



Mekong River Commission

Cambodia • Lao PDR • Thailand • Viet Nam

For sustainable development

Joint Action Plan

For the Implementation of the Statement on the Prior Consultation Process for the Pak Lay Hydropower Project

The Mekong River Commission Secretariat published this Joint Action Plan “unedited” as the approved version by the Mekong River Commission Joint Committee at its Special Session on the Prior Consultation Process for the Pak Lay Hydropower Project on 4 April 2019.

I. Introduction

The Special Session of the MRC Joint Committee (JC) convened on 4 April 2019 at the end of the prior consultation process for the Pak Lay Hydropower Project (PLHPP) agreed a “*Statement on the prior consultation process for the Pak Lay Hydropower Project [PLHPP] in Lao PDR*” (the Statement).

The Statement included a request to the Mekong River Commission Secretariat to support the preparation of a Joint Action Plan (JAP) that outlines a process for implementing the Statement. The proposed content for the JAP was also discussed and agreed by the Joint Committee at its Special Session on 4 April 2019.

II. The Purpose of the JAP

The aim of the JAP is to provide mechanisms for ongoing feedback and data exchange and sharing of knowledge between Lao PDR and the MRC, with regard to the ongoing design, construction and operation of the PLHPP. The intention is to monitor the implementation of the Statement and support Lao PDR in its ongoing efforts to identify measures that may further avoid, minimize, or mitigate the potential impacts of the PLHPP. It also aims at enhancing the benefits of the project and sharing knowledge and experience among the MRC Member Countries. The JAP will be initiated as soon as it is approved, and will run through the project design, construction and operation phases of the PLHPP. The outcomes of the JAP implementation are advisory in nature and form part of all the Member Country’s commitment to good faith cooperation. It may be updated by the JC throughout its implementation to address changing circumstances and the deepening understanding of the PC process and the potential impacts on the LMB.

Implementation of the JAP shall not impede the implementation of the PLHPP.

The purpose of the JAP is multifaceted and aims to:

- Support the implementation of the Statement as agreed by the Joint Committee (*the Statement is included as Annex 1*);
- Provide opportunities for the Government of Lao PDR (GoL) and the LNMC, to engage with experts from the MRCS and the Member Countries with view to enhancing existing measures to avoid, minimize and mitigate the potential for transboundary impacts, and to enhance the benefits of the project and the sharing of knowledge and experience amongst the Member Countries;
- Provide a mechanism for the exchange of data between the GoL, the MRC and the other Member Countries on the monitoring of flows, sediment transport, fish and aquatic ecology, water quality, navigation, and socio- economic factors;
- Present regular updates on progress with the development and revision of the final designs and operating rules for the PLHPP; and
- Provide a forum for exchanging information and knowledge with other hydropower developers on the mainstream and tributaries, to improve the conjunctive management of HPP in the LMB and to share lessons.

III Principles for implementation

The JAP will be underpinned by the same spirit of cooperation and practicality as the prior consultation process. To this end, it will be governed by the following principles:

- The JAP supports the implementation of the Statement after the conclusion of the six-month prior consultation process. It is a cooperative mechanism to jointly further explore viable and practical measures to avoid, minimise and mitigate potential transboundary impacts, or enhance any positive impacts and benefits;
- It is founded on the principles of the PNPCA, viz.;
 - Sovereign equality and territorial integrity;
 - Equitable and reasonable utilisation;
 - Respect for rights and legitimate interests; and
 - Good faith and transparency.
- It will aim to accommodate the interests and constraints of all the Member Countries, and will address concerns as far as reasonably practicable;
- The JAP takes note of the Lao PDR's plan to pursue the project, while making every effort to implement the Statement;
- While promoting the free and open exchange of data, the JAP recognises that certain data and information that may affect the developer's competitive advantage are confidential (as is provided for in the PDIES);
- The JAP does not include direct engagement of the developer by the MRC, and any discussions with the developer will be through the GoL and its Line Agencies; and
- The JAP covers the project design, construction and operational phases of the PLHPP.

IV. Engagement of Stakeholders

The MRC has committed to improve the engagement of stakeholders at all levels. The MRC Council, the Joint Committee and the Secretariat, as well as other government agencies in the Member Countries will be primarily responsible for the implementation of the JAP through the administrative mechanisms already in place in the MRC. These are the internal stakeholders to the process.

