The ISH 0306 Study
Development of Guidelines for Hydropower Environmental Impact Mitigation and Risk Management in the Lower Mekong Mainstream and Tributaries

Volume 3 – Final Knowledge Base and Supporting Documents
March 2018
The Final Reports constitutes 6 volumes:

**Volume 1:** Version 3.0 – Hydropower Risks and Impact Mitigation Guidelines and Recommendations

**Volume 2:** Version 3.0 – Hydropower Risks and Impact Mitigation MANUAL – Key Hydropower Risks, Impacts and Vulnerabilities and General Mitigation Options for Lower Mekong

**Volume 3:** Version 2.0 – Final Knowledge Base and Supporting Documents

**Volume 4:** Version 2.0 – Final Case Study Report - Mainstream Dams Assessment Including Alternative Scheme Layouts

**Volume 5:** ISH0306 Proposed Update of the Preliminary Design Guidance (PDG) and Hydropower Development Strategy

**Volume 6:** Final Closure Report

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Web-based Annexes to this report:

1) Data inventory sheet
2) ISH0306 Knowledge Base Library
3) Publications to be organized

A printer friendly version of Annex 1 is also attached in hard copy.
Preface

This document is part of the Final Phase (Phase 4) Report Volumes 1 to 6 of the ISH0306 Mekong River Commission study - *Development of Guidelines for Hydropower Environmental Impact Mitigation and Risk Management in the Lower Mekong Mainstream and Tributaries*. It builds on the work and results from previous Phases and constitutes as follows:

(i) Volume 1 - Hydropower Risks and Impact Mitigation Guidelines and Recommendations – Version 3.0;
(ii) Volume 2 - Hydropower Risks and Impact Mitigation MANUAL - Key Hydropower Risks, Impacts and Vulnerabilities and General Mitigation Options for Lower Mekong – Version 3.0;
(iii) **Volume 3 - Final Knowledge Base and Supporting Documents – Version 2.0**;
(iv) Volume 4 – Final Case Study Report– Version 2.0 – Mainstream Dams Assessment Including Alternative Scheme Layouts;
(v) Volume 5 - Discussion Note on Proposed Update of the Preliminary Design Guidance (PDG) and Hydropower Development Strategy;
(vi) Volume 6 – Final Closure Report

The study is supervised and coordinated by the Initiative on Sustainable Hydropower (ISH)/Mekong River Commission Secretariat (MRCS) with the following key personnel:

- Mr. Voradeth Phonekeo
- Mr. Simon Krohn
- Ms. Pravian Limbanboon
- Mr. Palakorn Chanbanyoung

The project is executed by a team of experts from Multiconsult (Norway/UK) in association with Deltares (The Netherlands) plus experts on additional contracts (Australia and Austria). The following key-experts have been involved:

- Mr. Leif Lillehammer (Team Leader, Multiconsult)
- Mr. Chris Grant (Hydropower Design and Operations Expert, Multiconsult)
- Mr. Jean-Pierre Bramslev (Hydropower Modeller and Economics Expert, Multiconsult)
- Mr. Ron Passchier (Hydrologist and Water Resources Modeller, Deltares)
- Dr. Kees Sloff (Hydraulic and Sediment Modelling Expert, Deltares)
- Dr. Lois Koehnken (Sediment and Water Quality Expert, Individual Consultant, Australia)
- Professor Stefan Schmutz (Fisheries and Aquatic Ecology Expert, BOKU University, Vienna)
- Mrs. Carina Seliger (Aquatic Ecologist, BOKU University, Vienna)
- Ms. Kristine Walløe-Lilleeng (Hydropower Engineer, Multiconsult)

The team includes also the following non-key experts and support staff:

