Guidelines for Transboundary Environmental Impact Assessment in the Lower Mekong River Basin

The Mekong River Commission (MRC) is funded by contributions from its Member Countries and Development Partners, including Australia, the European Union, Finland, Flanders/Belgium, France, Germany, Japan, Luxembourg, the Netherlands, New Zealand, Sweden, Switzerland, and the United States of America.

Guidelines for Transboundary Environmental Impact Assessment in the Lower Mekong River Basin

February 2023

First published (2023)

Title: Guidelines for transboundary environmental impact assessment in the Lower Mekong River Basin

DOI: 10.52107/mrc.aqrsbk

Keywords: guidelines/transboundary/Lower Mekong River Basin/climate change/environment

For bibliographic purposes, this volume may be cited as:
Mekong River Commission. (2023). *Guidelines for transboundary environmental impact assessment in the Lower Mekong River Basin*. Vientiane: MRC Secretariat. DOI: 10.52107/mrc.aqrsbk

Information on MRC publications and digital products can be found at
www.mrcmekong.org/publications

All queries on rights and licences should be addressed to:
Mekong River Commission
Documentation and Learning Centre
184, Fa Ngoum Road, Unit 18, Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR
Telephone: +856-21 263 263 | E-mail: mrcs@mrcmekong.org | www.mrcmekong.org

CITATION

Mekong River Commission. (2023). *Guidelines for transboundary environmental impact assessment in the Lower Mekong River Basin*. Vientiane: MRC Secretariat. DOI: 10.52107/mrc.aqrsbk

AUTHORS

Project management

Mr Socheat Hak, Dr Truong Hong Tien, and Mr Tran Minh Khoi, Directors of the Environmental Management Division, MRC Secretariat

Technical experts

Dr So Nam, Chief Environment Management Officer; Dr Prayooth Yaowakhan, Ecosystem and Wetland Specialist, Environmental Management Division

International technical experts

Mr Michal Musil, International Consultant, Integra Consulting, Czech

Contents

PREFACE

On the international stage, a cherished principle is national sovereignty. Every country reserves its right to determine domestic policies and is cautious about anything that might infringe upon that right. This is particularly true with issues like economic development.

However, there are certain challenges that cannot be contained exclusively within one's own border, but instead become transboundary. And these require good-faith cooperation with neighbors, in the interest of a greater good – perhaps for the entire neighbourhood.

That leads us to this groundbreaking document: the Mekong River Commission's Guidelines for Transboundary Environmental Impact Assessment in the Lower Mekong River Basin, or the "TbEIA."

All four MRC Member Countries – Cambodia, Lao PDR, Thailand and Viet Nam – have our own systems and legislation to assess the environmental impact of our own economic development projects, including irrigation, hydropower, navigation, mining, aquaculture and others. This is especially true for those involving our precious transboundary Mekong water resources, flowing from Southeast Asia's largest river.

Yet these Guidelines now fill a critical gap: they offer a standard practical tool to collect proper baseline data and assess any potential impact of our project on a neighbour. The tool is voluntary and its findings, or recommendations, requires trust and cooperation to be effectively implemented.

Nevertheless, the leadership of our four countries deserve praise for courageously setting forth these criteria, as such things are absent in many shared river basins around the world.

That helps to explain why these Guidelines were so long in the making. The 1995 Mekong Agreement entrusted the MRC to promote the river's sustainable development and help protect the Basin's water resources. It was in 2003, though, that the MRC Joint Committee voted to establish a TbEIA mechanism. That spawned a long process of consultation and compromise.

The fact that this document was finally agreed for voluntary application in October 2022 is largely a testament to a growing concern about the potential transboundary impacts of water related development projects. On the other hand, it is how the MRC has fostered knowledge, capacity and trust building over the years. After all, one of the MRC's other core missions is "water diplomacy."

Throughout this document, you will notice the phrase "facilitate cooperation" as we view it as a key to minimizing any misunderstandings or harmful missteps. I hope that these

Guidelines become a useful tool for any project, particularly during the early design phase, as we all hope to avoid any environmental impacts, both on the country of origin that proposes the project and on potentially affected countries who are the affected neighbours.

We have also built in a degree of "flexibility," trusting our stakeholders, especially project developers, to adapt and apply the TbEIA ever more effectively, based on their lessons learned from actually using this tool.

Moving forward, we now look forward to Member Countries testing the usefulness of these Guidelines and the applicability to their projects. I thank the leadership and technical teams of the MRC Secretariat for supporting Member Countries over the years and for your continuing support for us to now use these Guidelines for the benefits of the countries and the Mekong peoples.

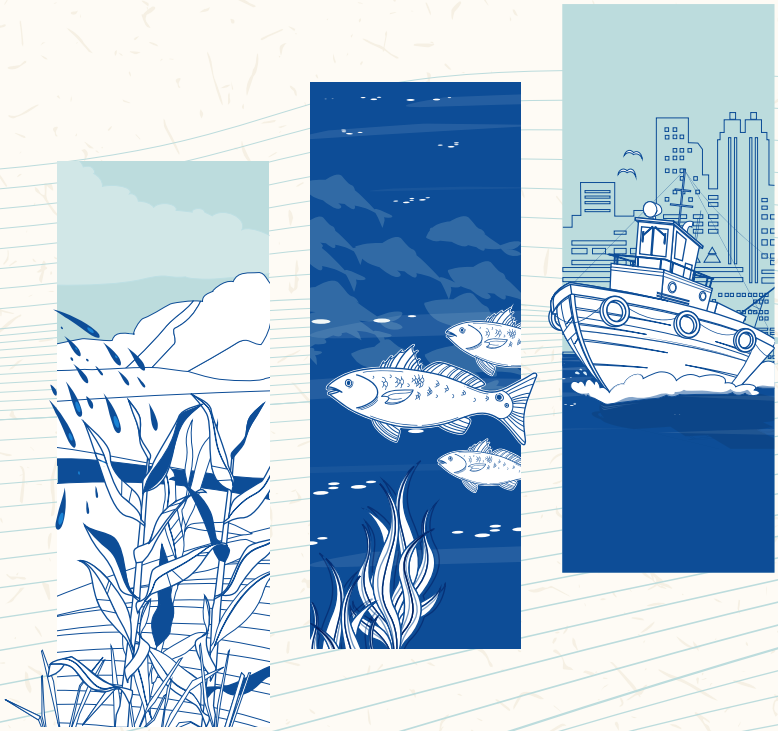
Dr Anoulak Kittikhoun

Chief Executive Officer
Mekong River Commission

ABBREVIATIONS AND ACRONYMS

DSF	Decision Support Framework
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
JEM	Joint Environment Monitoring of Mekong Mainstream Hydropower Projects
LMB	Lower Mekong Basin
MRC	Mekong River Commission
MRCS	Mekong River Commission Secretariat
NMC	National Mekong Committee
NMCS	National Mekong Committee Secretariat
PDIES	Procedures for Data and Information Exchange and Sharing
PMFM	Procedures for Maintenance of Flows on the Mainstream
PNPCA	Procedure for Notification, Prior Consultation and Agreement
PWQ	Procedures for Water Quality
PWUM	Procedures for Water Use Monitoring
TbEIA	Transboundary Environmental Impact Assessment
ToR	Terms of Reference
UNECE	United Nations Economic Commission for Europe

Introduction

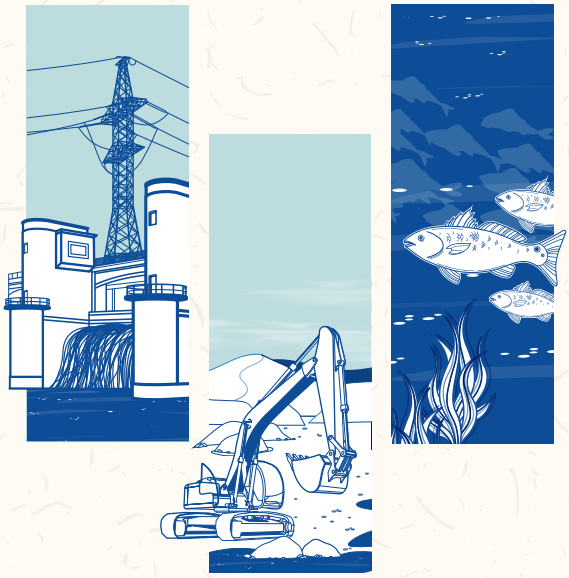


INTRODUCTION

In recognition of the cooperation stipulated in the 1995 Mekong Agreement to promote the sustainable development, utilization, conservation, and management of the Mekong River Basin water and related resources, in response to the MRC Council Resolution of 1998, and the Joint Committee's decision of 2003, the MRC Member Countries hereby decide to implement the ***Guidelines for Transboundary Environmental Impact Assessments (TbEIA Guidelines)*** where needed. These Guidelines were designed as a flexible document in view of its further development based on gradually accumulated experience of Member Countries with TbEIA application.

The TbEIA Guidelines are based on a draft TbEIA Framework that was developed from 2004 to 2010 through a series of workshops, seminars, national and regional consultations, and pilot studies, and further developed following advice generated through legal and institutional reviews undertaken in 2015–2017, and a series of national and regional consultations in 2016–2019, which involved Government officials from the four Member Countries.

It has been developed with particular regard to the valuable experience gained from the MRC-supported consultations on the Xayaburi Hydropower Project, the Don Sahong Hydropower Project, and the Pak Beng Hydropower Project, and particularly on lessons learned from the Srepok River and Se San River case study commissioned by the MRC. The approach adopted in these Guidelines also considers the transboundary EIA practice observed in other regional contexts, namely the experience gained by signatories and members states of the United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context (the Espoo EIA Convention), as well as experience from cross-border cooperation and joint management, and the monitoring of water resources implemented in the bordering area between the United States of America and Canada.



The Guidelines were designed as a supporting tool applicable in compliance with the different national EIA legislation systems in Member Countries. In recognition of already agreed MRC mechanisms, these TbEIA Guidelines build on and supplement the MRC Procedures for Notification, Prior Consultation and Agreement (PNPCA), and use and take into account other MRC Procedures – e.g. the Procedures for Data and Information Exchange and Sharing (PDIES), the Procedures for Water Use Monitoring (PWUM), the Procedures for Maintenance of Flows on the Mainstream (PMFM), and the Procedures for Water Quality (PWQ) – in addressing potential transboundary environmental impacts of development projects. Further positive synergy is also expected with the currently evolving Joint Environment Monitoring of Mekong Mainstream Hydropower Projects (JEM). In addition, the evolving policies and practices on public participation of the MRC are also recognized, and the MRC Member Countries are encouraged to apply them in EIA processes addressed by these Guidelines. Principles and specific provisions of these Guidelines (e.g. those related to post-project environmental monitoring) are also applicable in the context of already existing development projects, and MRC Member Countries are invited to apply relevant elements of the TbEIA Guidelines in their management of all relevant projects with potential transboundary impacts.

OBJECTIVE

The general objective of the TbEIA Guidelines is to support the application of the Objectives and Principles of Cooperation stated in the 1995 Mekong Agreement, namely: Article 3, Protection of the Environment and Ecological Balance; Article 5, Reasonable and Equitable Utilisation; Article 6, Maintenance of Flows on the Mainstream; Article 7, Prevention and Cessation of Harmful Effects; and Article 8, State Responsibility for Damages.

Therefore, the specific objectives of these Guidelines are:

- to support and reinforce the implementation of the relevant MRC procedures such as the PNPCA, and capitalize on methodological and technical advice published by the MRC that concerns the evaluation and management of environmental issues of common interest; and
- to support the national environmental impact assessment (EIA) systems in conducting EIAs of projects with potential significant transboundary impacts.

The nature of these TbEIA Guidelines reflects the fact that economic development projects in the Mekong Basin are already causing concern among the Member Countries about their potential transboundary environmental impacts. It aims to facilitate the MRC's cooperation and support the protection of the environment, natural resources, aquatic life and conditions, and the ecological balance of the Lower Mekong River Basin (LMB), and the prevention and cessation of harmful effects, resulting from development projects in accordance with the 1995 Mekong Agreement.

These TbEIA Guidelines aim to facilitate cooperation in conducting EIAs for projects with potential transboundary environmental impacts while respecting the differences among the EIA legislations in Member Countries and the specifics of their national EIA systems. Application of the provisions presented in these TbEIA Guidelines shall allow for a meaningful participation of all concerned Member Countries in transboundary EIAs without prior harmonization of their legislation and procedures to be fully and mutually compatible. Hence, the practice and experience can grow, which in turn would allow for further improvement of the TbEIA processes.

PRINCIPLES

In line with the provisions of the Mekong Agreement, the key principles on which the TbEIA Guidelines are based are as follows:

- **State sovereignty:** The decision-making authority of a Member Country to approve development of a project on its territory that has been a subject of a TbEIA is respected. In its practical application, the principle is that the TbEIA process follows the national EIA legislation of the Member Country within which the proposed project is to be located.
- **The polluter pays principle:** The costs of negative environmental and social impacts of a project shall be borne by the individual or entity responsible for the development of the project. According to this principle in the context of (Tb)EIAs, the entire burden of costs associated with conducting the (Tb)EIAs shall be primarily borne by the Proponent (developer).
- **The good faith and good neighbourliness principle:** The concerned Member Countries would apply EIAs to ensure the prevention and minimization of negative environmental impacts on their neighbours while refraining from using the TbEIA to obstruct the development plans of the neighbouring Member Countries.
- **Reciprocity principle:** According to this principle, favours, benefits, or penalties that are granted by one state to the citizens or legal entities of another, should be returned in kind. In the context of TbEIA, Member Countries should adopt a responsive and helpful approach that allows for effective and mutually beneficial transboundary consultations.