External stakeholders such as development partners, NGOs, implementing partners, civil society organizations, research institutions, academics, individuals and other interested groups will be kept informed of progress with the implementation of the JAP through the MRC's regular engagements.

V. A Phased Approach

The JAP will be undertaken in a phased manner, with reviews after each Phase. These Phases are as follows:

- **Phase 1: Initiation** – This will start immediately after approval of the JAP and the budget by the Joint Committee, and will focus on mobilising the resources required for implementation;
- **Phase 2: Project Design** – This will aim at working with relevant Line/Implementing Agencies in the GoL to explore measures that may further improve the project

design and operations of the PLHPP, and address the concerns raised during the Prior Consultation process;

- **Phase 3: Construction** – This will start once construction on the PLHPP starts, and will aim at appraising the progress with construction, monitoring of impacts during construction and having input into any design changes; and
- **Phase 4: Operations** – This will include agreement by the Joint Committee on a set of monitoring and reporting parameters for the operational phase of the PLHPP and will be completed as operations commence.

A broad Scope of Work (SoW) for these Phases is presented in more detail below. This SoW is intended to be flexible, and subject to change based on lessons learnt, the growing technical understanding of the Mekong River system, and the human and financial resources availability. Any changes to the SoW will be through agreement in the JC.

Phase 1: Initiation

This phase starts immediately and aims at:

- Mobilising resources required for implementation;
- Informing stakeholders of the outcomes of the prior consultation process and the content of the JAP;
- Initiating the implementation of the JAP within the MRC and the GoL. This will include agreement in the Joint Committee on the modalities of collaboration, and lines of communication and reporting; and
- Development of a Monitoring/Lessons Learnt Matrix, to be maintained by the MRCS, so that the JC can exercise effective oversight over the implementation of the JAP.

Phase 2: Project Design (including Operating Rules)

Recognising that the design process is ongoing this phase will start after agreement by the JC on the final JAP. This Phase will aim to exchange information between the GoL and the MRCS and Member Country experts on the ongoing design of the infrastructure and operating rules. This is intended to jointly explore opportunities to further avoid, minimise and mitigate potential transboundary impacts, as well as to enhance the benefits of the project and the sharing of knowledge and experience amongst the Member Countries. This Phase will also develop mechanisms to monitor the implementation of the agreed outcomes of the discussions. These include:

- Mechanisms to maximise the technical expertise available to support the implementation of the Statement. This may for example include the appointment of monitoring expertise by the GoL, and opportunities to engage the MRC's and Member Country's experts;
- Working sessions at key design milestones bringing together the relevant expertise around the following subjects;
 - Dam safety;
 - Sediment flushing infrastructure and operations;

- Dam release infrastructure, regulation and operations;
- Fish passage infrastructure and operations;
- Navigation lock infrastructure and operations; and
- Positive and negative impacts on socio-economic issues.
- Working sessions to gain a better understanding of potential transboundary socio-economic and ecological impacts, and options to further reduce these as far as reasonably practical; and
- After review by the JC, making recommendations on the project design and operating rules for the GoL to consider.

Progress with the implementation of the JAP will be reported as part of the overall implementation of the MRC Procedures. The progress report will have the following components:

- Comments (not a review) from the MRC Secretariat on the documentation received at the end of the prior consultation process, but not incorporated in the technical review, and feedback to Lao PDR in this regard;
- An outline of how the GoL has responded to the Technical Review Report and Statement;
- Presentation of further information supporting the Technical Review Report, and its key outcomes; and
- Presentation of the ongoing design and operating rules that will be put in place to further avoid, minimise and mitigate any potential transboundary impacts and to enhance the benefits of the project and the sharing of knowledge and experience amongst Member Countries.

This Phase will run in parallel to discussions on the ongoing review of the PNPCA and will contribute information on how the implementation of the Statement could support the effective implementation of the PNPCA.

At the first working session the GoL will be given the opportunity to present their updated design and further monitoring programmes, and share the data generated thus far.

Discussions will also aim at identifying monitoring indicators to assess the efficacy of the design and operations with respect to avoiding, minimising and mitigating the risk of transboundary impacts and to enhance the benefits of the project and the sharing of knowledge and experience amongst Member Countries. This will include recommendation by the JC on the modalities of exchanging data on a regular basis.

