. Recruitment of FM consultants has been completed and consultants are on board. However, transition challenges (e.g.,

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<sup>3</sup> Since the completion of the mission, a conditional No Objection has been given for the revised Procurement Plan, and the World Bank is reviewing the revised Work Program.

new FM team coupled with new FM arrangements and systems) contributed to delays in processing invoices and implementation of many of the actions agreed on the previous mission.

10. **Procurement:** A revised procurement plan has been given a conditional no objection since the mission concluded. The mission noted that all procurement items (including the carry-over items from the original financing) will have to be entered into STEP. It was suggested that support staff (e.g. interns, drivers, etc.) can be categorized under the IOC category, thus reducing the workload of the PMU. Recruitment of a national procurement consultant (pending World Bank no objection) should help monitoring and tracking procurement activities.

11. **Work flow management:** It was suggested a workshop be hosted by the PMU in early April 2018 (tentatively planned for April 5<sup>th</sup>) to explain work flow arrangements on project management, payments (FM) and procurement in the new structure. It's agreed that the workshop be mandatory for all project components and units, including DOF/MONRE and DOF and DPF/MAF. The Bank welcomes an opportunity to assist in drafting a work flow arrangement for discussion and agreement at the workshop.

12. **Safeguards:** The environmental safeguard review for three sub-components found that: (i) the new water quality laboratory SC2.2 Water Quality has been designed according to international ASHRAE laboratory design guidelines and should therefore satisfactorily address identified environmental safeguard concerns relating to air emissions, solid waste management, and wastewater treatment – an Environmental Management Plan will be prepared to document laboratory mitigation and management measures; (ii) discussion with DMH (for SC2.3 Hydro-met) concluded that Unexploded Ordinance (UXO) surveys be undertaken for both existing stations funded under MIWRM original financing and new stations under AF to ensure full safeguard compliance; and (iii) twice yearly monitoring of selected parameters (pH, BOD/COD, TSS, and nutrients) of wastewater releases from three renovated hatcheries in Champasak and Sekong provinces will be initiated (SC3.2 Fisheries). Safeguards related to the green infrastructure proposal for Toumlan District is discussed below (paragraph 19).

13. **Commitments to Green Growth (GG) DPO:** For GG trigger #9 on water resources assessment guidelines, it was agreed that the PMU will work with SC3.1.1 and SC2.3 to prepare documents for obtaining the required minister's instruction for the development of the guideline which is needed by August 2018. It was also agreed that trigger #9 will focus only on the water resource assessment guideline, without reference to water quality monitoring (water quality monitoring is also covered in trigger #13).

#### **D. Project Implementation - MONRE Components**

14. **Component 2.1 Water Law and National River Basin Development Strategy:** Since last mission in November 2017, there has been shift from establishing 8 regulations to 4 decrees and 3 regulations to support implementation of the Water Law. A major challenge is the preparation of the Decree on River Basin Management that is to be prepared first and submitted to Government for consideration by June. The World Bank team will support Department of Water Resources (DWR) to identify and recruit specialists to advise and provide examples of international best practice for each instrument. During the mission, key activities for 2018 were mapped out to help DWR better

understand critical periods to assist planning: however, the mission notes that the current timeframe is very tight, especially for the decrees. An outline for the National River Basin Development Strategy 2030 (RBDS) and 5-year Action Plan (2018-2022) (RBDP) is to be submitted to the Minister by mid-year. A detailed work program for preparing the RBDP is to be presented at the next mission in May. There are no funds currently allocated under MIWRMP AF; a budget estimate should be prepared and considered by the PMU. The World Bank recognized the importance of this planning process.