SCOPE

1. Each Member Country is encouraged to ensure that national EIA processes for projects that fall into the Areas of Cooperation pursuant to Article 1 of the 1995 Mekong Agreement and have a capacity to cause a significant[1] negative impact on the protection of the environment and ecological balance of the Mekong River Basin (pursuant to Article 3 of the Mekong agreement) or to affect reasonable and equitable utilization of the waters of the Mekong River system (pursuant to Article 5 of the Mekong Agreement) should take into consideration their potential transboundary environmental impacts.

   As indicated in the *Introduction* section, these Guidelines are designed to support the PNPCA process, which is mainly relevant to projects on the Mekong mainstream. Based on the neighbourliness principle, these Guidelines are applicable to any project if the Country of Origin during the planning process see any risk of significant transboundary impacts and wishes to conduct the EIA.[2]

2. For the purpose of the TbEIA Guidelines, the following categories[3] of projects are relevant, i.e. they fall within the scope of the 1995 Mekong Agreement as defined in paragraph 1 above:

   a) Hydropower projects

   b) Irrigation schemes

   c) Ports, river works, and navigation projects

   d) Industrial and mining projects

   e) Aquaculture projects.

3. In case a proposed project that falls into the scope of the 1995 Mekong Agreement (as indicated above) does not require a national EIA within the Country of Origin, the Country of Origin is advised to inform the other Member Countries in accordance with the PNPCA procedure.

1 The term 'significant' is understood as excluding mere inconveniences or minor disturbances that Member Countries are expected to tolerate from one another, in conformity with the principle of good neighbourliness. Such understanding is established in relevant context e.g. by the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (see United Nations Watercourses Convention, 2022)

2 The application of these TbEIA Guidelines is entirely at Member Countries' discretion. They can be applied provided that they see benefits from conducting a TbEIA for a given project.

3 The national EIA system screening criteria of the Country of Origin (e.g. size, capacity, location of the project) apply to determine whether or not any project should conduct the EIA. The need for a TbEIA is determined through further consultative steps described in these Guidelines. No additional technical screening criteria specific for the TbEIA are proposed.

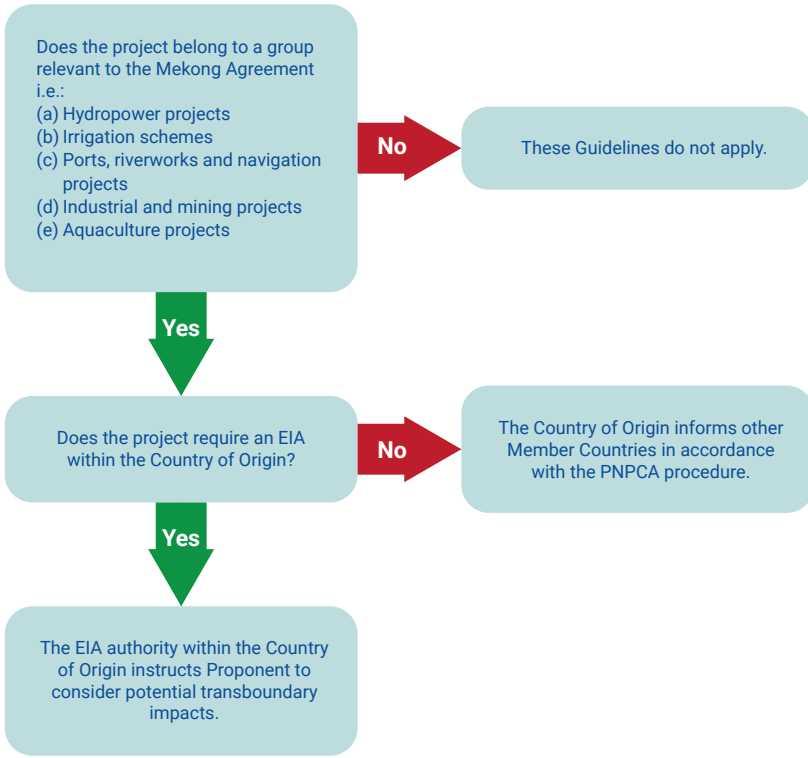
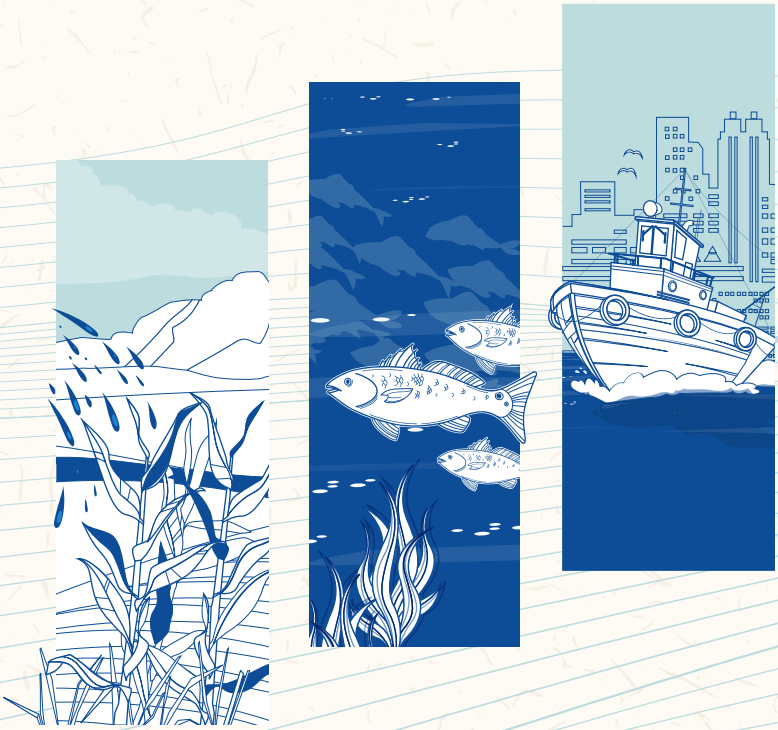


Figure 1. Scope of application of the TbEIA Guidelines

TbEIA Process



TbEIA PROCESS

The overall scheme of the TbEIA process consisting of steps described in this section is illustrated by the flowchart included in **Annex 1**.

Identification of potential transboundary environmental impacts and the need for a TbEIA

4. When applying the principle of good faith, each Country of Origin is recommended to encourage the Proponents of the projects specified in Paragraph 2 (of Annex 1) to identify potential transboundary environmental impacts as early as possible in order to allow for their proper consideration during the planning of the respective project and the EIA process.

TbEIA Initiation and early consultations

5. When the Proponent so requests, the Country of Origin can inform any Potentially Affected Country by a TbEIA initiation letter and invite the Country(ies) to consultations on the identification of transboundary environmental impacts that should be assessed.

6. The Potentially Affected Country(ies) should respond within 30 days, acknowledging the receipt of the TbEIA Initiation letter and indicating whether or not it wants to participate in the early consultations.

Determination of the scope of a transboundary assessment

7. The process of EIA scoping is conducted by the Proponent in line with the national EIA regulation in the Country of Origin. Resulting documentation (e.g. the scoping report, the ToR for the EIA study, the initial EIA, the initial environmental examination) should take into account the results of the early consultations among Concerned Member Countries. It shall propose whether or not any significant transboundary impacts are expected and how they will be addressed in the EIA report.

Preparation of the EIA Report

8. The EIA Report is prepared by the Proponent (or by a consultant appointed by the Proponent) in compliance with the EIA requirements in the Country of Origin. Within the purview established during the EIA scoping phase, it shall describe potential transboundary environmental impacts.

9. When doing so, the Proponent can ask the Country of Origin to request the Potentially Affected Country to:

a) provide the Proponent with access to information on the relevant aspects of the potentially affected environment on its territory;

b) allow the Proponent to conduct surveys on its territory; and

c) assist the Proponent in organizing consultations with potentially affected public and relevant authorities on its territory – provided that they are properly planned and conducted within reasonable timeframes.

Transboundary consultation of the EIA report

10. When the (draft) EIA report submitted in the Country of Origin indicates that the proposed project may have transboundary environmental impacts or when the concerned Member Country (ies) so requests (e.g. during participation in early consultations), the Country of Origin forwards the (draft) EIA report to Potentially Affected Country(ies)while making it available to its own public.

11. The formal transboundary consultations on the proposed project and its accompanying (draft) EIA Report between the concerned Member Countries should be undertaken using the mechanism established by the PNPCA procedure.

12. The Potentially Affected Country provides comments (including comments obtained during stakeholders' consultations and public participation events) on the (draft) EIA Report to the Country of Origin in a consolidated manner according to the timeframe agreed during the early consultations, or through the response mechanism of the PNPCA.

Public participation, dissemination of information, and consultation within the Potentially Affected Country

13. National consultations on the (draft) EIA Report in the Potentially Affected Country should be organized in accordance with applicable provisions specified in its national regulatory framework.

14. The (draft) EIA Report obtained from the Country of Origin can be disseminated together with other relevant information to stakeholders, including potentially affected communities according to standard practice for EIA consultation in the Potentially Affected Country.

15. The consultations on the (draft) EIA Report in concerned Member Countries should include *public participation*, i.e. a process through which key stakeholders gain influence and take part in decision-making in the planning, implementation, monitoring, and evaluation of a given project.[4]

4 Public Participation in the Context of the MRC, section 2.2 Defining Public Participation.

16. The results of the national consultation process on the (draft) EIA report should be provided to the Country of Origin in a consolidated manner according to the agreed schedule, so that the EIA responsible authority can take them into account before approving the EIA Report.

EIA approval and decision-making

17. The final approval of the EIA Report is granted by the EIA responsible authority in the Country of Origin according to the applicable national procedure while considering the comments from any Potentially Affected Country.

18. The Country of Origin should make the decision on whether to implement the proposed project by considering the views raised through formal transboundary consultations conducted in accordance with the paras. 10–12.

19. The Country of Origin is advised to ensure that the Potentially Affected Countries are provided with the final decision and a statement containing:

    a) responses to the comments received through the formal transboundary consultations;

    b) an explanation how were reasonable alternatives and practical measures for preventing, minimizing, or offsetting/mitigating the adverse transboundary environmental impacts considered in the final decision on the proposed project; and

    c) a description of the measures for monitoring and management (including acknowledgement and adaptation) of any residual transboundary environmental impacts and risks..

EIA results implementation and monitoring

20. The Country of Origin should ensure that the Proponent complies with the conditions stipulated in the decision on the proposed project. It should also ensure that the Proponent:

    - implement the agreed measures for preventing, minimizing, or offsetting/mitigating the adverse transboundary environmental impacts;
    - conduct monitoring in order to identify any unforeseen adverse transboundary environmental impacts at an early stage and to be able to undertake appropriate remedial action at its expense; and
    - make the results of the monitoring undertaken available to the concerned Member Countries.

21. The results of monitoring undertaken in accordance with Paragraph 20 shall be made

available to the Potentially Affected Country(ies) in formats and time intervals mutually agreed between the concerned Member Country(ies).

22. If any Potentially Affected Country deems the arrangements for monitoring insufficient, it is advised to inform the concerned Member Country(ies). The concerned Member Country(ies) might then consult and reach a consensus on the necessary measures to improve the monitoring. At the request of the concerned Member Country(ies), such consultation can be facilitated by the MRC Secretariat (MRCS).

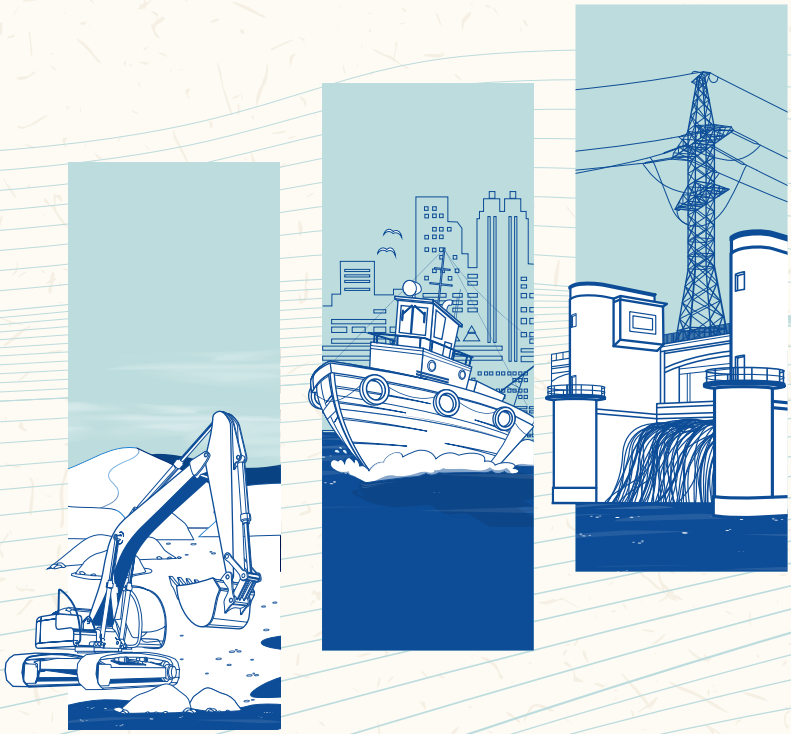
23. If as a result of the monitoring, or based on its own investigations, any Potentially Affected Country has reasonable grounds for concluding that there is a significant transboundary environmental impact, it is advised to inform the concerned Member Country(ies). The concerned Member Country(ies) should then immediately consult on measures that need to be taken to prevent, minimize, or offset/mitigate the impact. Such measures may include an immediate cessation of activities that cause significant adverse transboundary environmental impacts. At the request of concerned Member Country(ies), such consultation can be facilitated by the MRCS.

