



Mekong River Commission

P.O. Box 6767, 18- Fa Ngoum Road, Unit 18,
Ban Sithane Xoua, Sikhottabong District, Vientiane 01000, Lao PDR.
Telephone: (856-21) 263 263. Facsimile: (856-21) 263 261

TERMS OF REFERENCE

1. Consultancy Summary:

Title:	International Hydrology/Flood Expert (IHFE)
Consultancy type:	Short time consultant under SSA contract
Division:	Technical Support Division (TD)
Duration:	01 April to 31 December 2017
Duty station:	Home Based with possible travel to Lower Mekong Basin
Reporting to:	Director of TD and TCS
Total number of days for this consultancy:	A maximum of 35 working days
Required deliverables for this consultancy:	Annual Mekong Flood Report for 2015 and 2016

2. Background:

The **Mekong River Commission** (MRC) was established by the 1995 *Agreement on Cooperation for the Sustainable Development of the Mekong River Basin*, between the governments of Cambodia, Laos, Thailand and Viet Nam, in accordance with this Agreement. The **Mission** of MRC is: “to promote and coordinate sustainable management and development of water and related resources for the countries’ mutual benefit and the people’s well-being by implementing strategic programmes and activities, and providing scientific information and policy advice.”

Right after the 2000 severe flood, the Mekong River Commission Council instructed the MRC Secretariat (MRCS) to prepare a Flood Management and Mitigation (FMM) Strategy using a highly participatory process of interaction with all National Mekong Committees (NMCs) and Line Agencies (NLAs) in the four MRC Member Countries, Development Partners, the Civil Society Organizations (CSOs) and International Organizations (IOs), etc. The development objective of the MRC Flood Management and Mitigation Programme (FMMP) is “to prevent, minimize or mitigate people’s suffering and economic losses due to floods, while preserving the environmental benefits of floods”. The objective is the key to a balanced approach to Flood Management and Mitigation (FMM) and reinforces the region’s commitment to “living with floods”. This programme will also maintain an accurate flood forecasting system, to act as a facilitator on trans-boundary issues and build capacity in Member Countries.

The FMM Programme 2004-2010 committed itself to annually prepare a Mekong Flood Report for the MRC, which represented an account of the floods occurred in the LMB to be presented to the MRC Joint Committee and Council. The Annual Mekong Flood Report (AMFR) also served as source of information and as a reference document, not only for the Joint Committee and Council members, but also for a wider audience, like the agencies responsible for the disaster management and mitigation functions in the Member Countries, institutes involved in water resources planning, development partners, NGO’s etc.

The FMM Programme 2011-2015, which is a support programme to the Regional Flood Management and Mitigation Centre (RFMMC), continues the commitment to prepare the Annual Mekong Flood Report (AMFR). The Annual Mekong Flood Report is a FMMP product; between 2005 and 2013 a total of 9 AMFRs were successfully published by the FMMP in cooperation with the four MRC Member Countries. The Annual Mekong Flood Reports 2014 is scheduled to be released soon.

Since 2016, the MRC has undergone an organizational restructure to become a leaner organization; of which the former FMM Programme structure has changed to a team under Technical Support Division (TD), and AMFR remain a key output of the team. The AMFR is divided into an annual flood analysis and a special theme that is selected in close cooperation with the MRC Member Countries. The theme touches each year upon a different topic related to floods and droughts. For AMFR-2015 and AMFR-2016, the following themes have been defined: **“10-year lessons learnt of annual flood experiences”** and **“Emerging technology to cope with flood”** respectively. It is considered an instrumental topic to adjust the structure of the AMFR, as Member Countries have expressed that Flash Floods are perceived equally important as River Floods.

The report is usually developed through contributions from the national data collection experts (NDCE), the national hydrology/flood experts (NHFE), while the international hydrology/flood expert (IHFE) consolidates the four national reports into one AMFR. The report fosters common understanding and enables the Flood Management and Mitigation Programme (FMMP) to publish the AMFR-2014 for the benefits of the MRC Member Countries and other stakeholders.

3. Objective of the consultancy:

The past AMFRs were presented in Regional Consultation Meetings with the MRC Member Countries since 2005 to obtain suggestions and recommendations for improvements. Over the years a standard format was adopted with clearly defined target audiences, objectives and parameters/indicators. These improvements enabled the former FMMP to work through a simpler and more user-friendly procedure with the NMCs and the MRCS in the process of data collection, processing, analysis and report writing.

