Madams,

As Chairman of the National Water Resources Committee of the Kingdom of Thailand, I enclose herewith Thailand’s national reports on Indicator 6.5.1 and Indicator 6.5.2 of the Sustainable Development Goals (SDGs).

The Office of the National Water Resources Committee (ONWR), as the regulating agency responsible for water resources management in Thailand, has worked with all related agencies and stakeholders to collect, analyse, and verify the data for incorporation into the reports. I am confident that the reports will contribute to further cooperation on integrated water resources management and transboundary water cooperation between nations and regions.

I take this opportunity to reaffirm Thailand’s commitment to working with the UNECE, UNESCO, and all other related agencies on this important agenda.

Accept, Madams, the assurances of my highest consideration.

General (Prawit Wongsuwon)
Deputy Prime Minister of the Kingdom of Thailand

Ms. Audrey Azoulay,
Director-General,
The United Nations Educational, Scientific and Cultural Organization,
PARIS.

Ms. Olga Algayerova,
Executive Secretary,
The United Nations Economic Commission for Europe,
GENEVA.
REPORTING ON GLOBAL SDG INDICATOR 6.5.2

Office of The Prime Minister
Office of The National Water Resources
The Thailand Reporting on global SDG indicator 6.5.2
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Reporting on global SDG indicator 6.5.2

TEMPLATE of the second cycle for reporting

Content of the template

The template is divided into four parts:

- **Section I**  - Calculation of SDG indicator 6.5.2
- **Section II** - Information on each transboundary basin or group of basins
- **Section III** - General information on transboundary water management at the national level
- **Section IV** - Final questions

Country name: [fill in]

Thailand
I. Calculation of Sustainable Development Goal indicator 6.5.2

Methodology

1. Using the information gathered in section II, the information gathered in this section allows for the calculation of Sustainable Development Goal global indicator 6.5.2, which is defined as the proportion of transboundary basin area with an operational arrangement for water cooperation.

2. The step-by-step monitoring methodology for indicator 6.5.2, developed by UNECE and UNESCO in the framework of UN-Water, should be referred to for details on the necessary data, the definitions and the calculation.a

3. The value of the indicator at the national level is derived by adding up the surface area in a country of those transboundary basins (river and lake basins and aquifers) that are covered by an operational arrangement and dividing the area obtained by the aggregate total area in a country of all transboundary basins (both river and lake basins, and aquifers).

4. Transboundary basins are basins of transboundary waters, that is, of any surface waters (notably rivers, lakes) or groundwaters which mark, cross or are located on boundaries between by two or more States. For the purpose of the calculation of this indicator, for a transboundary river or lake, the basin area is determined by the extent of its catchment. For groundwater, the area to be considered is the extent of the aquifer.

5. An “arrangement for water cooperation” is a bilateral or multilateral treaty, convention, agreement or other formal arrangement among riparian countries that provides a framework for cooperation on transboundary water management.

6. For an arrangement to be considered “operational” all the following criteria need to be in place in practice:
   - (a) There is a joint body, joint mechanism or commission (e.g., a river basin organization) for transboundary cooperation (criterion 1);
   - (b) There are regular (at least once per year) formal communications between riparian countries in form of meetings (either at the political or technical level) (criterion 2);
   - (c) Joint objectives, a common strategy, a joint or coordinated management plan, or an action plan have been agreed upon by the riparian countries (criterion 3);
   - (d) There is a regular (at least once per year) exchange of data and information (criterion 4).

Calculation of indicator 6.5.2

7. Please list in the tables below the transboundary basins (rivers and lakes and aquifers) in your country’s territory and provide the following information for each of them:
   - (a) The country(ies) with which the basin is shared;
   - (b) The surface area of the basin (the catchment of rivers or lakes and the aquifer in the case of groundwater) within the territory of your country (in square kilometres (km²));
   - (c) Whether a map and/or a geographical information system (GIS) shapefile of the basin has been provided;
   - (d) Whether there is an arrangement in force for the basin;
   - (e) The verification of each of the four criteria to assess operationality;
   - (f) The surface area of the basin within the territory of your country which is covered by a cooperation arrangement that is operational according to the above criteria.

8. In case an operational arrangement is in place only for a sub-basin or a portion of a basin, please list this sub-basin just after the transboundary basin it is part of. In case there is an operational arrangement for the whole basin, do not list sub-basins in the table below.