Costs of a Transboundary EIA

24. The costs associated with the assessment of the transboundary environmental impacts and implementation of measures for their prevention, minimizing, or offsetting/mitigation, as well as costs associated with the monitoring and management of transboundary environmental impacts should be borne by the Proponent.

25. The costs related to consultations should be covered by the Proponent based on the agreement between the Proponent and concerned Member Countries reached on case-by-case basis.

Technical Implementation of TbEIA



TECHNICAL IMPLEMENTATION OF TbEIA

Technical guidance is provided in this section through comments and suggestions for the practical implementation of procedural steps outlined in the TbEIA Process section above, independently from the point of view of the Country of Origin, Proponent, and Potentially Affected Country. The overall scheme of the TbEIA process consisting of steps described in this section is illustrated by the flowchart in Annex 1. The MRC structures play a supporting role, which can change over time; therefore, it is also described in a separate (section 8).

Identification of potential transboundary environmental impacts and the need for TbEIA (TbEIA screening)

Country of Origin

26. The EIA responsible authority should consider the following:

    1. Does the proposed project fall within the scope of 1995 Mekong Agreement, i.e. does it belong to one of the following categories:

        a) Hydropower projects

        b) Irrigation schemes

        c) Ports, river works , and navigation projects

        d) Industrial and mining projects

        e) Aquaculture projects.

    2. Is the project due to its location, nature, and scale, likely to have an impact on the protection of the environment and ecological balance or likely to affect reasonable and equitable utilization of the Mekong River?

27. If a specific proposed project, falling under one of the categories listed above does not require an EIA within the Country of Origin, the Country of Origin should endeavour to inform the other Member Countries in accordance with the PNPCA procedure. The concerned Member Countries may then decide to develop a separate arrangement to address any potential transboundary environmental impacts.

28. If a proposed project falling within one of the categories listed above does require an EIA in the Country of Origin, the EIA responsible authority within the Country of Origin should instruct the Proponent (as early as possible, ideally during the screening or scoping phase) to consider potential transboundary impacts and request information from the Proponent on proposed approach to transboundary consultations.

29. The identification of potential transboundary environmental impacts can be carried out by using an Indicative Checklist of Potential Transboundary Impacts of Specific Projects (see Annex 2) and shall be supported by the expert capacity of the Proponent (i.e. a EIA consultant contracted by the Proponent).

Proponent

30. The Proponent assists the EIA responsible authority(ies) of the Country of Origin in determining whether or not the project qualifies for the application of the MRC TbEIA Guidelines. It is recommended to pose this question as early as possible, when permitting requirements are first being discussed between the project Proponent and relevant authorities, and the applicability of the national EIA legislation on a given project is established.

31. The Proponent must be ready to provide as early as possible the following information to the EIA responsible authority:

    - a brief description of the project;
    - its potential environmental impacts in normal operating conditions;
    - its potential environmental impacts in a worst-case scenario;
    - the type of transboundary environmental impacts possible;
    - potential stakeholders affected (including stakeholders in any Potentially Affected Country); and
    - proposal for consultations and data-gathering activities to be conducted in any Potentially Affected Country.

Any Potentially Affected Country

32. Although these Guidelines do not envisage any role for any Potentially Affected Country before it is formally informed and invited for early consultations, it is acknowledged that information on the preparation of large investment projects can be available informally. Any concerned Member Country can therefore adopt a pro-active approach and preliminarily request to be consulted in due time when the EIA process in the Country of Origin is initiated.

TbEIA Initiation and early consultations

Country of Origin

33. The initiation of the TbEIA is driven primarily by the Proponent's project preparation steps (e.g. feasibility studies and preliminary analyses) during which the initial information on potential transboundary impacts is acquired. The EIA responsible authority can, in

cooperation with the Proponent, summit a formal TbEIA Initiation Letter to notify any Potentially Affected Country during the 'Scoping' stage of the EIA. The TbEIA Initiation letter is delivered through the NMCS in the Country of Origin and via the MRCS to the NMCS in Concerned Member Countries.

34. The TbEIA Initiation letter comprises the information obtained from the project Proponent and shall include:

    a) information on the proposed project, including any available information on its possible transboundary impact;

    b) information on the nature of the possible decision and expected timing of the EIA process; and

    c) a proposal for early consultation to establish the EIA scope and to agree on the practical aspects of the fact-finding steps to allow for transboundary EIA analyses.

    A sample TbEIA Initiation letter is included in Annex 3.

Proponent

35. The Proponent is encouraged to assist in the drafting the TbEIA Initiation letter, including the summary of the project information, expected transboundary impacts, and the proposal for early consultations, for the convenience of the Country of Origin´s EIA responsible authority.

36. The Proponent participates in the early consultations in order to:

    - present the proposed project´s details and expected transboundary impacts (or lack thereof);
    - present a preliminary proposal for the scope of the EIA analyses, including analyses addressing potential transboundary impacts. In addition, receive feedback and note concerns expressed by the Potentially Affected Country; and
    - discuss with relevant authorities of the Potentially Affected Country the practical steps for conducting analysis (e.g. provision of existing data, surveys, sampling, and consultation with potentially affected local communities) on its territory.

The Potentially Affected Country

37. The Potentially Affected Country acknowledges the receipt of the TbEIA Initiation letter within 30 days and indicates its interest in participating in, and for availability for early consultations.

38. If the Potential Affected Country chooses to participate in the EIA process, the response should be sent as a formal letter and should contain the following information:

- acknowledgement of the intention to participate in the EIA (see Annex 4 for the template);
- a summary of readily available information on relevant topics in the Potentially Affected Country (e.g. protected areas, or sensitive ecosystems that might be affected by the proposed project);
- information on the national EIA public consultation process in the Potentially Affected Country, including contacts of statutory consultees (if any);
- the language of documents;
- comments on the proposed timing of the EIA process; and
- the specific type of information of great interest (e.g. Mekong mainstream water flow alteration).

39. The Potentially Affected Country can choose not to participate in the EIA process, and in this case, it is recommended to respond with a formal letter, which indicates that it does not wish to participate. The Potentially Affected Country can, however, request a copy of the draft and/or the final EIA Report or other materials for information.

Further recommendations for organization of early consultations

40. National Mekong Committee Secretariats (NMCSs) in concerned Member Countries can serve as focal points for the TbEIA related communication. The NMCS in the Country of Origin ensures the transmission of the TbEIA Initiation letter through the MRCS to the NMCS in any Potentially Affected Country, which in turn serves as a focal point to distribute it to the EIA responsible authority and/or other addressees (e.g. line agencies). The same mechanism is used for transmitting the response of the Potentially Affected Country to the Country of Origin. The MRCS functions as a communication nexus so that a track record of the TbEIA process is consistently kept by the MRCS for the future use of Member Countries.

41. The purpose of early consultations is to assist the EIA scoping process through discussion on potentially significant transboundary environmental impacts and on the practical arrangements for conducting fact finding and analytical works necessary for addressing transboundary impacts in the EIA.

42. Early consultations can be organized as one or several meetings as soon as possible after the initiation of the EIA process in the Country of Origin. Participation of the EIA responsible authorities of both the Country of Origin and any Potentially Affected Country, as well as the Proponent is considered necessary. Additional participants (e.g. other relevant authorities and stakeholders) can be invited. The MRCS can, if requested, facilitate, and support early consultations.

43. It is recommended that the early consultations be documented with a brief memo indicating mutual understanding of the following issues:

    - the general timeframe of the EIA process;
    - the key environmental and social issues considered of key importance and the relevant territorial scope for the Potentially Affected Country;
    - the types of relevant information and data that are available in the Potentially Affected Country and of the conditions that can be used by the Proponent (EIA Consultant);
    - the fact-finding activities (e.g. surveys, sampling, and consultations with potentially affected local communities) that the Proponent envisages to be carried out on the territory of the Potentially Affected Country, and how the relevant domestic authorities will be informed and participate; and
    - the standards for public consultation (public participation) in the EIA process in any Potentially Affected Country (e.g. number and format of obligatory public hearings on EIA Report.

Determining the scope of a transboundary assessment (TbEIA Scoping)

Country of Origin

44. The EIA responsible authority proceeds according to the national EIA legislation while taking into account the preliminary analysis prepared by the Proponent (e.g. the scoping report), as well as the results of the early consultations. If a formal EIA Scoping Decision or ToR for the EIA Report is issued, it can contain requirement to address relevant transboundary impacts within the EIA process.

The Proponent

45. While preparing the preliminary (i.e. scoping) analyses, the Proponent shall make efforts to investigate potential transboundary impacts of the proposed project, and identify potentially affected territory regardless of the administrative borders.

The Potentially Affected Country

46. The process of EIA scoping is conducted by the Proponent in line with the national EIA regulation in the Country of Origin. However, the opinions, concerns, and information shared by any Potentially Affected Country during the early consultations are taken into consideration by the EIA responsible authority in the Country of Origin when preparing the ToR for the EIA study or a similar activity concluding the scoping phase of the EIA.

Further recommendations for determining the scope of a transboundary assessment

47. The general purpose of the scoping phase of an EIA is to identify potential environmental impacts that shall be further addressed in the EIA Report, including identification of likely affected territories. However, there are no universally accepted and applicable quantitative standards for determining the significance of transboundary environmental impacts, and the national EIA legislations of the Member Countries vary with regard to EIA requirements according to list, size, magnitude, nature, and location of proposed projects.

    In general, there are three main factors that can be taken into account to preliminarily estimate the significance of transboundary environmental impacts of a development project, as follows:[5]

    - *Size:* proposed large-scale projects/activities;
    - *Location:* proposed projects/activities located in or close to the Mekong mainstream; and
    - *Effect:* proposed projects/activities that are complex and that could generate adverse effects on water quality and quantity, flow regimes, river morphology, and biodiversity, which may have implications on human health and livelihoods, and aquatic ecosystems in other concerned Member Countries.

    Further, for this purpose, the location of the proposed project shall be considered, i.e. if it is located close to an international frontier, as well as more remote proposed activities that could give rise to significant transboundary effects remote from the site of development.[6]

48. These Guidelines offer suggestions for forming a judgment on whether and to what extent any proposed project may cause significant transboundary concerns. An initial understanding of the potential risks and the nature of the impacts can be developed with the help of Indicative checklist of potential transboundary impacts of specific projects included in Annex 2 and by considering probability and likely extent of transboundary impacts (see Note on identification of "significant" transboundary impacts in Annex 2). However, in the transboundary context where individual parties (concerned Member Countries or other non-state stakeholders) often hold different views and show different levels of sensitivity to various issues, it is possible to reach agreement only by engaging in a deliberative process. The introduction of the early consultations into the process of transboundary EIA serves to this purpose.

5 Adopted from the United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention): Appendix III: General criteria to assist in the determination of the environmental significance of activities not listed in Appendix I (UNECE, 1991)

6 Adopted from the UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention): Appendix III: General criteria to assist in the determination of the environmental significance of activities not listed in Appendix I (ibid.),

Preparation of the EIA Report

Country of Origin

49. The EIA Report is prepared by the Proponent (or by a consultant appointed by the Proponent) in compliance with the EIA requirements in the Country of Origin. The EIA responsible authority should advise to the Proponent how to include and present information related to the transboundary impacts in the EIA Report while complying with the structure and formal requirements of the applicable national regulation.

50. Regardless of the formal structure, the EIA Report should include the following elements:

- a description of the purpose and nature of the proposed project;
- a description of the baseline environment likely to be affected (including the environment on the potentially affected territory of concerned Member Country);
- a description of the anticipated significant transboundary environmental impacts (or explicit justified conclusion that no significant transboundary impacts are expected);
- a description of reasonable alternatives to the proposed project (including a "no action" alternative);
- A description of proposed mitigation measures;
- an Environmental Management Plan and/or monitoring and management components;
- a record of sufficient number of opportunities for public participation, including the content of comments or responses received, and how the assessment addresses these comments or why they are not addressed; and
- acknowledgement of who prepared the environmental assessment.

It is acknowledged that individual Member Countries' national legislations do not contain provisions requiring the inclusion of information on transboundary impacts in the EIA Report; however, this should not be understood as an implicit restriction on including such information in the EIA Report (at minimum in the form of an Annex).

The Proponent

51. The conduct of the analyses relevant to the assessment and the preparation of the EIA Report are entirely the responsibility of the Proponent. Typically, a specialized consultant is commissioned to act on behalf of the Proponent in all aspects related to the EIA process, namely, to advance EIA analyses and related consultations, and to draft the EIA Report in compliance with the applicable regulation of the Country of Origin.

52. While designing, conducting, and presenting the analyses of the transboundary impacts,

the Proponent ensures that the applied methodology reflects and make use, as appropriate, of the technical and methodological resources available as result of the activities of the MRC, as follows:

- *the Decision Support Framework (DSF) Toolbox,*[7] i.e. the Hydrological Model: the Soil Water and Assessment Tool (SWAT); the Basin Simulation Model: the Integrated Quantity and Quality Model (IQQM); and the Hydrodynamic Model: ISIS;
- the *Procedures for Water Quality* (PWQ), i.e. to assess if the project can impact the "*acceptable*/good water quality" of the Mekong mainstream, and consider results of water quality monitoring and research conducted within the framework of the PWQ;
- the *Procedures for Water Use Monitoring* (PWUM) – i.e. to assess if the project involves any use of water, which may (alone or in combination with other existing or planned projects) have a significant impact to the water quality or flows regime *of* the mainstream of the Mekong River System by any Member Country, and to take into account the results of MRC Water Use Monitoring System;
- the *Procedures for the Maintenance of Flows on the Mainstream* (PMFM) – i.e. to assess if the project involves any diversions, storage releases, or other actions that may have a significant impact on the flows of the mainstream during the wet and dry seasons; and
- the *Guidelines for Management of The Mekong River Commission Hydrometeorological Network*, i.e. to consider within the EIA analyses the use of the information from the MRC Information System.