This phase concludes with the request for submission of the final designs and operating rules through LNMC.

Phase 3: Construction

This phase will be initiated with the commencement of construction of the PLHPP and will start after review by the JC making recommendations for the monitoring the implementation of the Statement during construction. Activities will include at a minimum:

- Periodic visits to the site by the MRCS and Member Country experts to observe the process. These visits will be arranged through the GoL;
- Working sessions or meetings to discuss any major design changes made during the construction phase;
- Exchange of data on the efficacy of measures agreed to avoid, minimise and mitigate impacts during construction; and
- Regular updates on progress with construction, provided via the LNMC and MRCS as outlined in the following section.

Given the costs of these working sessions, these will only be held when significant milestones have been reached with construction, or where input into design changes is desirable. The GoL will be requested to make presentations of the on-going design changes and the results of any monitoring.

Phase 4: Operations

This phase will start after commissioning of the PLHPP and will aim at developing an Operations Monitoring Scheme in line with the MRC Joint Environmental Monitoring Programme (JEM), to be based on monitoring indicators and frequency that have emerged from the previous Phases.

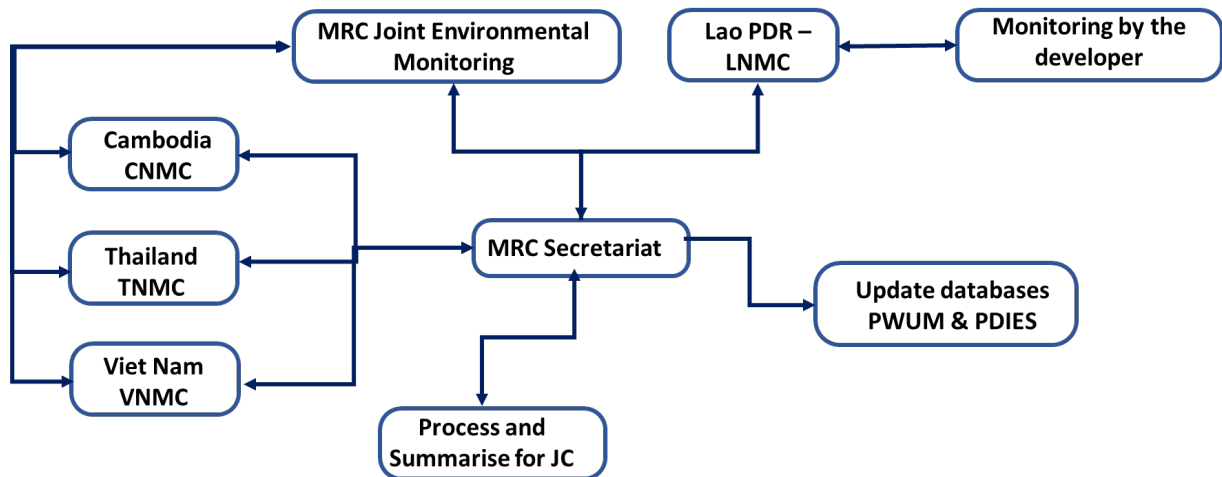
These indicators will aim at monitoring the efficacy of the infrastructure to minimise potential adverse impacts.

It is expected that the Operations Monitoring Scheme will, at a minimum, recommend measures to:

- Monitor daily changes in water levels in the impounded reach, and downstream of the dam;
- Monitor water quality and ecological impacts;
- Monitor transboundary and cumulative impacts on fish and fisheries (with assistance from the MRC Secretariat);
- Monitor the efficacy of the fish passage facilities, including navigation locks;
- Monitor sediment volume trapping in the impoundment area;
- Monitor suspended sediment concentration downstream through PLHPP;
- Monitor the number of vessels using the locking system and waiting times;
- Monitor any cavitation damage in the ship lock structure;
- Sediment deposits which can occur at the upstream and downstream approach channels; and
- Warn shipping, the MRC and the member Countries in the event of a dam break, water level changes.

The Operations Monitoring Scheme developed under this Phase will include recommendations on the frequency of reporting to the MRC, the internal processing and reporting mechanisms by the MRCS, and the regular reporting to the JC. Monitoring may therefore be done by the Developer (and reported through LNMC), and the Member Countries through the MRC JEM. This monitoring will form part of the PWUM.

