Mekong River Commission
For Sustainable Development

DRAFT TERMS OF REFERENCE

1.   CONSULTANCY SUMMARY

Title	Associate Modeller (one from each MRC Member Country)
Consultancy/Staff Type	Special Agreement (SA)
Division	Technical Support Division (TD), Vientiane
Duration	1 year, from 1 January to 31 December 2024 with possibility for extension
Duty Station	MRCS Office in Vientiane
Reporting to	The incumbent will be working under the overall supervision of the Director of the Technical Support Division (TD) and Chief Hydrologist and under the direct supervision of the Modellers

2.   INTRODUCTION AND 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, Lao PDR, Thailand and Viet Nam. The role of the MRC is to coordinate and promote cooperation in all fields of sustainable development, utilisation, management and conservation of the water and related resources of the Mekong River Basin.

The MRC Secretariat (MRCS) is the operational arm of the MRC. It provides technical and administrative services to the Joint Committee and the Council to achieve the MRC's mission. Modelling Team (MT) under the MRCS Technical Support Division (TD) is responsible for conducting modelling activities and providing technical assistance to other divisions in modelling, assessment and analysis. It also provides other information and support for sustainable development, when required. To do so, the Decision Support Framework (DSF) system was developed aiming for MRC to have a transparent modelling system that could be used by each and any of the member countries (MCs) to study and check proposals and strategies for water resources developments.

MRCS Modelling Team (MT) was established in 1998 within the Technical Support Division to provide modelling service to other MRCS units. Since the start of implementation of the World-Bank-funded project of Water Utilization Programme in 2000, the MT have been involved intensively in the development and application of the Basin Modelling and Knowledge Base, also known collectively as the DSF with a set of the simulated models (hydrology, and hydraulic/hydrodynamic) to support the studies within LMB related to water resources.

Under the approved Proactive Regional Planning (PRP), the current DSF will be upgraded. The upgraded DSF will be an integration of a contemporary web-based regional, multi-user DSF platform to support implementation of all river basin management functions, from short-term planning (real-time river monitoring and operational control) to long-term planning. New datasets will be added (including from satellite and other remote sensing sources) as well as models (for supporting operational flow management and sediment management) and tools for supporting visualisations, analysis and decision-making. The upgraded DSF will ensure the compatibility with national Decision Support Systems (DSS) in each basin country and with MRC's ongoing improvements of its knowledge base and flood and drought forecasting capabilities. Inter-operationality with national DSS's will dramatically improve data and

information sharing capabilities among the countries and create the opportunity for each country to verify regional modelling and assessment results and test new proposals for water resources development and management, all of which will increase trust and confidence among the countries.

The involvement of the MCs in all processes of above-mentioned activities with MT through the Associate Modeller Programme will ensure the acceptable quality of MRC products including the upgrade of the DSF and it will intensively maintain and enhance national modelling capacity and human resources at the national level.

Against this background, the MRC's Technical Support Division is seeking a competent associate modeler from each basin country to support the implementation of upgraded DSF under PRP and relevant MT activities.

3. OBJECTIVES OF THE ASSIGNMENT

The associate modeller will get acquainted with the upgrading, and modernization of upgraded MRC DSF through self-study, training courses, on-the-job training and case study, and will help the modelling team to carry out tasks under modeling activities.

After this assignment with the MRCS, the associate modeller will have the capability to support water resources planning and management activities with the upgraded DSF (or with a national DSS) in their countries.

4. DELIVERABLES

The associate modeller will prepare a short monthly progress report outlining the nature of activities undertaken, main findings, issues arising (if any), recommendations (if any), and a workplan for the next months.

In addition, the associate modeler will prepare technical notes and PPTs on their on-the-job activities and case studies in which they apply the knowledge and skills obtained in training courses and self-studies.

5. SCOPE OF WORK

The associate modeler will conduct the following activities:

- **Conduct technical review relevant documents** as appropriate or requested, such as reports relevant to the PRP project, particularly for the upgraded DSF, and other reports relevants to the key modeling tools used in upgraded DSF platform such as MIKE modeling suites, HEC-RAS, Source (eWater), etc.;

- **Participate in technical trainings in both in-house and out-campus training** including training courses related to the upgrading and use of DSF components, models, databases, interfaces, tools and methods;

- **Participate in on-the job-trainings and implement case studies** to apply the knowledge and skills obtained in the technical trainings;

- **Technically support ongoing activities** of the modelling team related to the upgraded DSF (and help ensuring practical user functionality of the upgraded models and tools), the testing all elements of upgraded DSF, and the use of the upgraded DSF for proactive regional planning;

- **Provide technical assistance** to the ongoing data and information collections and compilation for the upgraded DSF including Hydro-meteorolocial, spatial dataset, and operational dataset, etc.;

- **Build capacity in written and presentation skills** related to progress reports and technical notes on on-the-job training and case studies;

- Technically support other tasks as assigned by MT and TD under either Director or Chief Hydrologist and other key staffs.

6. ITINERARY

The assignment will be implemented at the MRCS Office in Vientiane and may require sporadic trips in the region.

7. WORKING ARRANGEMENTS

The associate modeller will be working under the overall supervision of the Director of TD and Chief Hydrologist and under the direct supervision of the Modellers.

8. PAYMENT MODALITY

The payment will be made on a monthly basis (with acceptable reporting quality).

9. INTELLECTUAL PROPERTY RIGHTS

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

10. DECLARATION OF NON-FRAUDELENCE AND PROTECTION OF PERSONAL DATA

The associate modeler shall adhere to the MRC's relevant rules and regulations on personal data protection, business exclusion, fraud prevention and anti-corruption principles, and shall be under strict disciplinary measures should any violation occur.

11. QUALIFICATIONS AND REQUIREMENTS

- Bachelor's Degree or higher in the field of water resources modeling, hydrology and hydrodynamic modeling, water resources planning and management, or relevant engineering field;

- Preferably at least 5 years of professional experience in water resources modelling, hydrological analysis, GIS, impact assessment, remote sensing, programming skills (Python or R), web applications or another relevant area;

- Excellent computer skills and passionate to grow professionally in the development, use and management of DSS's;

- Demonstrated ability to work in an international environment with good communication and teamwork skills, and with a good command of spoken and written English;

- Knowledge of the MRC, including its DSF and knowledge base.

12. SIGNATURE BLOCK

MRCS:

Full Name: Tran Hinh Khoi

Title: Director of TD

Signature:

Date: 17.10.2023

Associate Modeller:

Full Name:

Signature: _____

Date: _____