The Joint Environment Monitoring of Mekong Mainstream Hydropower Projects (JEM), which is currently being developed, shall be used to: inform the EIA analysis; support Member Countries in jointly monitoring and reporting on transboundary environmental impacts during construction and operation; and inform mitigation and management, wherever appropriate, to ensure that it is based on credible data and shared understanding of the environmental situation.

For any EIA concerning hydropower projects, the following MRC resources shall be considered, and compliance of the project with the following MRC Guidelines[8] shall be investigated:

- *ISH 0306 Study: Development of Guidelines for Hydropower Environmental Impact Mitigation and Risk Management in the Lower Mekong Mainstream and Tributaries*. *Vol. 1–3.,* i.e. to apply within the EIA relevant advice presented in the section: *MANUAL – Key Hydropower Risks, Impacts and Vulnerabilities and General Mitigation Options for*

7 For details, see the MRC's Data Portal (MRC, 2017).

8 For details and a full list of MRC's Guidelines and Procedures, see the MRC's webpage. www.mrcmekong.org/publications/policies-procedures-and-guidelines/?start=0

Lower Mekong.

- *Guidelines for the evaluation of Hydropower and Multi-purpose project portfolios*, i.e. to understand and acknowledge within the EIA if, and if so, how the Sustainable Hydropower Planning Support Tool was employed during the hydropower project planning, and if any project alternatives are considered, as well as how environmental and social criteria have influenced the project rationale and/or its design.
- *Guiding Considerations on Transboundary Monitoring for LMB Hydropower Planning & Management* – i.e. to assess with the EIA if the project-related analyses use relevant environmental data (e.g. in terms of selected parameters, monitoring methodology, locations and timing of data collection), and that the proposed monitoring system covers all relevant topics such as hydrology, sediments and geomorphology, water quality, aquatic ecology, fisheries, and socio-economic conditions.

An extended list of applicable MRC resources is presented in Annex 7.

53. The (draft) EIA Report shall describe all potentially significant transboundary environmental impacts, their character, likelihood, and significance in an appropriate manner; this follows the same logic as in the case of impacts that are limited to the territory of the Country of Origin, i.e. including an indication of whether the potential transboundary environmental impacts are positive or negative, direct or indirect, cumulative, synergistic, etc.

54. In description of proposed measures for the prevention, minimization, mitigation/ offsetting, monitoring and management of the potential negative impacts the EIA Report shall indicate if and which of these measures are envisaged to be implemented on the territory of the Potentially Affected Country. It shall also clearly state which cooperation and actions of the authorities (or other stakeholders) of the Potentially Affected Country are necessary to ensure efficient implementation of these measures.

55. The description of the monitoring, mitigation measures and environmental management plan presented in the EIA Report shall clearly indicate the commitment (including commitment to finance implementation of the proposed measures) of the project Proponent.

56. Recent examples of typical difficulties and therefore useful material to study for any Proponent conducting an EIA in the MRC context provides the Review of the proposed Xayaburi Hydropower Project, or the Review of the EIA for the Pak Beng Hydropower Project conducted under the PNPCA.

The Potentially Affected Country

57. In order to support the TbEIA process and the development of the EIA Report, the Potentially Affected Country is recommended to:

    - provide the Proponent with access to information on the relevant aspects of the potentially affected environment on its territory;
    - allow the Proponent to conduct surveys on its territory; and
    - assist the Proponent in organizing consultations with potentially affected public and relevant authorities on its territory – provided that they are properly planned and conducted within reasonable timeframes.

Transboundary consultation of the EIA Report (regional consultations through the PNPCA)

Country of Origin

58. Upon receipt of the (draft) EIA Report from the Proponent, the EIA responsible authority forwards the (draft) EIA Report through the NMC and the MRCS to the NMCS in any Potentially Affected Country while making it available to its own public.

59. After the national consultations on the EIA Report in the Potentially Affected Country(see below) are completed, the EIA responsible authority receives via the MRCS and the NMCS comments and opinions on the EIA Report from the Potentially Affected Country, and takes them into consideration in its further actions in the same manner as comments from stakeholders in the Country of Origin.

The Proponent

60. If required, the Proponent ensures the translation of the original EIA Report into the languages specified during the early consultations.[9] If suitable, the Proponent also ensures preparation of other support materials (presentations, maps, explanatory visuals, etc.) to facilitate effective national consultations (including public participation) in the Potentially Affected Country (see below).

The Potentially Affected Country

61. Any Potentially Affected Country is free to conduct a quality review for the received EIA Report to examine whether the project activities, transboundary environmental impacts, and their proposed mitigation measures as well as monitoring activities detailed in the EIA Report reflected the local context and requirements.

9 For the MRC's consultations, English is typically regarded as satisfactory for developing key documents. According to the international best EIA practice, the translation of the EIA Report into the languages of potentially affected nations is necessary for effective public participation.

62. The quality review might be based on any Potentially Affected Country´s own national practice for reviewing standard EIA documentation by the relevant EIA authority, or can take a more complex form, for example voluntarily establishing an independent panel consisting of representatives from the environmental authority, related key line agencies, and recognized experts or representatives of affected communities in order to avoid or reduce bias.

    It is up to each concerned Member Country to decide whether the national EIA responsible authority would take the responsibility (in similar manner as for standard EIA) or NMCS should be given the leading role in conducting the EIA Report review.

    In contrast with reviewing an EIA Report prepared according to its own national legislation, the review conducted by the Potentially Affected Country(ies) in the context of TbEIA should focus on substantial and technical aspects of the EIA Report, and refrain from commenting on formal and procedural differences resulting from the EIA Report being prepared in compliance with legal framework and established practice of the Country of Origin.

63. The NMCS supports national consultations and the public participation process, and collects the comments for the EIA Report (including comments from the EIA responsible authority and other stakeholders). Within the agreed timeframe, it sends a consolidated opinion based on the review of the EIA Report, together with the comments collected during the national consultations and the public participation process conducted on any Potentially Affected Country´s territory, in a consolidated manner, to the Country of Origin. The transmission is facilitated by the MRCS as per the PNPCA.

Further recommendations for transboundary consultations on the EIA Report

64. National Mekong Committee Secretariats in concerned Member Countries can serve as focal points for the TbEIA-related communication. The NMCS in the Country of Origin transmits the EIA Report via the MRCS to the NMCS in the Potentially Affected Country(ies), which in turn distribute it to the EIA responsible authority and/or other addressees (e.g. line agencies). The same mechanism is used for transmitting the opinion and comments of the Potentially Affected Country to the Country of Origin.

65. The transboundary consultations (regional consultations) are conducted as per the PNPCA and can involve meetings of stakeholders from concerned Member Countries facilitated by the MRCS. Such meeting(s) can allow for a transboundary discussion of comments and findings collected by NMCS during the national consultations on the EIA Report in concerned Member Countries (see below).

Public participation, dissemination of information, and consultation within the Potentially Affected Country (national consultations through the PNPCA)

Country of Origin

66. The public participation, dissemination of information, and consultation within any Potentially Affected Country takes place without the direct involvement of any authorities of the Country of Origin, i.e. the authorities of the Country of Origin do not have any responsibility in this regard.

The Proponent

67. The Proponent is responsible for conducting public consultation process at the relevant territory of the Potentially Affected Country while meeting the minimum standards for public participation required by the applicable regulations of the Potentially Affected country and taking into account the MRC document *Public Participation in the Contex*t of the MRC. Specifically, the consultations conducted by any Proponent in the Potentially Affected Country shall include activities meeting the MRC definition for the Public Participation, i.e. a *process through which key stakeholders gain influence and take part in decision making, planning, implementation, monitoring and evaluation* of the project. Depending on the context of the specific project, this can entail ensuring effective opportunity for participation for potentially affected communities or disadvantaged groups with limited means and capacity to study the technical EIA Report.[10]

68. The Proponent ensures representative participation of the EIA Report authors in the public participation events in the Potentially Affected Country.

The Potentially Affected Country

69. The NMCS ensures that the proposed project documentation and the EIA Report obtained from the Country of Origin via the MRCS are transmitted to the EIA responsible authority and other concerned stakeholders, as well as made available and accessible to the potentially affected people, interested parties, and the general public for review, comments, and follow-up. Information disclosure should take place based on the national established practice (as in the case of any standard EIA process conducted according to the national legislation) and should take into account the MRC Communications Strategy and Disclosure Policy.

70. The NMCS supports national consultations and the public participation process organized by the Proponent, and collects the comments for the EIA Report. This support primarily concerns participation in the consultation events and providing advice on the form, timing,

10 A useful example is the unique consultation requirements for ethnic communities that could be considered indigenous according to the criteria of the World Bank's policy on indigenous people (self-identification, unique languages, collective attachment to land/territory, distinct institutions). World Bank Operational Manual OP 4.10 - Indigenous Peoples.

and location of the public participation events, and on identifying key stakeholders.

71. It is recommended that the EIA responsible authority supports the national consultation process and participates in consultation events. It can conduct its own review of the EIA Report in order to form an opinion (see section "Transboundary consultation of the EIA Report" above), which, together with the comments acquired through the public participation and national consultations, should be transmitted in a consolidated manner by the NMCS via the MRCS to the Country of Origin in accordance with the PNPCA.

Further recommendations for the public participation, dissemination of information, and consultation within the Potentially Affected Country

72. Due to the complexity of the TbEIA, it is necessary to address the practical aspects for conducting a public participation process and the related events in the territory of any Potentially Affected Country during the early consultations between concerned Member Countries (see section TbEIA Initiation and early consultation above). This includes an agreement on the number, scope, and nature of the public participation events, the participation of national and local authorities, and civil society organizations in any Potentially Affected Country, as well as organizational and financial aspects.

73. In principle, the Proponent of the project responsible for conducting the EIA is also responsible for covering all the costs for national and the transboundary consultations. In practice, it is recommended that any Potentially Affected Country interested in maximizing the effectiveness of the public participation within its jurisdiction supports the process through in-kind contribution, e.g. providing space in public buildings for the meetings, and by covering costs associated with the participation of its official representatives (e.g. representatives of EIA responsible authority and other relevant agencies) in the consultation events. Such costs-sharing arrangement shall be also understood as an incentive for the Potentially Affected Country to maximize the efficiency of the consultation process and refrain from stipulating non-standard requirements entailing excessive costs to be borne by the project Proponent.

EIA approval and decision-making

Country of Origin

74. The EIA responsible authority of the Country of Origin treats the comments received through transboundary consultations (via the MRCS and the NMCS) according to standard practice together with comments from domestic stakeholders. The final approval of the EIA Report by the national EIA responsible authority takes place in full compliance with the national legislation of the Country of Origin, after the Proponent responsible for conducting the EIA study fulfils all necessary steps of the EIA process, including adjusting or correcting the EIA Report based on received comments when required.

75. Decision on a proposed project is taken by a designated authority of the Country of Origin, and the TbEIA cannot in any way limit the national authority´s decision-making freedom. The aim of the EIA is to supply the decision-making authority objective and scientifically sound information on the potential risks and likely environmental consequences of a proposed project. Any decision-making authority (i.e. authority approving the project or granting a development permission) must take into due account and respond to the findings of the EIA Report in line with its national legislation. The decision-making authority should also ensure that commitments of the project Proponent related to the implementation of the Environmental Management Plan, and Environmental Monitoring are included into the relevant permitting documents.

76. The Country of Origin should ensure that the Potentially Affected Countries consulted through the PNPCA process are provided with the final decision and a statement containing:

    - responses to the comments received through the formal transboundary consultations;
    - an explanation of how reasonable alternatives and practical measures for preventing, minimizing, or offsetting/mitigating the adverse transboundary environmental impacts were considered in the final decision on the proposed project; and
    - a description of the measures for monitoring and management of any residual transboundary environmental impacts and risks.

The Proponent

77. The Proponent finalizes the EIA Report in line with the national legislation of the Country of Origin, while following instructions from the EIA responsible authority. This may include substantial revisions or additions if the (transboundary) consultation process revealed such need.

78. The Proponent prepares a response to the consolidated comments received through the consultation process for the national EIA responsible authority, and participates in drafting the statement accompanying the final decision for the decision-making authority.

The Potentially Affected Country

79. The Potentially Affected Country acknowledges receipt of the final decision on the project implementation and the accompanying statement related to the EIA conclusion. This marks a formal end of the TbEIA. Any further comments or disagreements shall be dealt with through other means, e.g. through discussions at the political level.

EIA results, EMP implementation and monitoring

Country of Origin

80. The Country of Origin (i.e. the permitting authority) should ensure that the Proponent complies with the conditions stipulated in the decision on the proposed project. It must also ensure that the Proponent:

    - implement the agreed measures for preventing, minimizing, or offsetting/mitigating the adverse transboundary environmental impacts – i.e. through the Environmental Management Plan (EMP); and
    - conduct monitoring in order to identify any unforeseen adverse transboundary environmental impacts at an early stage and be able to undertake appropriate remedial action at its expense.