This monitoring scheme will be developed in the six months following the start of operations and will be submitted to the JC for approval. The monitoring scheme may be reviewed from time-to-time based on the analysis of the results. Any substantial changes in the scope of monitoring during operations in response to the analysis of the data will be subject to approval by the JC. The following flow diagram outlines the proposed reporting lines.



These reporting lines outline the following:

- Once the Operations Monitoring Scheme (OMS) has been agreed by the JC, its recommendations will be communicated to the GoL through the usual channels.
- The GoL may implement the agreed monitoring scheme and will collate those data on a regular basis and transmit that to the Secretariat.
- The Secretariat will include those data in the MRC-IS and will summarise the information into an annual report to the JC. The JC may on receiving that report, propose changes in the OMS.
- Outside of this, the NMCs of the notified Countries will ensure that Line/Implementing Agencies monitor environmental parameters within their countries and provide those to the MRCS for inclusion into the Joint Environmental Monitoring Programme (JEM) process. Information from the JEM will also form part of routine reporting on the State of the Basin.
- The OMS and JEM will be subject to the provisions of the PWUM and PDIES and will form part of those Procedures.

VI. Financing the JAP

The following activities in the JAP will have to be financed:

- Working sessions between the Member Countries and the MRCS experts;
- Regional stakeholder engagements as per normal MRC process;
- Internal MRCS staff attendance of the above;
- Training for internal stakeholders; and
- Field monitoring / inspection and site visit activities.

It is proposed that the following funding mechanisms should be considered:

- MRC basket funds; and
- Funding support from interested development partners, and other sources.

Budget for the implementation of the JAP will be prepared by the MRC Secretariat.

VII. Institutional Responsibilities

Joint Committee (JC)

The MRC Joint Committee will maintain oversight of the implementation of the JAP and will approve any updates to the JAP that may be proposed from time-to-time. The JC will make recommendations to the GoL in the spirit of the Statement.

The Lao National Mekong Committee (LNMK)

In keeping with the spirit of the Statement and the commitment to engage the MRC with respect to ongoing efforts to avoid, minimise and mitigate the potential transboundary impacts, and to enhance the benefits of the project and the sharing of knowledge and experience amongst Member Countries; the GoL is requested to provide regular updates on progress with the design, construction and operations of the PLHPP, including at MRC JC meetings. It is noted with appreciation that the LNMK, through its Secretariat (LNMKS), has already presented a Preliminary Response to the Statement in this regard.

The frequency of monitoring and reporting and feedback once the PLHPP becomes operational will be specified in the Operations Monitoring Scheme.

The National Mekong Committees of the notified Countries

Similarly, in keeping with the spirit of good faith cooperation and the Principles outlined in Section III, the NMCs of the notified countries are requested to maintain open and good faith communication with a view to advising the GoL on viable measures that will further avoid, minimise and mitigate potential adverse transboundary impacts from the PLHPP, and to enhance the benefits of the project and the sharing of knowledge and experience amongst Member Countries.

The NMCs may identify national experts (consultants) and implementing/line agencies' staff to support the implementation of the JAP, and will avail these experts for workshops, meetings and providing comments on any documentation produced. The NMCs will form the primary point of liaison with their respective countries and should pass information to their national experts as expeditiously as possible, consistent with their national mandates.

The NMCs are requested to oversee the implementation of the Joint Environmental Monitoring in their countries, and to share these data through the established mechanisms.

The NMCs may brief their respective JC members of the outcomes of these working sessions and visits, and before the JC meetings.

The Mekong River Commission Secretariat (MRCS)

The MRCS will provide a summary of progress with implementation of the JAP, and any data provided, as a standing item on the JC Agenda. The MRCS will make arrangements for any working sessions agreed by the JC. The MRCS may request the LNMC for an update on progress to prepare for the JC meetings prior to these meetings.

If agreed by the JC, the MRCS will appoint any external specialists/consultants to support any workshops with specialist inputs.

Once the MRCS receives documentation outlining technical progress milestones, it will undertake an internal assessment, and provide feedback to the JC, with suggestions as to the ongoing process. The MRCS may take proactive action to prompt the LNMC to provide documentation in a timely manner.