- Ms. Jenny Pronker (Hydraulic Expert – Delta Assessment, Deltares)
• Dr. Jørn Stave and Mr. Jens Johan Laugen (Environmental and Social Impact Assessment and Safeguards Experts, Multiconsult)
• Mr. Bjørn Stenseth and William Greene (Power Economists, Multiconsult)
• Dr. Sanjay Giri (Hydraulic Expert, Deltares)
• Mr. Amgad Omer (Reservoir sedimentation expert, Deltares)
• Mr. Bernhard Zeiringer (Fish-Pass Eco-Engineer, BOKU University, Vienna)
• Ms. Ragnhild Heimstad (Terrestrial Ecologists, Knowledge Base Responsible, Multiconsult)
• Mrs. Irene N. Koksæter (Livelihoods Expert and Knowledge Base, Multiconsult)
• Ms. Kirty Manandhar (Knowledge Base, Multiconsult)

The following National Consultants also provided input to the study:

• Lao PDR: Ms. Thipsathiane Khamvongsa (Environment and Water Resources)
• Lao PDR: Mr. Lamphone Dimanivong (Hydropower and Energy)
• Cambodia: Dr. Heng Sokchay (Hydropower and Energy)
• Vietnam: Dr Nguyen Quang Trung (Environment and Water Resources)
• Vietnam: Dr. Hoang Minh Tuyen (Hydropower and Energy)
1 Introduction

1.1 Overview
This Volume 3 of the ISH0306 Final Reports is a supporting document to the Guidelines (Volume 1) and the Manual (Volume 2) and consists of all the literature, documents and data collected during the ISH0306 study. The Knowledge Base is meant to be an interactive and searchable tool supporting and underpinning the findings and recommendations in the Guidelines and the Manual.

1.2 Specific Objective of this report
The objective of this report is to outline and describe the structure and usage of the ISH0306 Knowledge Base and how it will support the Guidelines (Volume 1) and the Manual (Volume 2).

2 Outline of the ISH0306 Knowledge Base

2.1 Deliveries
The ISH0306 Knowledge Base consists of three separate parts:

1) Summary Report on Structure, Usage and Update of Knowledge Base (Manual – This report)
2) Data Inventory Sheet
3) Knowledge Base Library

These three parts are further described in detail in the following chapters 2.1.1, 2.1.2 and 2.1.3.

2.1.1 Data Inventory Sheet
The Data Inventory Sheet consists of an excel sheet with a complete overview of all the publications that have been collected throughout the project period. All cited references from Guidelines and the Manual will be found in the inventory sheet, as well as all other relevant publications gathered as supporting literature. The Data Inventory Sheet contains approximately 940 references. See Figure 2.1 for an extract of the data inventory sheet, and Annex 1 for all the references collected up to now.
Figure 2.1. Extract of the Data Inventory Sheet of the ISH0306 Knowledge Base.
The inventory sheet displays eight columns:

1) First author – the name of the leading author in the format of “Doe, J.”
2) Year of publication
3) Title of publication
4) Name of Journal/Magazine/Newsletter
5) Other information – relevant information that is not a part of the title
6) Geographic focus – Country, LMB etc.
7) Search words – relevant words that will be useful as search words, and are not mentioned elsewhere in the title, publication etc.

All columns have a comment added in the title row (hold the mouse arrow over the title field), to explain in detail what information to insert and in what format.

Previously the inventory sheet was in word format, which did not allow filtering and sorting functions. Through converting the inventory sheet to an excel format, the sheet has become more user friendly in terms of possibilities of sorting the publications by any column. This means that you can easily sort the publications either alphabetically or filter them by selecting specific author(s). It is also possible to combine filters from different columns, to specify all publications from a certain author in a certain year, for instance. The search function [Ctrl + F] is still viable and will allow you to search for any word(s) in the inventory sheet. The added search words are especially important in this respect.

2.1.2 Knowledge Base Library

The Knowledge Base Library consists of all publications collected throughout the project. Some of the publications are not available online, and are only available through university access. Thus, these publications will not be found in the Knowledge Base Library, only as references in the Inventory Sheet. All publications in the Knowledge Base Library are in pdf or word format, except for a folder with data, that is presented in .csv and excel formats.

