



Mekong River Commission

P.O. Box 6101, 184 Fa Ngoum Road, Unit 18,
Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR
Telephone: (856-21) 263 263. Facsimile: (856-21) 263 264

TERM OF REFERENCE

1. Consultancy Summary:

Consultancy Title:	Sediment Transport and River Morphology Impact Assessment International Expert to support the implementation of the PNPCA Prior Consultation process of a hydropower project to be submitted under PNPCA Prior Consultation process
Consultancy type:	Special Service Agreement (SSA)
Duration (# of days):	26 working days, 1 May to 31 December 2020
Division/OC:	MRCS Planning Division
Working station:	Homebased, and a travel to the Mekong Country
Total budget: (for lumpsum)	

2. General background:

2.1. Background and objective/s of the consultancy

The MRC Procedures on Notification, Prior Consultation an Agreement (PNPCA) which was adopted in 2003 is a set of three separate processes undertaken by Member Countries for certain projects using water from the Mekong Basin, which may significantly alter water flow or water quality of the Mekong mainstream. The three processes include Notification, Prior Consultation, and Agreement.

The PNPCA Prior Consultation process allows the other member countries to discuss and evaluate the impact of the proposed use upon their uses of water and any other effects, with the aim to avoiding, minimizing and mitigating harmful effects, which is the basis for arriving at an agreement.

Since 2010 the MRC has completed carrying out four Prior Consultation processes of Lao mainstream hydropower projects. These include the Xayaburi (XHPP), Don Sahong, Pak Beng (PBHPP), and the Pak Lay (PLHPP) hydropower projects conducted in 2010-2011, 2014-2015, 2016-2017, and 2018-2019, respectively. Currently, the fifth prior consultation process for Luang Prabang hydropower project is being conducted and due to complete on 07 April 2020.

For 2020, it is expected that another hydropower project will be submitted for Prior Consultation process. As part of the Prior Consultation process, the MRC Secretariat will support the PNPCA Joint Committee Working Group (JCWG) to review the submitted documents, especially in formulating the Technical Review Report (TRR) in which the MRCS will review the developer's impact assessments and the likely effectiveness of the proposed mitigation measures. This may lead to additional recommendations with a view to further avoiding, minimizing and mitigating transboundary environmental and social impacts. The TRR will be submitted to the MRC Joint Committee (JC) through the JCWG for consideration and arriving at a conclusion. The relevant MRC Divisions will review the developer's impact assessments and the effectiveness of the proposed mitigation measures, and make recommendations with a view to avoiding, minimizing and mitigating transboundary environmental and social impacts.

Based on previous experience, the MRC Secretariat is expected to provide support to the Member Countries in conducting the technical review of the submitted HPP, and facilitate the PC process. Therefore, the MRCS will need to utilize the MRCS experts as well as commission a team of international and national experts to support this.

The objectives of this consultancy is to review and assess to the extent possible the likely transboundary impacts of the hydropower project and identify mitigation measures related to sediment and river morphology issues, and to provide other support related to sediment and river morphology issues to be identified and agreed based on consultation between the MRCS and the consultant.

2.2. Expected final product

The Sediment and River Morphology Impact Assessment International Expert will produce a final technical report on the assessment of the proposed Hydropower Project related to sediment and river morphology.

3. Required deliverables, timelines and responsibilities

3.1. Deliverables and concrete timelines:

No.	Deliverables	Number days	Target date ¹
1	1 st draft technical report on the assessment on sediment and river morphology of the Submitted Hydropower Project, including compliance/alignment assessment of the submitted report with the PDG and its revised	9 days	June – July 2020
2	Join site visit and a PNPCA Joint Committee Working Group (JCWG)	5 days	August 2020
3	2 nd draft technical report on the assessment on sediment and river morphology of the Submitted Hydropower Project	4 days	August 2020
4	Final draft technical report the assessment on sediment and river morphology of the Submitted Hydropower Project including an Executive Summary	2 days	October 2020
5	Final technical report	1 day	November 2020
6	Other ad hoc support on technical review and recommendation related to the PBHPP, PLHPP, LPHPP and other related issues.	5 days	May – Dec. 20
Total Working Days		26 Days	

3.2. Required tasks and responsibilities:

The Sediment and River Morphology Impact Assessment International Expert will be responsible to fulfill the following tasks:

- To check compliance/alignment of the submitted project with the PDG and/or revised DG² regarding sediment and river morphology issues;
- Screen the submitted Hydropower Project documents in relation to aspects of sediment and river morphology;

¹ This proposed target date is only indicative. They can be adjusted.