Once the PLHPP is operational, data from the Operations Monitoring Scheme may be presented to the MRCS via the LNMC – as outlined in the flow diagramme above. It is recommended that this is done on at least an annual basis. The MRCS will prepare an analysis of these data, placing this in the context of the key findings as provided by the Council Study as well as the results from the Joint Environmental Monitoring of the Mekong mainstream Hydropower Projects. These data will also be used to update the database held by the MRC. This report will be presented to the JC meeting on an annual basis.

The report will highlight the efficacy of the agreed measures and may recommend changes to the operating rules or monitoring activities. The JC may then request the Lao PDR to implement these changed operating rules and monitoring as far as reasonably practical. This annual report will not constitute a further technical review of the PLHPP but is rather aimed at a collaborative process to continually examine and update measures to further avoid, minimise and mitigate any impacts, and to optimise benefits, and to develop monitoring activities in that regard. The MRCS must take a proactive role in driving the monitoring activities in line with the PWUM and PDIES.

With the introduction of various Expert Groups to provide supports to Planning, Environment, Data and Modelling, and Strategy and Partnership, these groups of experts will be engaged along the process of JAP implementation with their respective area of expertise and responsibility when it is appropriate.

VIII. The way forward

The MRC Secretariat will use the agreed version to guide the formulation of the JAP Implementation Matrix.

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Annex 1



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Statement on the Prior Consultation Process for the Pak Lay Hydropower Project in Lao PDR

The Mekong River Commission Secretariat published this Statement “unedited” as the approved version by the Mekong River Commission Joint Committee at its Special Session on the Prior Consultation Process for the Pak Lay Hydropower Project on 4 April 2019.

The Joint Committee of the Mekong River Commission (MRC) met at a Special Session on 4th April 2019 in Vientiane, Lao PDR, to discuss the Pak Lay Hydropower Project (PLHPP) submitted by the Lao PDR for Prior Consultation.

As provided for in Article 5 of the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin (the 1995 Mekong Agreement), and Article 5.4.3 of the Procedures for Notification, Prior Consultation and Agreement (PNPCA), the MRC Joint Committee aimed to reach an agreement on the PLHPP, and to propose measures that should be considered in the ongoing development of the Project.

The MRC Joint Committee noted that the 1995 Agreement; signed by the Governments of Cambodia, Lao PDR, Thailand and Viet Nam; set out cooperation in all fields of sustainable development, utilisation, management and conservation of the water and related resources of the Mekong River Basin. The meeting also recognised that the four MRC Member Countries reaffirmed their commitment to the Objectives and Principles of the Mekong Agreement at the last three MRC Summits in 2010, 2014 and 2018, in Hua Hin in Thailand, in Ho Chi Minh in Viet Nam and in Siem Reap in Cambodia, respectively.

The MRC Joint Committee also recalled that in 2016, the MRC adopted the Basin Development Strategy 2016-2020 for the Lower Mekong Basin, which recognises mainstream hydropower as a development opportunity and the enhancement of regional benefits while any potential adverse transboundary impacts should be avoided, minimised and mitigated.

The MRC Joint Committee acknowledged its mandate to evaluate the proposed PLHPP with the aim of arriving at an agreement. The meeting noted that the notified Countries had submitted individual Reply Forms on the proposed PLHPP, and that the Lao PDR delegation has submitted a Statement at the Special Session the Joint Committee.

The MRC Joint Committee appreciated the spirit of cooperation and responsibility of all Member Countries during the Prior Consultation process and noted with gratitude that efforts were already made by Lao PDR to address some of the Member Countries' concerns.

The MRC Joint Committee noted that MRC Secretariat has prepared Technical Review Report (TRR), guided by the Joint Committee Working Group and informed by feedback from national and regional stakeholder forums. The MRC Joint Committee also considered the responses to the second draft of the TRR prepared by Lao PDR's Ministry of Energy and Mines and Ministry of Natural Resources and Environment.

Having considered the Technical Review Report and outcomes of the national and regional stakeholder forums, the Reply Forms from the notified Countries, and the Statement from the Lao PDR, and to conclude the prior consultation process, the MRC Joint Committee:

- I. **Calls on the Government of the Lao PDR to make every effort to address any potential adverse transboundary impacts of the PLHPP by considering the inter alia the following measures in the ongoing development of the proposed project:**

- 1. *Addressing the impacts of the changed hydrology by:***
 - a. Introducing the operating rules curve to accommodate requirements of flow management as Article 6 of the 1995 Mekong Agreement, cascade optimisation and no significant harm to the downstream, that is aligning with Xayaburi HPP, and other potential mainstream HPPs to improve sediment flushing and downstream larval drift; and
 - b. Ensuring environmental flows for the area immediately downstream of the dam site.