    This shall be achieved mainly through consistently incorporating the conditions related to the implementation of the EMP and monitoring into all subsequent planning and permitting procedures and their enforcement.

81. The designated authority (determined through transboundary consultation) of the Country of Origin shall regularly publish the monitoring results and ensure their transmission via the MRCS and the NMCs to all concerned Member Countries.

The Proponent

82. The requirements related to the content of the EMP may vary according across national jurisdictions; however, from a substantive perspective, it is important that it contain the following key components that would allow any Potentially Affected Country to review and check for compliance and effectiveness during the project implementation:

    a) Mitigation measures work plan

    b) Monitoring work plan

    c) Public participation process of the EMP formulation (if any)

    d) Staffing and training work plan

    e) Cost estimates for EMP implementation

    f) Time schedule of EMP implementation and reporting.

a) *The mitigation measures work plan* provides detailed information on how mitigation measures would be implemented, where and who will implement them, including the implementation timeframe. A detailed description of the mitigation measures work plan in a table format is vitally important and useful to be able to have an overview of the workplan, i.e. from project activities to the timeframe for mitigating transboundary

impacts (Annex 6).

b) The *public participation process* for EMP formulation describes the process undertaken to involve the public in the EMP formulation, and summarizes the comments and feedback of affected people, community leaders, district, provincial and central officials, non-governmental organizations, and other stakeholders. It also describes how comments and feedback have been taken into consideration during EPM formulation.

c) The *staffing and training work plan:* provided information on the composition of staff of the project for implementing the EMP. Where relevant, the Terms of Reference (ToR) should be drafted for each staff member. The ToR would include the duty station, the background of the project, objectives and expected outputs of the assignment, working principles, responsibilities and tasks, and types of reports to be delivered during the EMP implementation. The staffing and training workplan needs also to include the cost estimates of each member of the Environment Management Section/Unit of the project. As regards the training component of the work plan is concerned, it is necessary to indicate and plan on what types of training (training courses) the staff must undertake to enhance their capacity in implementing the EMP.

d) *Cost estimates for the EMP implementation* should include the cost for detailed planning, mitigation of impacts during project construction, operation and decommissioning, monitoring activities, staff, and training cost requirements.

e) The *time schedule of EMP implementation and reporting* provides the detailed timeframe for implementing the EMP, which covers detailed work plan preparation, mitigation measures, monitoring, staff, and training cost requirements. The time schedule is needed to highlight the reporting requirements (monthly, quarterly, semi-annually, and annually) during the EMP implementation.

83. The monitoring system in the context of the TbEIA should be designed with a particular focus on its capacity to record the development of transboundary environmental impacts of the proposed project, and to effectively assist in their management. Monitoring is undertaken during and after the project construction, during the project operation, and during decommissioning. The monitoring results are compared with the respective environmental baseline data that were obtained before the start of the project construction, operation, and decommissioning. For its effective execution, it is crucial to ensure transboundary cooperation between the responsible authorities, allowing for an exchange of data, and where relevant, also agreeing on the conditions for the access by experts commissioned by the Proponent (developer, operator) to the potentially affected territory to conduct sampling or other monitoring activities.

It is important that any proposed project-specific monitoring system is aligned with the general Joint Environment Monitoring of Mekong Mainstream Hydropower Projects (JEM,

currently under development). Thus, any specific monitoring system proposed within the respective EIA shall refer to and take advantage of the JEM, as well as acknowledge which additional project-specific monitoring measures shall be advanced.

84. Monitoring results should be part of the normal progress report and conducted based on the monitoring work plan. An effective monitoring should be able to provide answers to following simple questions, which can be also used for communicating the monitoring results to the public:

- Does the project appear to be having any significant transboundary environmental impacts other than those anticipated for the construction, operation, and decommissioning phases? And what measures have been taken to deal with these additional impacts?
- Have all mitigation measures proposed for dealing with those transboundary environmental impacts been implemented? If so, are they having the desired effect?
- Are implemented measures effective in preventing any significant negative impacts and in enhancing any significant positive impacts?
- Are the stakeholders and communities affected by the project generally satisfied with the management of the transboundary environmental impacts?
- Have adequate provisions been made for monitoring the impacts caused by the project-related activities?
- Are there any challenges or additional steps required? Who is responsible for their management? What tools and techniques are in use? How are the results disseminated?
- Who is responsible for implementing the remaining steps/measures and in what time frame they should be implemented?

Potentially Affected Country

85. The Potentially Affected Country is advised to provide necessary cooperation for implementation and execution of planned mitigation measures and monitoring on its territory. This might include allowing for access by the authorized personnel conducting sampling or observations, and allowing for the construction and maintenance of the monitoring installations (e.g. water gauges).

86. If any Potentially Affected Country deems that the arrangements for monitoring are insufficient, it is free to inform the concerned Member Country(ies) to initiate consultations on the necessary measures to improve the monitoring. The MRCS can facilitate these consultations.

87. If as a result of the monitoring, or based on its own investigations, any Potentially Affected Country has reasonable grounds for concluding that there is a transboundary environmental impact affecting or in contrast with the objectives of the 1995 Mekong Agreement, it is recommended to inform the MRCS and concerned Member Country(ies) to initiate consultations on the measures that need to be taken to prevent, minimize, or offset/mitigate the impact.

Costs of the Transboundary EIA

Country of Origin

88. The administrative costs of EIA responsible authority and other authorities participating in the TbEIA are covered according to standard practice as in any domestic EIA. The costs of participating in early consultations and formal transboundary consultations on the EIA Report (e.g. travel costs) should be covered by the Proponent.

The Proponent

89. The Proponent covers all the costs associated with conducting the EIA analyses and preparing the EIA Report, among others, within the scope defined by the EIA responsible authority in the Country of Origin (granting the final EIA approval). This also includes all of the costs associated with conducting analyses concerning the impacts on the territory of any Potentially Affected Country, such as travel costs for experts, costs of consultations with local potentially affected communities, and costs of obtaining relevant data.

90. In principle, the Proponent of the project responsible for conducting the EIA is also responsible for covering all of the costs for national and the transboundary consultations. In practice, some assistance of the concerned Member Countries may be sought.

91. The post-EIA implementation of the measures planned for the mitigation of potential negative impacts and environmental monitoring can be substantial and may affect the overall project economic viability. In general, the polluter pays principle is a point of

departure for necessary case-by-case arrangements that must be concluded before the final decision on the project implementation is made. The Proponent and later the operator of a project shall bear the costs of adjusting the design, or the mode of operation of the project to ensure compliance with the Environmental Management Plan and monitoring.

Potentially Affected Country

92. The costs of participating in early consultations and formal Transboundary consultations on EIA Report (e.g. travel costs) should be secured through agreement with the Proponent.

93. For the consultation events taking place on its territory (namely, public consultation and participation), any Potentially Affected Country interested in maximizing the effectiveness of the public participation within its jurisdiction should support the process through in-kind contributions, e.g. by providing space in public buildings for the meetings, and by covering costs associated with the participation of its official representatives (e.g. representatives of the EIA responsible authority and other relevant agencies) in the consultation events. Such a cost-sharing arrangement shall also be understood as an incentive for the Potentially Affected Country to maximize the efficiency of the consultation process and refrain from stipulating non-standard requirements incurring excessive costs to be borne by the project Proponent.

94. The costs of an independent review of the EIA Report if conducted as a part of the PNPCA process by the MRCS PNPCA Task Group and supporting Expert Group(s) shall be covered by the MRCS.

95. The costs associated with an additional national review of the EIA Report (if conducted) shall be borne by the concerned Member Country from its own resources because it is clearly in its interest to thoroughly evaluate the EIA Report received from the Country of Origin. Seeking external financial support for such an exercise is recommended. The MRCS shall provide assistance in such efforts.

INSTITUTIONAL SUPPORT GUIDANCE

96. These TbEIA Guidelines were prepared under the assumption that MRC institutions and structures will support TbEIA processes in the LMB; however ,in the long-term perspective, the TbEIA system should be developed as self-standing, based on the capacities of Member Countries and independent of MRC resources. Therefore, the role of the MRC institutions specified in this section should be understand as supporting and facilitating, rather than primarily driving and enabling.

97. The roles, functions and responsibilities of the NMCs are to:

    - serve as a focal point for the transmission of any TbEIA Initiation letters, responses, and EIA Reports among Concerned Member Countries;
    - support national consultations on the EIA Report in Potentially Affected Country(es), collect comments and opinions from consultations and the public participation process, and transmit the results in a consolidated manner via the MRCS to the Country of Origin;
    - promote and actively encourage the implementation of the TbEIA Guidelines, i.e. collaborate with the related line agencies for their implementation within their respective Member Countries;
    - assist and participate in any consultations, dialogues, and agreements under these Guidelines involving their respective Member Countries; and
    - log, file, and follow up on the progress of TbEIA initiation, responses, TbEIA process results, and any subsequent monitoring results received or issued by their respective Member Countries.

98. The key task of the NMCs is to ensure that the relevant authorities (i.e. the permitting authorities) in charge of planning activities and projects subject to the EIA, and that the authorities supervising EIA processes for proposed projects become aware of their role in the assessment of potential transboundary impacts. and that the project Proponent takes into account the potential need for an assessment of transboundary impacts within the EIA process as early as possible.

99. Within each Member Country, an internal decision should be made by the relevant authorities on whether the NMCs would serve as a focal point for the transboundary communications related to the TbEIA, or whether another arrangement should be adopted (e.g. the EIA responsible authority would directly address its counterparts in other Member Countries). If agreed, the NMCs would be entrusted with the transmission of all the TbEIA-

related documents (TbEIA Initiation letter, response, invitations to consultations, EIA Report, comments on the EIA Report, the final decision on the implementation of the project, and the concluding EIA statement).

100. The NMCs will arrange the transmission of the monitoring results and will facilitate any consultations on potential shortcomings in the monitoring systems, on the existence of any significant transboundary environmental impact, and on the measures that need to be taken to prevent, minimize, or offset/mitigate such impacts.

101. The roles, functions, and responsibilities of the MRCS are to:

- facilitate consultations and the resolution of disagreements among concerned Member Countries when requested;
- provide, in an open and transparent manner, impartial technical advice to Member Countries and the Joint Committee on any element of the implementation of these Guidelines if requested to do so; in particular, the capacities of the MRCS PNPCA Task Group. In addition, supporting Expert Group(s) should be used to conduct an independent review of the EIA Reports, which are subject to the TbEIA process;
- assist Member Countries, when requested, in seeking sources of funds to support the implementation of these Guidelines, e.g. to cover the costs of the regional consultations;
- monitor, and report to the Joint Committee on, the implementation of the TbEIA Guidelines and submit any proposal for change/amendment of the Guidelines to the Joint Committee for consideration or endorsement; and
- update these Guidelines and provide support mechanisms and necessary training for the Member Countries to strengthen their capacity in their implementation.

102. If a disagreement arises regarding the interpretation or implementation of these Guidelines, this should be resolved in line with the provisions of the 1995 Mekong Agreement as stipulated in Article 34.

REVISION OF THE GUIDELINES

103. Each Member Country should report on an annual basis to the MRCS and other Member Countries on its arrangements for the implementation of these Guidelines into national regulatory and institutional frameworks, and on its experience with its practical application. The MRCS would facilitate exchange of experience with the application of these Guidelines.

104. The Guidelines should be treated as a flexible document that can be gradually amended and developed to reflect the accumulated experience and new aspirations of the Member Countries for advancing sustainable management and development in the Lower Mekong Region.

DEFINITION OF TERMS

Member Country(ies): The signatory country(ies) to the 1995 Mekong Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin.

Country of Origin: The Member Country under whose jurisdiction a proposed project is intended to take place.

Potentially Affected Country(ies): Any Member Country likely to be affected by potential transboundary environmental impact of a proposed project.

Concerned Member Countries: Either the Country of Origin or the Potentially Affected Country(ies) or both.

Proponent: A physical or legal person who proposes a project for consideration or acceptance, or physical or legal person who implements or operates such a project. For practical purposes, the Proponent is always identified in accordance with the national EIA legislation. In the post-EIA follow-up, i.e. for purpose of conducting monitoring or any additional mitigation measures once the project is implemented, the role of the Proponent should be attributed to the entity owning/operating the project. When the ownership is transferred (e.g. from a private developer to the state after the expiration of a concession period), so are the obligations and commitments included in the project as a result of a previously conducted EIA.

Proposed project: Any project or activity proposed by the Proponent in the Country of Origin that is subject to a national environmental impact assessment (EIA) of the Country of Origin.

Environmental Impact Assessment (EIA): A national procedure for assessing the likely impacts on biophysical, social, and economic aspects of a proposed project.

EIA report: A report prepared in compliance with national EIA legislation in the Country of Origin, including for a project where potential transboundary environmental impacts were considered, and where the EIA Report is a subject of transboundary consultation.

PNCPA Procedures (Mekong River Commission [MRC] Procedures for Notification, Prior Consultation and Agreement), as per the definition set out in Chapter II of the 1995 Mekong Agreement. The prior consultation process in which the countries exchange information and/or will jointly review any proposed development project relevant to the sustainable development, management, and conservation of the water and related resources of the Mekong River Basin. The aim is to reach a consensus on whether or not it should proceed, and if so, under what conditions. Prior consultation is neither a right to veto the use nor a unilateral right to use water by any riparian without taking into consideration other riparian's rights. For the purpose of the Transboundary Environmental Impact Assessment (TbEIA) Guidelines, projects subject of notification as well as projects subject of prior consultation as per PNPCA are regarded as potentially falling into the scope of TbEIA Guidelines application.