15. **Component 2.2 Water Quality:** The ISO accreditation for the national laboratory at NRERI to carry out water quality analysis for 6 parameters needs to be re-applied every 3 years, including updating the Standard Operating Procedure (SOP), calibration of equipment, conducting proficiency test, and training for NRERI staff. NRERI plans to recruit 4 individual consultants to advise on laboratory operation according to ISO/IEC17025 including training for NRERI staff on equipment maintenance, water quality monitoring and analysis and bio-monitoring. The Consultant to support NRERI on identifying specifications and developing bidding documents for laboratory equipment, to be in place in March 2018, is a high priority. Bidding documents for laboratory furniture will be completed by mid-May 2018.

16. **Component 2.3 Water Resources Analytics:** To ensure coordination with sub-component 3.1.1 and project efficiency, the following set of consultancies was identified/agreed/discussed:

- International or regional advisor to develop ToR for DSS, to manage firm contract, review Decision Support System (DSS) firm outputs, to develop work plan for C2.3 in coordination with river basin planning (C3.1.1); contracting of the component advisor is a high priority action
- International Firm for DSS to develop modelling packages and DSS for priority river basins
- Local modelling firm to develop modelling package at local level to address the needs from river basin planning
- National modeler to support NRERI on development of DSS and model upgrades.

17. The National Water Resources Information Center offers opportunities to serve the needs across the MIWRMP project, including both DSS and river basin planning, consistent with international good practice. It is expected that an REOI for building design consultant for National Water Resources Information Center will be published in mid-May, and include an analysis of needs across MIWRMP.

18. **Component 2.4 Hydro-Met:** Sixty-nine locations for hydro-met upgrading in northern part of Lao PDR have been identified. Detailed survey ToRs will include UXO clearance, development of conceptual engineering design and cost estimate to prepare for bidding documents for the civil works. The Bank team would like to thank the DMH for their collaborative efforts between MIWRM Project and Southeast Asia Disaster Risk Management (SEADRM) and emphasize that ongoing close collaboration is crucial to ensure smooth procurement and contract execution. DMH will also work closely with the National Regulatory Authority (NRA) for the UXO/Mine Action Sector in the Lao PDR on UXO clearance. Procurement of the detailed survey ToR is a high priority; the request for proposal will be sent to qualified firms by mid-May.

19. **Component 3.1.1 River Basin Planning:** Significant progress was made on the conceptualization of three green infrastructure packages located in (i) Xe Don River Basin (Toumlan District, Saravan Province); (ii) Upper Xe Bang Hieng River Basin (Savannakhet Province) related to water storage needs, and (iii) Lower Xe Bang Hieng Basin for sustainable management of the RAMSAR Xe Champhone Wetland Management Complex (XCH).<sup>4</sup> Investment packages (ii) & (iii) will provide support to the management of the XCH, including identification of environmental flows at the basin scale, one of the GG results indicators. Each of these packages will be supported by water resources assessments and river basin planning. DWR is to prepare concept notes, including cost estimates, initial safeguards assessments (consistent with GoL environmental impact assessment guidelines) and timelines. The mission fully supports the plan to engage a Technical Assistance for Green Infrastructure firm consultancy, and suggests ToRs be finalized as the earliest. As previously noted, completing these investments before the end of the project will be challenging; feasibility should be reassessed upon completion of the concept notes.

20. DWR confirmed 5 river basin profile reports, 5 river basin plans, 1 water allocation plan for the Xe Bang Hieng River Basin (including environmental flows) will be completed, consistent with the Water Law and implementation decrees and regulations. The World Bank team will comment on the draft ToR for River Basin Planning firm consultancy that will assist DWR to achieve these outputs, and integration of planning and modelling (C2.3) activities.

21. Good progress was made on scoping groundwater activities in Savannakhet Province, namely: 1) preparation of a groundwater management plan, 2) establishment of a groundwater monitoring network and 3) establishment of a water user registry for major groundwater users in the province.