- 2. *Increasing the transport of sediment through the head pond by considering:***
 - a. Optimising sediment-related design to improve the sediment delivery efficiency of the PLHPP, including effective flushing gates and mechanical delivery method;
 - b. Considering the measures to minimise and mitigate the potential impacts of sediment deposition in the headpond/in-channel storage;
 - c. Reviewing the sediment management strategy to pass sediment more frequently, such as on a seasonal or annual basis; and
 - d. Coordinating water management and sediment management operations at the PLHPP with other hydropower projects of the cascade to minimize adverse impacts of flood and drought downstream and optimize power supply.

- 3. *Improving the fish passage facilities by:***
 - a. Examining the design and effectiveness of the fish pass facilities at the previous best practice of mainstream hydropower projects when designing and constructing the fish pass for the PLHPP; and
 - b. Demonstrating the most effective designs in terms of the entrances and exits, slope of the fish pass, flow velocity and capacity of fishpass, dam operational rules to maintain drifting fish egg and larvae and effective fish passing, operation of spillway gates and turbines to minimise fish mortality and installing fish screens to divert larger fish from the turbines.

- 4. *Gaining a better understanding of potential transboundary socioeconomic impacts by:***

Considering the results from the socio-economic impact assessment of the related MRC studies and undertaking further assessment if needed on the consequences of the PLHPP on livelihoods and food security.

- 5. *Improving the design of the dam safety features by:***
 - a. Undertaking a dam break analysis including possible failures, at the start of the detailed design stage to identify any weaknesses in the design and allow mitigation measures to be incorporated at an early design stage; and
 - b. Carrying out dam break modelling to determine the consequences of the theoretical dam break flood wave, and to select the design standards accordingly.

- 6. *Increasing the safety of the navigation facilities by:***
 - a. Increasing the air clearance over the upper lockhead to align with the standard practice on the Mekong;
 - b. Providing a vertical front for the downstream guidance wall, as is the case with the upstream guidance wall;
 - c. Improving the safety of the upstream and downstream approaches to the lock

- system by considering appropriate design changes; and
- d. Using the lock system to facilitate fish migration during construction, drawing upon the Xayaburi system as an example.

7. *Maintaining a communication channel to get the inputs into the ongoing design and development of the PLHPP, including at a minimum the following expertise:*

- a. Dam safety;
- b. Flow regulation;
- c. Sediment flushing infrastructure;
- d. Fish passage infrastructure;
- e. Navigation lock infrastructure; and
- f. Socio-economic assessment.

8. *Gaining a better understanding of the potential impacts of the PLHPP by:*

- a. Collecting additional data to better support local and transboundary impacts assessment and identification of appropriate mitigation measures;
- b. Taking into account the impact assessments at both local and transboundary levels including changes in flow regimes, sediment transport, fisheries, water quality, and ecological health as recommended by the Technical Review Report; and
- c. Cooperating with MRC Secretariat to consider the impacts of the PLHPP in the context of cumulative impacts of other existing and planned mainstream dams including the dams in the Upper Mekong River.

9. *Monitoring*

Expanding the MRC Joint Environment Monitoring of the mainstream development projects to cover the impacts assessment of the PLHPP on the hydrology, sediment, water quality, aquatic ecology and fisheries in construction and operation stages.

10. *Information sharing*

Periodically share the monitoring data, the updated detailed design and operating rules with the MRC for comment and reference.

II. Requests the Mekong River Commission Secretariat to support the preparation of a Joint Action Plan (JAP) that outlines a post Prior Consultation process.

III. Requests the MRC Secretariat to incorporate the key findings from the PLHPP PNPCA process in the development of Commentaries to the Procedures for Notification, Prior Consultation and Agreement through its work with the MRC Joint Platform, and to expedite this work for consideration by the MRC Joint Committee.

The MRC Joint Committee notes that the list of recommendations above may be updated based on the additional information provided. The MRC Joint Committee will continue its dialogue on the PLHPP in order to address the transboundary impacts of the PLHPP through the Joint Action Plan (JAP). Financial arrangement would be discussed for all the items listed above.

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