Dropbox was originally used for collection and sharing publications. However, when presenting large amounts of data (> 15 GB) such as in this project, and the data should be organized and edited/controlled by a moderator, Dropbox is not optimal as a sharing portal. Thus, due to storage limits, payment fees as well as a suboptimal interface, all documents are systematically being moved into a similarly functioning database called Tempo Box. Tempo Box makes it easy to share and transfer data to an external partner and facilitates easy transfer of large collections of data. In short, Tempo Box has several advantages:

- no storage limits
- free of charge regardless of how many members that will need access
- safe solution that requires user's login
- user friendly interface:
  - easy to navigate: both thumbnail and list view
  - easy to find relevant documents with designated search field (search by object names and contents)
- no loss of information: both editor and version tracking of all documents
• can be used from any location and device as long as you have internet connection and a web browser
• easy to facilitate downloading to the Mekong River Commission when the Knowledge Base is to be handed over

Figure 2.2. Interface of Tempo Box with an extract of the publications in the ISH0306 Knowledge Base Library.

The Tempo Box contains four folders:

1) Data inventory sheet
2) ISH0306 Knowledge Base Library
3) Publications to be organized

Folder 1) Data inventory sheet contains an updated inventory of all publications in the Library folder (2).

Folder 2) ISH0306 Knowledge Base Library contains all publications that have been organized and put into the Data inventory sheet. This folder is currently updated as publications are registered in the inventory sheet and moved into the Library by the moderator.

Folder 3) Publications to be organized contains at any time publications that are collected however not fully registered in the inventory sheet, thus not yet moved into the Library (folder 2).

2.1.3 How to get access to Tempo Box

By using Tempobox, you simply click on the link “Start using Multiconsult Tempo Box now”, enter your user name (i.e. the e-mail address that you received the invitation on) and generate a password. See Figure 2.3. Please contact the moderator (ragnhild.heimstad@multiconsult.no) if there should be any
problems with access to Tempo Box. Once you get access, you must accept the sharing request by clicking on the notification next to your personal menu in the upper right corner (see Figure 2.4).

Figure 2.3. Interface of first time logon to Tempo Box.

Figure 2.4. Accepting the sharing request in the upper right corner of Tempo Box.

All members can read and download articles in Tempo Box freely. Furthermore, all members can upload new publications in Tempo Box folder named «Publications to be organized». The moderator will then name them appropriately, register them in the data inventory sheet and move them to the folder ISH0306 Knowledge Base. Please note that only the moderator of Tempo Box can register publications in the data inventory sheet and then move publications into the Mekong Knowledge Base Library folder. This is important in order to keep an organized structure.

The User manual is recommended for understanding more about how to use the Tempo Box. Please note that only internet browsers Chrome, Firefox and Safari (not Internet Explorer) supports drag and drop functions as well as opening and creating interactive links to publications.

3 Continued development of the Knowledge Base

The platform and set up for the Mekong Knowledge Base has been established. For the handover to MRC, the following instructions will help to develop it further after completion of the ISH0306:

Data inventory sheet
- When identifying and collecting new documentation/publications they can be moved to the folder *Publications to be organized*. These should then be systematically registered in the data inventory sheet that forms a complete overview of the whole knowledge base library.
- All public publications will have links from the inventory sheet to the knowledge base library folder.
- Add to columns *search words* and *other information* where relevant.

**ISH0306 Knowledge Base Library**

- Publications should then be moved systematically from the folder *Publications to be organized* into the folder *ISH0306 Knowledge Base Library* when registered in the inventory sheet.
- Data in other formats such as xlsx., csv. and shp. should be added systematically as well and put in specific folders.

**Final delivery to MRC**

- Process for the final delivery of the Mekong Knowledge Base will be discussed and established to ensure a best hand over to the Mekong River Commission.
- This report will be the user manual especially designed for the ISH0306 Knowledge Base.