The theme of the AMFR-2015 and AMFR-2016 have been jointly determined, selected and agreed by the Member Countries during a Regional Gathering Workshop, which was conducted in January 2017 in Phnom Penh, Cambodia. The participants of the workshop were: representatives from four NMCs and line agencies concerned. The Office of CEO (OCEO) of MRCS will be requested to provide guidance and advice on the draft version. The TD will be responsible for the accommodation of the amendments recommended by the meeting and CEO into the draft AMFR-2015 and AMFR-2016. Subsequently the final draft reports will be presented by the TD during a Regional Technical Meeting with representatives from the MRC Member Countries, during which the report is given a final check. After accommodation of the recommendations and suggestions the report will be printed and disseminated.

For the above reasons, the consultancy service of an IHFE is required in order to assist the TD in drafting the MRC AMFR-2015 and AMFR-2016.

The main objectives of this consultancy service are:

- a) In cooperation with the Head of Flood Center of the TD to undertake an in-depth analysis of 2015 and 2016 flood situation at a regional scale (LMB). The analysis and report writing will be based on *Preliminary National Flood Reports* as well as other relevant flood related data and information to be provided by the NHFEs of the MRC Member Countries. Apart from this, additional relevant data and information from the MRCS and other regional and international organizations will also be needed. A Regional Technical Meeting will be organized by the TD to carry out a solid screening of the draft report.

- b) In cooperation with the TD, and OCEO to present a well-documented draft AMFR-2015 and AMFR-2016, fully structured, edited and enriched with reference information, of which the content and presentation/layout has been approved by the MRC Member Countries and the MRCS during the aforesaid Regional Technical Meeting. The draft AMFR-2015 and AMFR-2016 will be developed to such a level, that the MRCS, as a last and final step in the process, has to contract the printing services only.

4. Responsibility and Tasks:

The IHFE will technically work in a cooperative manner with the Head of Flood Center and National TD focal point attached to each NMC; and will be strategically guided by the MRCS and TD Management. The IHFE will be particularly supported by a Professional Officer (PO) of OCEO, regarding basic formation, layout, structuring, reference information, editing etc.

For the specific flood data related information, support will be provided from TD and through the RFMMC in Phnom Penh.

The following are the tasks of the IHFE:

- 1) To undertake an in-depth analysis of 2015 and 2016 flood situations with the technical coordination support to be provided by the TD. The AMFR-2015 and AMFR-2016 should be based on the *preliminary National Flood Reports* and other flood related data and information such as causes and mechanism of flooding; flood extent, water depth during flood events, duration maps; satellite images of flash flood events; and flood damage in standard categories etc. in the various regions of the LMB.
- 2) To explore and fill up the data and information gaps, if necessary, for hydro-meteorological information for better analysis of the report; the report should incorporate in the introductory part of the AMFR-2015 and AMFR-2016 the deficit or surplus rainfall value over the LMB based on the comparison with the long term average basin rainfall.
- 3) To adjust the structure of the Annual Mekong Flood Report such, that river floods and flash floods are both thoroughly analyzed and described, and impact of the floods are separately identified and assessed in terms of casualties and damages. Casualties and damages will be identified, quantified and presented for the Member Country's territory, being part of the LMB, as well as for each Member Country as a whole.
- 4) As the identification of Flash Flood impacts in terms of casualties and damages is a complex process, the IHFE is requested to carefully interact with the Head of Flood Center and NDCE and to come up with recommendations that may include taking advantage of the Annual Performance Evaluation Report of the MRC-Flash Flood Guidance System. Likewise the IHFE may also take advantage of the Annual Performance Evaluation Report of the Mekong Flood Forecasting System for the Mekong River mainstream.
- 5) To check and where needed adjust the structure of the AMFR-2015 and AMFR-2016 in accordance with the agreed format and content, and to edit the reports in UK English language standard in easily readable language;
- 6) To prepare a summary learning note on collected understanding and lessons learned about the process undergone in carrying out the work and make recommendations on improvements for the next AMFR publications;
- 7) To organize and implement, in close cooperation with the Head of Flood Center an internal MRCS round consultation with the TD management and concerned staff on the draft AMFR-2015 and AMFR-2016;

- 8) To provide inputs (PPT and color printed copies) for the Regional Technical Meeting (RTM) with representatives of the NMCs and responsible National Line Agencies on the draft final AMFR-2015 and AMFR-2016;
- 9) To process all comments in good coordination with the MRCS and TD and present a final draft version of the AMFR-2015 and AMFR-2016 for approval by the MRCS; and
- 10) To duly perform other tasks as required and deemed necessary by the TD.