#### **E. Project Implementation-MAF Components**

22. **Component 3.1.2 Irrigation Component:** Implementation of C3.1.2 is ahead of schedule. All planned activities, except for SRI dissemination, are well on track. Total value of awarded contracts and hard commitments reached USD1.8 million, and real expenditures reached USD0.9 million, accounting for 60% and 30% of the planned annual budget respectively. Looking forward, the mission recommends improving the typical design for irrigation and expediting implementation of SRI activities. DOI proposed to replace the four irrigation schemes located outside the XBF Sub-basin with four schemes newly identified within the XBF Sub- and to provide continuous technical support to the 40 WUAs and 10 FMGs established under the original financing within the current budget allocation to technical assistance activity. There is a need to further strengthen the engagement of community to support the sustainability of the Water User Associations (WUAs), with a focus on involvement of women.

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<sup>4</sup> During the mission, NRERI's Department of Environment Quality & Protection and FAO CAWA project, partners in the Xe Champhone investment, held the 3rd stakeholder meeting.

23. **Component 3.2 Fisheries Component:** All 15 Fisheries Management Committees (FMCs) have now been established with representation from women and ethnic groups. Fisheries management plans have been prepared with five FMCs, two of which have received official approval for their plan implementation. Patrol boats and other equipment for management plan implementation will be purchased for each FMC starting next month. Presently, the management plans formulated to date appear to focus on only enforcing the existing national legislation (fisheries law); it was suggested that the Component Management Unit (CMU) should consider reviewing the scope of the plans with the FMC to ensure that local interests and priorities identified by fisher communities are included. It should also ensure that fundamental elements of the plan including objectives, indicators, targets, management measures, stakeholder roles and responsibilities and financing mechanisms are identified and adequately documented in the plans. To facilitate these improvements, and to strengthen the capacity of key management stakeholders, the Bank worked with the CMU to strengthen a sample of the management plans with FMCs during the mission.

24. Mapping of FMC boundaries and their fish conservation zones (FCZs) remains ongoing. Approximately 85% of the zones designated for conservation have now been mapped. Alternative livelihood (AL) support has been delivered in six (6) Kum Banhs (KBs). More than 50 villages and several hundred households (>350) have received goods/supplies to support their AL to date generating important cash income. Rural infrastructure projects have been identified and designed in all 15 KBs. The 116 projects benefiting 117 villages.

25. The renovation of three fish hatcheries has been completed. Two of these hatcheries are now operational producing fingerlings of indigenous species. The Bank provided no objection for the ESMP for the new hatchery at in Attapeu in December 2017. The REoI for the construction contracts has been prepared by the PMU and will be announced in March 2018. The new hatchery should become partially operational by June 2018 and completed by early 2019. Business plans for the hatcheries are being prepared by a newly appointed hatchery operations and management specialist.

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*Annex 1*  
**Project Parameters**

Project ID	P104806
Total Project Cost:	US\$ 51.0 million
Original Grant Amount: (Lao PDR)	US\$ 18.0 million (IDA-H6750): Components 2 and 3
Additional Financial (AF) Amount (Lao PDR)	US\$ 25.0 million (IDA-61180): Components 2 and 3
Grant Amount: (MRC)	US\$ 8.0 million (IDA-H7620): Component 1
Date of Effectiveness	March 8, 2012
Lao PDR Closing Date	March 31, 2021
MRC Closing Date	December 31, 2019
Environmental Category:	Category B
Last Mission	November 6 – 10, 2017 (Implementation Support Mission)
Date of Last Archived ISR	December 7, 2017
Disbursement (as of March 6, 2018)	IDA-61180: US\$ 2.5 (US\$ 23.38 million remaining) IDA-H6750: US\$ 18 million (US\$0 remaining) IDA-H7620: US\$ 5.8 million (US\$ 1.75 million remaining)

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 February 12 – March 2, 2018**