Transboundary environmental impact: Significant environmental impacts/changes originating within the territory of one Member Country that potentially affect other Member Countries. The environmental impacts/changes include: effects on hydrology and hydraulic regime; river morphology and sediment; aquatic ecology and biodiversity; water quality; and socio-economic consequences such as impacts on cultural heritage, and access to natural resources and to people's livelihoods depending on the Mekong River Basin (e.g. fisheries). Both negative and positive environmental impacts shall be acknowledged. The guidance to determine the significance of transboundary impacts is provided in Annex 2. The transboundary impacts can occur both downstream of the project location (i.e. altered flow regime) and upstream (e.g. reduced fish migration).

Transboundary Environmental Impact Assessment (TbEIA): An environmental impact assessment (EIA) carried out in compliance with national EIA legislation in the Country of Origin for a project where potential transboundary environmental impacts are considered, and where the EIA report is subject to transboundary consultations.

Public: One or more natural or legal persons.

Public participation: A process through which stakeholders gain influence and take part in decision-making in the planning, implementation, monitoring, and evaluation of development projects.[1]

Stakeholder: Any person, group or institution that has an interest in a project. This includes both intended beneficiaries and intermediaries, those positively affected, and those involved and/or those who are generally excluded from the decision-making process.[2]

1,2 Adopted from the document Public Participation in the Context of the MRC, section 2.2 Defining Public Participation (see MRC, 1998).

BIBLIOGRAPHY

MRC. (1998). *Public participation in the context of the MRC*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.akivra

MRC. (2001). *Procedures for Data and Information Exchange and Sharing*. Phnom Penh: MRC Secretariat. https://doi.org/10.52107/mrc.akivp7

MRC. (2002). *Guidelines on Custodianship and Management of the Mekong River Commission Information System*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.akbog8

MRC. (2003). *Procedures for Notification, Prior Consultation and Agreement*. Phnom Penh: MRC Secretariat. https://doi.org/10.52107/mrc.akbnu1

MRC. (2003). *Procedures for Water Use Monitoring*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.akbnu6

MRC. (2005). *Guidelines on Implementation of the Procedures for Notification, Prior Consultation and Agreement*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.aji2nk

MRC. (2006). *Procedures for the Maintenance of Flows on the Mainstream*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.aji00r

MRC. (2006). *Guidelines on Implementation of the Procedures for Water Use Monitoring.* Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajgfxx

MRC. (2009). *Communication strategy and disclosure policy*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajhz6n

MRC. (2011). *Procedures for Water Quality*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajhylo

MRC. (2015). *Guidelines on Disclosure of Data, Information and Knowledge*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajg831

MRC. (2017). *1995 Mekong Agreement and Procedures*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajg7k5

MRC. (2017). *MRC Toolbox*. http://portal.mrcmekong.org/mrctoolbox

MRC. (2018). *Mekong Climate Change Adaptation Strategy and Action Plan*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajg6oh

MRC. (2019). *Hydropower Mitigation Guidelines* (Volume 1). Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajg6c9

MRC. (2019). *Hydropower Mitigation Guidelines* (Volume 2). Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajg6cq

MRC. (2019). *Hydropower Mitigation Guidelines* (Volume 3). Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajg0o6

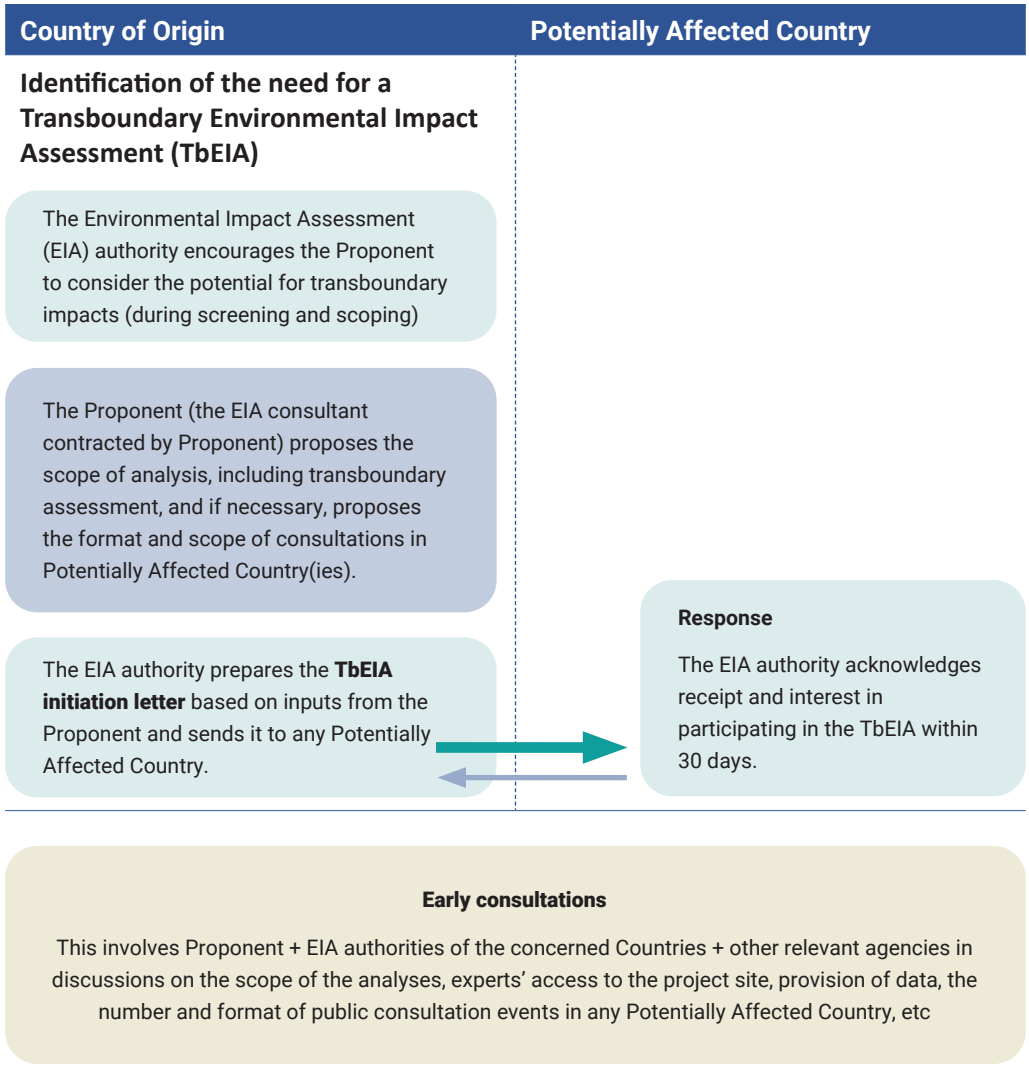
MRC. (2021). *Technical guidelines to facilitates the implementation of the Procedures for Water Quality*. Vientiane: MRC Secretariat. https://www.mrcmekong.org/assets/Publications/TGWQ.pdf.

MRC. (2022). *Sustainable hydropower development strategy: A basin-wide strategy for a changing Mekong River Basin*. Vientiane: MRC Secretariat. https://doi.org/10.52107/mrc.ajutpe

UNECE. (1991). Appendix III: General Criteria to Assist in the Determination of the Environmental Significance of Activities not Listed in Appendix I. In *Convention on Environmental Impact Assessment in a Transboundary Context*. https://unece.org/fileadmin/DAM/env/eia/documents/legaltexts/Espoo_Convention_authentic_ENG.pdf.

UN Watercourses Convention. (2022). *Frequently asked questions*. http://www.unwatercoursesconvention.org/faqs/

ANNEX 1: TbEIA PROCESS SCHEME



Determination of the scope of a transboundary environmental impact assessment assessment

The Proponent (the contracted EIA consultant) conducts the scoping (e.g. a preliminary assessment, a scoping report) while also taking into account the results of the early consultations

The EIA authority ensures that the formal scoping conclusion (if applicable) reflects the transboundary dimension as appropriate

Preparation of the EIA Report

The Proponent (the contracted EIA consultant) conducts EIA analyses and fact-finding consultations.

EIA Report is prepared and submitted it to the EIA authority

The Proponent (the contracted EIA consultant) conducts EIA analyses and fact-finding consultations

Pre-PNPCA

Transboundary/regional and national consultations on EIA Report (through the PNPCA)

The EIA authority sends the EIA Report to any Potentially Affected Country via the National Mekong Committee (NMC) in the Country of Origin and the MRCS

The Proponent, with support of the NMC, conducts national consultations and public participation events in line with the standards of the Potentially Affected Country

The NMC collects comments on EIA Report and sends them in a consolidated manner to the Country of Origin via MRCS

PNPCA

EIA approval and decision on the project

The EIA authority concludes the EIA process

The decision-making (permitting) authority adopts the decision on project implementation and the issues the accompanying statement (on how EIA results were considered)

The EIA authority and other relevant authorities and the public are informed via the NMC and the MRCS

EIA results implementation and monitoring

The Proponent (the project operator) implements the Environmental Management Plan (EMP), EMP and monitoring (including components on the territory of any Potentially Affected Country) and reports systematically the monitoring results

The relevant authorities check and enforce compliance of the project with the conditions of approval, the Environmental Management Plan (EMP), and monitoring commitments. The monitoring results are regularly transmitted to the Potentially Affected Country via the NMC and the MRCS

The EIA authority and the other relevant authorities and the public are informed via the NMC and the MRCS

Post-PNPCA

Note: The terms 'pre-PNPCA' and 'post-PNPCA' do not appear in the MRC documents, and are used here in a purely technical manner to indicate steps/activities conducted before the initiation of the formal PNPCA process, and after its conclusion, respectively.

The TbEIA steps recommended by the TbEIA Guidelines, in both pre- and post- PNPCA phases do not apply to Lao PDR at this stage

ANNEX 2: INDICATIVE CHECKLIST OF POTENTIAL TRANSBOUNDARY OF SPECIFIC PROJECTS

1. Hydropower Projects	Issues	Potential Transboundary Impacts			Potential Mitigation Measures
		Primary Impacts (Direct Impacts)	Secondary Impacts (Indirect Impact)	Other (Indirect Impact)	
Project Design					
1. Project siting	Siting close to critical fish habitats	Loss of land, soils and other assets			Provide replacement land, housing and infrastructure together with support services to fully restore the livelihoods, living standards and services of the people affected. Select the site where there are no critical fishery habitats. Consider and design dam with appropriate height to minimize the impacts. Optimize/limit the capacity compared to river flow and basin capacity.
2. Dam site (too high)	Large volume of water storage during the retention period	Loss of critical fishery habitats	Reduced ability of fish breeding	Reduced fish resources and food security issue	
3. Reservoir storage capacity (too large)	Large storage of water compared to basin/river flow	Flow reduced downstream High fluctuation of water downstream river flow and	Inadequate water for navigation, agriculture production and use Reduced water supplies downstream Increased river bank erosion/bed scouring	Income reduced and poverty concerns Impacts on the quality of life Impacts on navigation due to change in the riverbed Loss of land and related infrastructure	

Project Construction					
1. Dam and access road construction	Removing top soil along or close to the river	Soil erosion	Water quality issue in the downstream	Human health issue and poverty concern	Use appropriate erosion control during the construction, and avoid removing topsoil along or close to the river.
2. Dam site and facilities construction	1. Barriers to fish migration 2. Barriers to navigation activities 3. Limitation to nutrient transport 4. Sediment trapping 5. Involuntary resettlement of people	Reduce ability for fish migration and breeding Reduced income from trade and tourism Loss of fertile soil Reduced aquatic food chain Water quality issues and algae bloom acceleration Livelihoods concern	reduced fish resources Reduced national/ sub-national GDP Reduced agricultural production Reduced fish productivity Health issue Income losses Reduced income Influx of medium- to large- scale labour forces into the local economy, society and environment	reduced fish catch, income, and food security, poverty issue Lack of funds to support poverty reduction Poverty concern Poverty concern Poverty concern Poverty concern	Appropriate design the fish passage/ ladders: Install ship locks to facilitate navigation activities. Properly design dams to flush out sediments to the downstream. Carry out dredging where appropriate. Provide fair compensation to affected people. Provide adequate accommodation and recreation facilities, control camp, and the workers' code of conduct

3. Electric transmission lines and corridors	The lines and corridors pass through flora and fauna areas	Loss of terrestrial ecology	Biodiversity reduced	Recreation/tourism affected	Carefully select corridors to minimize/control the loss.
Project Operation					
1.Reservoir impoundment	Biomass degradation	Water quality issue	Human, aquatic and animal health issue	Reduced aquatic resources and poverty concerns	Clear all vegetation before reservoir filling.
	Reduce downstream flow	Water shortage issue	Water supply constraints	Aquatic ecosystem disturbed, and livelihood impacts	Take into consideration of MRC minimum flow procedures.
	Upstream area flooded	Loss of arable land and forest areas	Income and food security issues	Poverty issue	Take into consideration of dam operation alternatives

2. Powerhouse operation	1. Irregular water release	Downstream floods Fluctuations of water flow/level in downstream Change in degree of sedimentation and sea-water influx (in estuary) River channel/ bank erosion	Loss of arable land, houses and cultural heritage site Fish habitat and breeding damages River bank erosion/ bed scouring	Resettlement of people Reduced fish resources	Ensure an appropriate dam design, the application of appropriate rules for dam operation, and a fair compensation mechanism. Ensure that the appropriate rules for dam operation are applied. Take the necessary measures to protect the riverbank.
	2. Sediment trapping	Reduced sediment deposition (in estuary)	Soil fertility reduced	Loss of arable land, houses, and islands and change in socio-economic conditions downstream	Regularly release sediment to the downstream
Project commissioning	Not practiced				

2. Irrigation Schemes (Activities)	**Issues**	**Potential Transboundary Impacts**			**Potential Mitigation Measures**
		Primary Impacts	**Secondary Impacts**	**Other**	
Project Design					
Very large-scale of Irrigation channel	High volume of water use	Water quantity reduced in the downstream	Inadequate water for crop production and navigation in the dry season downstream.	Income reduces and poverty concerns	Avoid designing of very large-scale of irrigation schemes.