² Currently, the revised PDG (DG) is being discussed and finalized.

- Provide assistance and advice to the PNPCA Task Group – TG and PNPCA Joint Committee – JCWG (via the Secretariat) to elaborate the MRC Prior Consultation Review Report in relation to the submitted Hydropower Project;
- Provide high level and professional independent advice and guidance to support objectivity and credibility in the assessment process of sediment and river morphology aspects which refer to the past, present and future changes;
- In respect to the latter point, provide a technical review of the submitted documents and a cross-check of the findings of the submitted Hydropower Project;
- Deliver a technical review report regarding possible impacts of the submitted Hydropower Project on sediment and river morphology, identify existing gaps and propose future monitoring:
 - Analyse and assess possible impacts regarding the sediment quantity and quality in the upstream reservoir and downstream section of submitted Hydropower Project;
 - Instruct and advise the MRCS on modeling where needed;
 - Integrate findings on impacts in an overall environmental context that may cause possible impacts on fisheries (i.e. deep pool sedimentation and river morphology);
 - Estimate on possible impacts on the riverine environment (i.e. wetlands, in the wider scope on the overall water status/condition) that may be caused by a changed sediment balance;
 - Cross-check and look into the additional cumulative impacts of the proposed 6 mainstream dams up from Vientiane of Lao PDR in comparison with the single dam of the proposed submitted Hydropower Project;
 - Elaborate conclusions regarding the submitted Hydropower Project, reflect on possible cumulative impacts taking into account the other planned mainstream hydropower projects, the hydropower cascade in the Chinese Mekong reach as well as existing/future dams in the tributaries;
 - Propose a monitoring programme to assess a sediment baseline (quantity) in the submitted Hydropower Project area that will be likely to detect and quantify the extent of possible future impacts in comparison to the established baseline to enable better Impact Assessment of developments including hydropower;
 - Identify existing gaps regarding knowledge on sediment quantity and propose critical future assessments, research or studies in the immediate and longer term.
- Contribute to the elaboration and achievement of the other work package especially on elaborating a sediment management approach also addressing dam operations and possible mitigation measures (individual case and transboundary);
- Provide a concise report on the elaborated tasks outlined above and support MRCS to produce one concise, consolidated and harmonized report according to the needs of the PNPCA TG to compile a final MRC Prior Consultation Review Report;
- Compile an executive summary of respective findings including key conclusions;
- Facilitate and participate in national/regional meetings, workshops, consultations and field trips that stand in relation to the submitted project as needed and required;
- Participate in meetings with government agencies, hydropower developers as needed)

4. Working Arrangement:

4.1. Director supervisor: Director of Planning Division

4.2. Communication line: The Sediment and River Morphology Impact Assessment International Expert will work under the direction of the Chief River Basin Planner and Hydrologist Chief and the strategic guidance of the Director of the Planning Division. Furthermore, the consultant will work in close collaboration with the regional and international water policy consultant and other technical expert teams.

5. **Payment mode:** Payments will be made based on number of days used with the condition that the MRCS Planning Division will satisfactorily accept all deliverables.

6. Qualifications and Requirements:

The Sediment and River Morphology Assessment International Expert will have the following qualifications:

- 15 years of international experience in river hydrology and hydraulics, geomorphology and sediment transport;
- High level knowledge of and experience in assessing impacts of dams regarding sediments, including mitigation measures;
- Demonstrated ability to write technical reports which can be readily understood by decision makers and the public;
- Able to communicate effectively, verbally and in writing with a wide range of people;
- Excellent written and oral communication skills in English;
- Familiarity with the Lower Mekong Basin and the Mekong River Commission but particularly in developing countries is essential.

7. **Intellectual property rights:** Information, data, database, knowledge resources in the forms of briefings, reports, proceedings, articles, essays, etc. issued by and for the MRCS will be the MRCS property. Any utility, announcement and disclosure that are without MRCS highest levels of authority' permission is considered illegal and will be charged by relevant local and international legal procedures.

In addition, due to the nature of the prior consultation process, the consultant shall not communicate or provide any documents/results to third parties before they are made officially available within the MRC framework through the MRCS and/or the MRC Member Countries.

8. Signature Block

<p>MRC Secretariat Division: Planning Division Name of OIC for PD: Thim Ly</p> <p>Signature:</p>	<p>Date:</p>
<p>Consultant Name of consultant:</p> <p>Signature:</p>	<p>Date:</p>