*Annex 2  
 List of people met*

<b>Name</b>	<b>Position</b>	<b>Organization</b>
Mr. Virana Sonnasinh	Deputy Director General	Department of Planning and Cooperation (DPC), MONRE
Mr. Bounpakone Phongphichit	Director of Division	DPC, MONRE
Mr. Mounthala Southanilaxay	Assistant to Project Manager	DPC, MONRE
Mr. Somphone Khongsab	Assistant to Project Manager	DPC, MONRE
Ms. Yuphin Savengseuksa	Project Assistant	DPC, MONRE
Ms. Lutdavanh Khounthavong	Project Assistant	DPC, MONRE
Ms. Toumkham Khamvongxay	Project Assistant	DPC, MONRE
Mr. Kingkham Manivong	Deputy Director General	DWR, MONRE
Mr. Khamphone Chanthalongsy	C2.1 Coordinator	DWR, MONRE
Mr. Thanongxay Douangnoulak	Component 3.1.1 Manager	DWR, MONRE
Mr. Bounteum Sysouphanthavong	Component 2.4 Manager	DHM, MONRE
Mr. Viengxai Manivong	DRM project's coordinator	DHM, MONRE
Mr. Virasack Chundara	Director General	National Resources and Environment Institute (NREI), MONRE
Mr. Oulaphone Ongkeo	Component 2.3 Coordinator	NREI, MONRE
Mrs. Setouvanh Phanthavongsa	Head of Lab	NREI, MONRE
Mr. Vilasith Nathavong	Deputy Director of Division	Department of Finance, MONRE
Mr. Lankeo Phengaloun	Component 3.2 manager	Provincial Department of Livestock and Fisheries, Champasak Province
Mr. Akhane Phoumsouvanh	Component 3.2 coordinator	Department of Livestock and Fisheries (DLF), MAF
Dr. Sinthavong Viravong	Consultant	SC3.2
Mr. Khamhou Phanthavong	Deputy Head of Division	Planning and Cooperation Division, Department of Irrigation, MAF
Mr. Chittakone Chanthilath	Technical Officer	DEF, MOF
Mr. Vic Macasaquit	Implementation Support Consultant	
Ms. Khemmala	FM Consultant	PMU, DPC, MONRE
Mr. Vilaysuck Phonechalern	FM Consultant	SC3.2
Mr. Khammone Phomhipak	Head of DAFO, Nongbok District	DAFO, Nongbok District
Mr. Manane Vongnalaysane	Community Development	SC3.1.2
Mr. Boun Om Soulideth	Agriculture Extension and M&E	SC3.1.2
Mr. Virarath Syhabout	Irrigation Engineer	SC3.1.2
Mr. Somchith Phonphachanh	Pump Engineer	SC3.1.2

**Mekong Integrated Water Resources Management Project Phase 1 Additional Financing**
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*Annex 3  
 High priority actions plan (March to May 2018)*

<b>Sub-component</b>	<b>Action</b>
2.5 Project Management	1. Procurement Plan and Work Program finalized 2. Outstanding payables resolved and Contract Work Flow (roles and responsibilities) agreed 3. Ministerial instruction for Water Resource Assessment Guidelines submission (Green Growth trigger) (DWR might be the lead, with inputs from NRERI) 4. Procurement consultant to be recruited
2.1 Water Law	5. Work program for River Basin Development Plan agreed and budget allocated (i.e. WR strategy) – Concept Note (timeline) and propose budget to share with the Bank 6. Consultation on RBP decree completed 7. Consultation plan for the dissemination of water law
2.2 Water Quality	8. TOR and bidding documents for lab furniture
2.3 Water Resource Analytics	9. Modelling advisor to be recruited 10. RFP finalized for DSS/modeling firm contract(s) and shorted list firms identified from REOI 11. REOI published for building design consultant
2.4 Hydro-met	12. RFP for Hydromet preparation consultants sent to short-listed firms
3.1.1 River Basin Planning	13. Two IWRM specialist (Intl and national consultant) 14. Detailed concept notes and procurement plans completed for 3 green infrastructure packages (Toumlan and Upper Xe Bang Hieng (water storage) and Lower Xe Bang Hieng (i.e. Xe Champhone))
3.1.2: Irrigation	15. Consultation on SRI for interested farmers
3.2: Fisheries Management	16. Six (6) Fisheries Management Plans approved by District Governor and DLF