Project Construction					
1. Access road and channel construction	Soil erosion	Water quality issues	Human health impacts	Poverty concern	Avoid constructing the unnecessary access road, and construct the appropriate channel.
2. Land clearing in sensitive areas	Soil and river bank erosion	Loss of land value and associated property/ infrastructure	Loss of income and increased expenditure on infrastructure	Poverty and quality of life issue	Avoid or limit use of land near sensitive areas.
Project Operation					
1. Water use	Diversion of water for irrigated areas	Reduced river flows downstream	Land use water supply issues downstream	Reduce production and poverty concerns	Use of MRC Procedures for Water Use Monitoring.
	Fluctuations in water in downstream	Navigation activity and saline intrusion issue	Reduced income	Poverty issue	
2. Use of chemical fertilizers	Leaching and runoff of nutrients to downstream	Proliferation of aquatic weeds, and eutrophication,	Water quality issue	Health issue	Ensure that the appropriate rules and control of the use of fertilizers are applied.

3. Use of pesticides	Leaching and runoff of pesticides to downstream	Water quality issue	Human health issue	Poverty issue	Introduce of rules on use of pesticides, and limit pesticides that have high toxic substances.
Project commissioning	Nutrient and pollutants release				Carry out post-project monitoring and clean-up
3. Port and riverworks (Activities)	**Issues**	**Potential Transboundary Impacts**	**Potential Mitigation Measures**	**Issues**	**Potential Transboundary Impacts**
Project design					
1. Port siting 2. Design of riverworks (significant changes from nature)	Damage of fish habitats and breeding River bank protection large scale Erosion control structure	Reduced fish resources Changes in hydrology and loss of river bottom Use of inappropriate structure and materials	Reduced fish productivity River bank erosion/ riverbed scouring increased Increase river bank erosion downstream	Less fish catch and reduced income Loss of land and related property/ infrastructure	Site the port far away from deep pools Consider use of Appropriate river embankment methods and inform other countries to prepare in advance.
Project construction					

1. Port construction	Port stretches to the river	Changes of follow regime	Increase river bank erosion	Loss of land, houses, and islands	Build a minimum/limited structure stretched into the river.
		Local navigation and fishery interference	Loss of human productivity and of income	Reduced food security and poverty issue Quality of life issue	
2. Erosion control structure construction	Inappropriate use of imported materials	River bank erosion/-bed scouring increased	Loss of land and related property and/or infrastructure	Income and quality of life issue	Use houses, technology and material for construction.
Project operation					
1. Navigation of vessels	Operation of vessel propellers	Erosion of island nearby and creation of new islands	Loss of land for cultivation	Food security issue and reduced income	Select the appropriate port site far from islands.
	Navigation close to the riverbank and with high speed	Riverbank erosion affecting local boats	Gradual loss of arable land and houses, damage to local boats	Insufficient land for cultivation and poverty issue	Navigate on the middle of the river following the speed limit. Set the time for releasing vessels.
	Inadequate management of waste from vessels	Water contamination	Destruction of river fishery/ecology		Put in place appropriate solid waste management.

2. Port operation	Inadequate management of waste emission from port facilities (oil spills, sewage release and solid waste disposal from port operation area)	Water contamination Water-related diseases	Human and aquatic health issue Destruction of port fishery/ecology	Poverty issue	Strongly enforce laws and regulations. Pay particular attention to waste management from the port facilities.
Project commissioning	Alteration of the water regime	Temporary sediment mobilization			Monitoring and rehabilitation of ecosystems.

4. Navigation Projects (Activities)	**Issues**	**Potential Transboundary Impacts**			**Potential Mitigation Measures**
		Primary Impacts	**Secondary Impacts**	**Other indirect Impacts**	
Project design					
1. River channelization	Dredging/large amount of spoil material	Incorrect disposal of dredging spoils (in private land and/or sensitive public areas, eg, national parks/ forests)	Changes in hydrology and values of disposed lands Wastes associated with the materials	Loss of land value/ productivity Loss of tourist/ recreational areas	Limit amount of dredging spoils. Use appropriate sites and methods of disposing the spoil materials.

Project construction					
Navigation canal improvements	Rapid, shoal, and reef blasting	Increase water velocity in the river Loss of fish habitats and aquatic weeds and killing fish	River bank erosion Reduced fish resources, and loss of aquatic weeds	Loss of arable land and houses Reduce fish catch and income. Loss of local traditional food made from weeds	Minimize rapid, shoal, and reef blasting Avoid blasting rapids, shoals and reefs where fish habitats and aquatic weeds are critical.
Dredging activity	Dredging	Loss of bottom habitat and changes of hydrology	Increase flow velocity in the river	River bank erosion/ riverbed scouring increased	Invest in modern dredging techniques. Dredge during the low flow periods or non-critical periods.
Project operation					
1. Navigation of vessels	Navigation close to the river bank and with high speed	River bank erosion affecting local boats	Gradual loss of arable land and houses, damage to local boats	Insufficient land for cultivation and poverty issue	Navigate on the middle of the river with speed limit. Set time for releasing vessels.
2. Navigation facilities (incl. piers)	Use of public services and release of sewage and solid waste	Limited supply of public services and increased pollution	Loss of land value/ productivity Water-related diseases	Income and quality of life issue	Consider limited use of public services and pollution of the facilities

5. Industrial and Mining projects	Issues	Potential Transboundary Impacts			Potential Mitigation Measures
		Primary Impacts	Secondary Impacts	Other Indirect Impacts	
Project design					
1. Project siting	Siting close to critical fish habitats	Loss of critical fishery habitats	Reducing the ability of fish breeding	Reduced fish resources and food security issue	Select the site where there is no critical fishery habitats.
	Siting near important cultural/ archeological sites	Loss or damage to resources	Loss of tourist / recreational areas	Poverty and quality of life issue	Select sites carefully to avoid damage.
2. Types, layout and size (incl. technology)	Large area and capacity of production	Limited supply of public services and increased pollution	Loss of land value / productivity	Income and quality of life issue	Consider limiting the use of area, capacity, and public services, with less pollution.
Project construction					
1. Land clearing in sensitive areas	Construction in sensitive areas (e.g., watersheds, river banks, highly populated)	Loss of biodiversity and land value	Local/regional land and environmental degradation	Local community socio-economic conditions worsen	Consider limiting the clearing area and the use of non-sensitive areas.
2. Pollution during construction	Induced pollution (including. noise, vibration, waste, etc.)	Nuisance and health issue	Income and quality of life issue		Limit and plan for appropriate management of construction waste and pollution.

Project operation					
1. Mineral production	Extraction of minerals from or nearby the river	Changes in flow patterns Water quality issue	River bank erosion/ riverbed scouring Health issue	Loss of arable and houses Poverty concern	Avoid extraction of huge minerals in the river or close to the river.
2. Mineral processing	Use of water	Water quality issue	Aquatic and human health issue	Poverty concern and reduced aquatic life	Ensure water use with appropriate treatment before releasing into the river.
3. Mining/ industrial town development	Storm water, solid waste disposal, and sewage release	Water quality issue	Aquatic and human health issue	Poverty concern and reduced aquatic life	Ensure appropriate town planning and management
4. Industrial/ mining production	Pollution from production e.g., noise, air, etc.) Inappropriate management of hazardous materials	Human nuisance issue Water quality issue	Public health issue	See above.	Consider use of technology and capacity to limit pollution impacts.
Project commissioning	Alteration of the water regime	Post-project contamination	Impacts on fisheries Impacts on water quality		Rehabilitate the site, remove tailings, manage water runoff Carry out underground and surface water monitoring.

6. Aquaculture projects (Activities)	Issues	Potential Transboundary Impacts			Potential Mitigation Measures
		Primary Impacts	Secondary Impacts	Other Indirect Impacts	
Project design					
Pond siting	Siting close to river	Potential loss to fish habitats	Reduced fish resources	Food security issues and poverty concern	Select the site where there is no critical fishery habitats.
Project implementation					
Pond development	Conversion of natural habitats	Loss of wetland and fish habitats	Reduced fish resources	Food security issues and poverty concern	Avoid converting important wetland to fish farming.
Project operation					
Fish feeding	Wastewater discharge and feed decay	Water quality issues	Contamination of aquatic ecosystems Human health issue	Reduced aquatic resources Poverty concerns	Provide a facility for water treatment and the control of feed for fish.
	Wastewater release from slaughter and processing house	Water quality issues	Water borne diseases	Human health issue	Provide a facility for water treatment before releasing to the river.
Project decommissioning	Alteration of the water regime	Temporary sediment mobilization	Impacts on fisheries Impacts on water quality		Apply sediment control measures during earth-works and bank modifications.

7. Water extraction for water supply (Activities)	Issues	Potential Transboundary Impacts			Potential Mitigation Measures
Project design					
1. Weir or dam siting	Siting close to river	Potential loss to fish habitats	Reduced fish resources	Food security issues and poverty concern	Select the site where there is no critical fishery habitats.
2. Water intake/ treatment works	Structure stretch into the river	Navigation/ fishery interference	Loss of human productivity and of income	Quality of life issue	Ensure the appropriate structural design with limited structure stretched into river.
Project implementation					
Water facility development	Weir or dam construction and water pipe alignment	Water quality issue	Human and aquatic health issue	Poverty concern and aquatic life affect	Ensure the appropriate control of sediment during the construction.
Project operation					
1. Water processing and use	Diversion of huge amount of water for use	Reduced water quantity	Inadequate water use downstream	Food security issues and poverty concern	Use of MRC Procedures for Water Use Monitoring.
2. Wastewater generation from some activities	Wastewater from tourism-related and industrial activities	Water quality issues	Impacts on aquatic ecosystem	Reduce biodiversity and human health	Ensure appropriate planning and implement wastewater management and reuse system.

Note on identification of 'significant' transboundary impacts

The term 'significant' is understood as excluding mere inconveniences or minor disturbances that Member Countries are expected to tolerate from one another, in conformity with the principle of good neighbourliness.[11] In practice, the significance of transboundary environmental impacts (e.g. those indicated in the checklist above) could be considered based on their probability and extent. Tables 1 and 2 provide examples of the scales of *the level of probability and level of extent of transboundary impacts,* which can be used for the initial estimation of impacts of the proposed project, which can lead to the classification of the transboundary impact level. Significant transboundary environmental impacts may therefore be identified and defined combining these two components as described in Tables 1, 2, and 3.

Table 1. Probability of transboundary impacts

Level	Descriptor	Description
1	Rare	May occur only under very exceptional circumstances
2	Unlikely	Could occur sometimes
3	Moderate Likely	Might occur sometimes
4	Likely	Will probably occur under most circumstances
5	Almost Certain	Is expected to occur under most circumstances

Table 2. Extent of transboundary impacts

Level	Descriptor	Description
1	Insignificant	Very minor impact, with low costs
2	Minor	Minor impact, with moderate costs
3	Moderate	Medium-level impact requiring ongoing management or expensive corrective action
4	Major	Major issue, high financial loss, and high and long-term costs
5	Catastrophic	Serious issue, very high financial loss, and very high and long-term costs

The significance of the transboundary impacts can be determined based on the relationship between the two components as

11 Such an understanding is established in the relevant context, for example, in the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (see, for example, the discussion of the term on the Convention's website, www.unwatercoursesconvention.org/faqs).

illustrated in the matrix (Table 3) where impacts are classified into different levels or categories as low, medium, significant or very significant.

Table 3. Significance of transboundary impacts

Probability		Extent				
		Insignificant	Minor	Moderate	Major	Catastrophic
Level of Impact		1	2	3	4	5
1	Rare	1.0	1.5	2.0	2.5	3.0
2	Unlikely	1.5	2.0	2.5	3.0	3.5
3	Moderate	2.0	2.5	3.0	3.5	4.0
4	Likely	2.5	3.0	3.5	4.0	4.5
5	Almost Certain	3.0	3.5	4.0	4.5	5.0

Source: Adapted from the International Hydropower Association. Sustainability Assessment Protocol, pp. 910, July 2006.[12]

Level of transboundary impact classification:

1.0 – 2.0 Low

2.5 – 3.0 Medium

3.5 – 4.0 Significant

4.5 – 5.0 Very significant

It is worth emphasizing that the above approach is not intended to produce an 'objective' decision on whether or not the potential transboundary impacts associated with a given project are enough 'significant' enough to be included in the EIA Report. In the transboundary context where individual parties (concerned Member Countries or other non-state stakeholders) often hold different views and show different levels of sensitivity to various issues, it would be necessary to reach a mutual understanding by engaging in a deliberative process with an uncertain result. Therefore, a possible lack of agreement on which particular values of the environmental indicators shall constitute thresholds defining a 'significant' impact should not be used as a justification for postponing or not proceeding with the TbEIA process.

12 International Hydropower Association. Sustainability Assessment Protocol, pp. 9-10, July 2006.

ANNEX 3: FORMAT OF TbEIA INITIATION LETTER

Enquiry on a potential Transboundary Environmental Impact Assessment

This letter is to inform you that the _____ (Country of origin) has identified a potential project _____ (name/title of the project) that may have a transboundary environmental impact.