5. Deliverables and timelines:

The following outputs have to be produced and provided to the TD following the overall work schedule below.

Deliverables	Number of days	Deadline
A discussion papers outlining the theme and its merits as well as the proposed structure and main features for the AMFR-2015 and AMFR-2016, to be used as the basis for further discussion with the MRC Member Countries.	2	30 Jun 2017
Six (6) printed and one (1) electronic version of the draft final AMFR-2015 and AMFR-2016, well structured, well edited, well documented, describing the causes, mechanisms, extents, durations and consequences (casualties and damages) of the flash floods in the LMB in the year 2015 and 2016	30	31 Aug 2017
A CD containing all raw data and results of data processing as well as the power point presentation (PPT) of the AMFR-2015 and AMFR-2016.	1	30 Nov 2017
A summary of learning note on collected understandings and lessons learned about the process undergone in carrying out the work since the commencement and make recommendations (themes and main features) on improvements for the next AMFR publications.	2	30 Nov 2017

6. Working Arrangement:

The schedule presented below is shown key activities should be performed and in according to the schedule.

Overall tentative work plan for the Annual Mekong Flood Report 2015 and 2016	
Schedule	Key activities and by whom
Mar 2017	Experts selections <ul style="list-style-type: none"> - TD prepares TORs and in close cooperation with HRS and NMCs to recruit/select the experts (NMC will send CV and proposed candidates) and for international expert the waiver may be proceeding or recruitment. - HRS will prepare contract and get the contracts signed off
Apr/May 2017	Data collection, analysis and prepare a report <ul style="list-style-type: none"> - IHFE prepares the draft outline/lay-out of the AMFR-2015 and AMFR-2016 in according to the selected themes, then send this draft material to the NHFEs thru TD - All comments are gathered within a week and send to IHFE for the finalization - Data and information collection by NDCE

Overall tentative work plan for the Annual Mekong Flood Report 2015 and 2016	
Schedule	Key activities and by whom
	<ul style="list-style-type: none"> - Reporting writing by NHFEs based on agreed contents - Communications between key stakeholders (experts) - Perform other related tasks if deem necessary
Jul/Aug 2017	<p>Draft finalization of the reports</p> <ul style="list-style-type: none"> - NHFE submits the first draft reports to IHFE thru the National Focal Point of TD and TD - IHFE reviews and provide comments on the first reports NHFEs to those who concerns (country by country) - NHFE revises and updates the report based on inputs from IHFE (if necessary and due to lack of data and information as required, IHFE should contact the NDCE to help and supplement) - Resubmit the draft final reports to TD and NMCs
Sept 2017	<p>Regional Technical Meeting (RTM)</p> <ul style="list-style-type: none"> - TD organizes and conducts a Regional Technical Meeting (RTM) to discuss the draft AMFR-2015 and AMFR-2016. - IHFE participates and processes comments obtained from RTM and preparing the 2nd final draft AMFR-2015 and AMFR-2016. - TD to adjust and get approval of the AMFR-2015 and AMFR-2016.
Nov 2017	<p>Format, publication and dissemination (by TD)</p>

Note: All experts if invited should prepare and present the report for meetings when appropriate. TD will cover all related travel costs include DSA in according to MRC rule.

7. Qualifications and Requirements:

The IHFE will work in a coordinated effort with the Head of Flood Center and closely interact with the TD Management and the PO of OCEO. The IHFE will work under the overall supervision and guidance of the Head of Flood Center, report to the Director of TD, and is technically assisted by the Head of Flood Center, and other concerned professional staff of the TD, if and when required.

The TD will secure support from the Communication Officer of the OCEO to provide data and information (printed reports, publications, newspaper articles, hydraulic, hydrological data and information, statistics, aerial photographs, satellite images, maps, other relevant material) to the IHFE; at the request of the Consultant the material will be made available to him/her.

The International Hydrology/Flood Expert must have the following qualifications:

- a. The IHFE must have a MSc. or PhD level university degree in a field of study closely related to water engineering , i.e., hydrology, hydraulics, flood plain analysis and flood disaster management and/or integrated water resources management;
- b. The IHFE must have proven long-term experience in a field closely related to , i.e., hydrology, hydraulics, flood plain analysis and flood disaster management;
- c. The IHFE must have a minimum of 15-20 years working experience in the field of integrated water resources management, irrigation and drainage and/or disaster/flood management and mitigation;
- d. The IHFE must have a minimum of 5 years' experience in working in one or more MRC Member Countries;