In accordance with the law/legislation in the Country of Origin, the project is undergoing an Environmental Impact Assessment (EIA) and is now at the scoping stage. In the interest of good international cooperation and partnership in the Lower Mekong Basin, we would like to know if you are interested in taking part in this EIA.

Please find attached project description, project maps, and preliminary information on anticipated transboundary environment impacts.

We would like to know if your country would like to participate in the EIA process, and would encourage you to inform us of any particularly sensitive environmental or social issues that might be affected in the _____ (potentially impacted region) that should be taken into account.

We would appreciate it if you could let us know the contact details of the contact person for further communication. Please indicate if you would like to participate in early consultations to discuss a need for a Transboundary Environmental Impact Assessment, its scope, and practical arrangements.

Kindly respond regarding whether or not you would like to participate in this EIA process within 30 calendar days upon receipt of this letter.

Yours sincerely,

Country of Origin

EIA-responsible authority

copy to:

NMC

MRC Secretariat

Attached: Summary of the project information:

a) information on the proposed project, including any available information on its possible transboundary impacts;
b) information on the nature of the possible decision and expected timing of the EIA process; and
c) a proposal for early consultations to establish EIA scope and to agree on the practical aspects of fact-finding steps towards a transboundary EIA analysis.

ANNEX 4: FORMAT OF RESPONSE TO TbEIA INITIATION LETTER

Response to your letter on potential Transboundary Environmental Impact Assessment dated _____

Thank you for your letter.

We would like to participate in your Environmental Impact Assessment (EIA) process concerning the project_____ (name/title of the project), and we are ready to take part in the early consultations to determine the scope and practical arrangements of the EIA. We propose that the early consultation meeting take place _____ (proposed time) at _____(proposed venue).

We designate _____ (from our EIA responsible authority) for future routine contact with your authority as well as with the project Proponent.

With best regards,

Affected country

EIA responsible authority

copy to:

The National Mekong Committee

We are attaching summary information for your further consideration:

- a summary of readily available information on relevant topics in the Potentially Affected Country (e.g. protected areas, or sensitive ecosystems that might be affected by the proposed project);
- information on the national EIA public consultation process in the Potentially Affected Country, including contacts of statutory consultees (if any);
- preferred/required language of the documents;
- comments on the proposed timing of the EIA process;
- type of the most relevant information (e.g. Mekong mainstream water flow alteration).

ANNEX 5: MITIGATION MEASURES IMPLEMENTATION WORKPLAN

Project Stage/ Activities	Direct Indirect Impacts	Irreversible/ Irretrievable Impacts	Proposed Mitigation Measures	Location to be Implemented	Responsibilities	Timeframe
Project design						
Activity 1						
Activity 2						
Activity 3						
Activity 4....						
Project construction						
Activity 1						
Activity 2						
Activity 3						
Activity 4....						
Project operation						
Activity 1						
Activity 2						
Activity 3						
Activity 4....						

ANNEX 6: MONITORING WORKPLAN

Project Stage/ Activities	Direct/ Indirect Impacts	Irreversible/ Irretrievable Impacts	Proposed Mitigation Measures	Indicators/ targets to be met	Location to be Measured	Means/ Methods to be Measured	Timeframe (Frequency)	Responsibilities
Project construction								
Activity 1								
Activity 2								
Activity 3								
Activity 4….								
Project operation								
Activity 1								
Activity 2								
Activity 3								
Activity 4….								
Project decommission								
Activity 1								
Activity 2								
Activity 3								
Activity 4….								

ANNEX 7: THE Mekong River Commission's SELECTED LITERARY SOURCES

TOPIC	KEY REFERENCES
THE MRC'S PROCEDURES	• Procedures for Data and Information Exchange and Sharing (PDEIS) – 2001 • Procedures for Notification, Prior Consultation, and Agreement (PNPCA) – 2003 • Procedures for Water use Monitoring – 2003 • Procedures Maintenance of Flow on the Mainstream – 2006 • Procedures for Water Quality – 2011
THE MRC'S GUIDELINES AND TOOLS	• Development of Guidelines for Hydropower Environmental Impact Mitigation and Risk Management in the Lower Mekong Mainstream and Tributaries – 2015 • Guidelines for the evaluation of Hydropower and Multi-purpose project portfolios – 2015 • Guidelines on Disclosure of Data, Information and Knowledge Revised version, May 2015 • Guiding Considerations on Transboundary Monitoring for LMB Hydropower Planning & Management – 2014 • Guidelines on Implementation of the Procedures for Water Use Monitoring – 2006 • Guidelines on Implementation of the Procedures for Notification, Prior Consultation and Agreement – 2005 • Guidelines for Management of The Mekong River Commission Hydrometeorological Network – 2005 • Public Participation in the Context of the MRC – 1998 • Decision Support Framework (DSF) Toolbox[13], namely the Hydrological Model: Soil Water & Assessment Tool (SWAT), Basin Simulation Model: Integrated Quantity and Quality Model (IQQM), and Hydrodynamic Model – ISIS.

13 For details see (MRC, 2017): http://portal.mrcmekong.org/mrctoolbox

TOPIC	KEY REFERENCES
CROSS-SECTORAL ISSUES	• ICEM 2010 Strategic Environmental Assessment of Hydropower on the Mekong Mainstream Final Report Mekong River Commission, Vientiane, Lao PDR • MRC 2017 Review of the EIA for the Pak Beng Hydropower Project (and related PNPCA documentation) • MRC Integrated Basin Flow Assessment (IBFM) Process • MRC 2013 Improved Environmental & Socio-Economic Baseline Information for Hydropower Planning (ISH11)
	• MRC 2011 PNCPA Proposed Xayaburi dam project: PNCP documentation, Mekong River Commission, Vientiane, Lao PDR • MRC 2009 BDP Scenario Assessment, Mekong River Commission, Vientiane, Lao PDR (several volumes: Methodology volumes, and Technical Notes). • MRC 2010 State of the Basin Report Mekong River Commission, Vientiane, Lao PDR • MRC 2011 BDP Basin Development Strategy 2011–2015 Mekong River Commission, Vientiane, Lao PDR • MRC 2011 BDP-Assessment-of-Basin-wide-Dev-Scenarios Mekong River Commission, Vientiane, Lao PDR • MRC (in preparation) Study on Sustainable Management and Development of the Mekong River or in short, the 'Council Study' (CS)
GEOMORPHOLOGY	• Jirayut 2007 SWAT Model Application for Erosion and Sedimentation of Lower Mekong River Basin Mekong River Commission, Vientiane, Lao PDR • Koehnken L 2012 Potential Sediment Contribution in the Lower Mekong River Basin Mekong River Commission, Vientiane, Lao PDR • Saarkkula etal 2010 Origin fate and role of Mekong sediments Mekong River Commission, Vientiane, Lao PDR

TOPIC	KEY REFERENCES
HYDROLOGY	• Adamson P 2010 Hydrological Significance, Mekong River Commission, Vientiane, Lao PDR • Cross 2004 Hydrologic Analysis for Basin Planning using the MRC DSF Spatial flood relationships to river flows dai fish catches & inundated populations Mekong River Commission, Phnom Penh, Cambodia • Hatfield 2010 Review of Streams and Catchments data Mekong River Commission, Vientiane, Lao PDR • Hatfield 2010 Stream and Catchment Generation Mekong River Commission, Vientiane, Lao PDR • Piman etal 2013 Assessment of hydrological changes in the lower Mekong Basin Mekong River Commission, Vientiane, Lao PDR • van Zalinge etal 2003 The Mekong River System Mekong River Commission, Vientiane, Lao PDR • Vogel 2012 Final Draft Synthesised Significant Tributaries Study Mekong River Commission, Vientiane, Lao PDR
WATER QUALITY	• Hart etal 2001 Transboundary Water Quality in the MRB Mekong River Commission, Phnom Penh, Cambodia • MRC 2010 Water Quality Report Card Mekong River Commission, Vientiane, Lao PDR
BASIN DEVELOPMENT PLANNING	• MRC 2016 Basin Development Strategy 2016-2020 • BDP 2004 The application of the RAOM to economic analysis of water use trade offs within the BDP Mekong River Commission, Phnom Penh, Cambodia • Halcrow 2003 Final Report on the Development of the BDP RAOM Mekong River Commission, Phnom Penh, Cambodia • MRC 2005 Scenarios for strategic planning Mekong River Commission, Vientiane, Lao PDR • MRC 2005 Strategic directions for IWRM in the LMB Mekong River Commission, Vientiane, Lao PDR • MRC 2006 BDP Completion Report for Phase 1 Mekong River Commission, Vientiane, Lao PDR

TOPIC	KEY REFERENCES
HYDROPOWER	• MRC 2009 BDP2-Regional-Hydropower-Sector-Review Mekong River Commission, Vientiane, Lao PDR • MRC 2009 Preliminary-DG-of-LMB-Mainstream-dams-FinalVersion-Sept09 Mekong River Commission, Vientiane, Lao PDR • Muir 2010 Tributary Significance Study - HYDROPOWER Mekong River Commission, Vientiane, Lao PDR • ISH01: PILOT TESTING IN THE SRE POK SUB-BASIN ON THE IDENTIFICATION OF ECOLOGICALLY SENSITIVE SUB-BASINS FOR SUSTAINABLE DEVELOPMENT OF HYDROPOWER ON TRIBUTARIES
BIODIVERSITY AND ECOSYSTEMS	• Grill G Ariwi G and Lehner B 2012 ecosystem fragmentation in Significant Tributaries Mekong River Commission, Vientiane, Lao PDR • Halls AS and Kshatriya M 2009 Modelling the cumulative barrier and passage effects of mainstream hydropower dams on migratory fish populations MRC Technical Report No 25 Mekong River Commission, Vientiane, Lao PDR • Meynell PJ 2012 Ecological significance paper V1 Mekong River Commission, Vientiane, Lao PDR • MRC 2013 ISH11 Phase 2 Aquatic Ecology Annex 20 Dec 2013 Mekong River Commission, Vientiane, Lao PDR • Poulsen AF 2002 Ouch Poeu Sintavong V Ubolratana S and Nguyen TT Fish Migrations of the Lower Mekogn River Basin implications for development planning and environment MRC Technical Report No 8 Mekong River Commission, Vientiane, Lao PDR • Schmultz and Mielach 2013 Review of existing research on fish passage through large dams and its applicability to Mekong mainstream dams Mekong River Commission, Vientiane, Lao PDR • Baran, E., Baird, I.G., Cans, G., 2005a. Fisheries bioecology at the Khone Falls (Mekong river, southern Laos). WorldFish.

TOPIC	KEY REFERENCES
FISHERIES	• Hortle KG and Sontornratana 2008 Socio-economics of Fisheries of the Songkhram River basin, Northeast Thailand MRC Technical Report No 17 Mekong River Commission, Vientiane, Lao PDR • Hortle KG Troueng R and Lieng S 2008 Yield and value of wild fishery in Battambang Province MRC Technical Report No 18 Mekong River Commission, Vientiane, Lao PDR • Hortle, K.G. (2013) Mitigation of the impacts of dams on fisheries - a primer. Mekong Development Series No. 7. Mekong River Commission, Vientiane Lao PDR. 74 pages Mekong River Commission, Vientiane, Lao PDR • Humbry 2002 financial-analysis-and-risk-assessment of selected aquaculture and fishery activities in the Mekong Basin MRC Technical Report No 5 Mekong River Commission, Phnom Penh, Cambodia • Koponen etal 2009 Productivity and fisheries report Mekong River Commission, Vientiane, Lao PDR • Baran, E., Jantunen, T., Kieok, C.C., Chong, C., 2005b. Values of inland fisheries in the Mekong River Basin. WorldFish.
AGRICULTURE	• MRC 2010 Multi-functionality of paddy fields over the Lower Mekong Basin MRC Technical Report No 26 Mekong River Commission, Vientiane, Lao PDR • Nesbitt 2003 Lower Mekong Basin Future trends in agricultural production Mekong River Commission, Vientiane, Lao PDR
INFRASTRUCTURE	• Douven WJAM Goichot M and Verheij 2009 Best Practice for the Integrated Planning and Design of Economically Sound and Environmentally Friendly Roads MRC Technical Report No 35 Mekong River Commission, Vientiane, Lao PDR
CLIMATE CHNAGE	• Hoanh CT Jirayoot K Lacombe G and Srineter V 2010 Impacts of climate change and development on Mekong flow regime MRC Technical Report No 29 Mekong River Commission, Vientiane, Lao PDR • MRC 2009 Adaptation-to-climate-change in the countries of the Lower Mekong Basin MRC Technical Report No 24 Mekong River Commission, Vientiane, Lao PDR • Schiller L Liu W Krawanchid D and Chanthy S 2010 Review-of-climate-change adaptation methods and tools MRC Technical Report No 34 Mekong River Commission, Vientiane, Lao PDR

TOPIC	KEY REFERENCES
SOCIO-ECONOMICS	• MRC 2011 knowledge-base-benefit-sharing-vol1-of-5-Jan-2012 Mekong River Commission, Vientiane, Lao PDR • MRC 2012 Knowledge-base-benefit-sharing-vol1 Mekong River Commission, Vientiane, Lao PDR • Sarkkula and Koponen 2010 Indicator and SocioEconomics report Mekong River Commission, Vientiane, Lao PDR

P.O. Box 6101, 184 Fa Ngoum Road, Unit 18, Ban Sithane Neua,
Sikhottabong District, Vientiane 01000, Lao PDR
T: +856 21 263 263 F: +856 21 263 264
www.mrcmekong.org