---
a Available from the UN-Water website: https://www.sdg6monitoring.org/indicators/target-65/indicators652/updated version -2020". 
<table>
<thead>
<tr>
<th>Name of transboundary river or lake basin/sub-basin</th>
<th>It is a basin or a sub-basin?</th>
<th>Countries shared with</th>
<th>Surface area of the basin/sub-basin (in km²) within the territory of the country</th>
<th>Map and/or GIS shapefile provided (yes/no)</th>
<th>Covered by an arrangement (entirely, partly, no) (Ref. to questions in sect. II)</th>
<th>Criterion 1 applied (yes/no) (Ref. to questions in sect. II)</th>
<th>Criterion 2 applied (yes/no) (Ref. to questions in sect. II)</th>
<th>Criterion 3 applied (yes/no) (Ref. to questions in sect. II)</th>
<th>Criterion 4 applied (yes/no) (Ref. to questions in sect. II)</th>
<th>Surface area of the basin/sub-basin (in km²) covered by an operational arrangement within the territory of the country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mekong River Basin</td>
<td>Basin</td>
<td>Cambodia, Lao People's Dem. Rep., Thailand, Viet Nam.</td>
<td>184,000 km²</td>
<td>yes</td>
<td>Covered by an arrangement (partly)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>184,000 km²</td>
</tr>
</tbody>
</table>

(A) Total surface area of transboundary basins/sub-basins of rivers and lakes covered by operational arrangements within the territory of the country (in km²) (do not double count sub-basins)

(B) Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km²) (do not double count sub-basins)

Source: http://www.tnmc-is.org/

\(^b\) List sub-basins after the basin they belong to.
Table 2
Transboundary aquifers (please add rows as needed)

<table>
<thead>
<tr>
<th>Name of the transboundary aquifer</th>
<th>Countries shared with</th>
<th>Surface area of the aquifer (in km²) within the territory of the country</th>
<th>Map and or GIS shapefile provided (yes/no)</th>
<th>Covered by an aquifer specific arrangement entirely, partly, no (Ref to questions in sect II)</th>
<th>Covered within an arrangement not specific to the aquifer entirely, partly, no (Ref to questions in sect II)</th>
<th>Criterion 1 applied (yes/no) (Ref to questions in sect II)</th>
<th>Criterion 2 applied (yes/no) (Ref to questions in sect II)</th>
<th>Criterion 3 applied (yes/no) (Ref to questions in sect II)</th>
<th>Criterion 4 applied (yes/no) (Ref to questions in sect II)</th>
<th>Surface area of the aquifer (in km²) covered by an operational arrangement within the territory of the country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>/ / /</td>
<td>/ / /</td>
<td>/ / /</td>
<td>/ / /</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Thailand has no clear cooperation with international agencies on transboundary aquifers, and there has been no clear studies of groundwater in the borders, particularly international agreements.

Subtotal: surface area of transboundary aquifers covered by operational arrangements (in km²)

Total surface area of transboundary aquifers (in km²)

For a transboundary aquifer, the extent is derived from the aquifer system delineation which is commonly done relying on information of the subsurface, notably the extent of geological formations. As a general rule, the delineation of aquifer systems is based on the delineation of the extent of the hydraulically connected water-bearing geological formations. Aquifer systems are three-dimensional objects and the aquifer area taken into account is the projection on the land surface of the system. Ideally, when different aquifer systems not hydraulically connected are vertically superposed, the different relevant projected areas are to be considered separately, unless the different aquifer systems are managed conjunctively.

In the text of the agreement or arrangement or in the practice.
**Indicator value for the country**

**Surface waters:**

Percentage of surface area of transboundary basins of rivers and lakes covered by an operational arrangement:

\[
\frac{A \times 100}{B} - \frac{184}{184} \times 100\% = \frac{A}{B} \times 100\% : A = 184,000 \text{ km}^2, B = 184,000 \text{ km}^2
\]

**TABLE 1** Country areas in the Mekong river basin

<table>
<thead>
<tr>
<th>Basin</th>
<th>Area km²</th>
<th>% of Southeast Asia</th>
<th>Countries included</th>
<th>Area of country in basin (km²)</th>
<th>As % of total area of the basin</th>
<th>As % of total area of the country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mekong</td>
<td>795,000</td>
<td>3.8</td>
<td>China, Myanmar, Lao PDR, Thailand, Cambodia, Viet Nam</td>
<td>165,000</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24,000</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>202,000</td>
<td>25</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>184,000</td>
<td>23</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>155,000</td>
<td>20</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>65,000</td>
<td>8</td>
<td>20</td>
</tr>
</tbody>
</table>


**Aquifers: (N/A)**

Percentage of surface area of transboundary aquifers covered by an operational arrangement:

\[
\frac{C \times 100}{D} = \text{N/A}
\]

Thailand has no clear cooperation with international agencies on transboundary aquifers, and there has been no clear studies of groundwater in the borders, particularly international agreements. Also, factors related to transboundary groundwater data may not be equal among countries.

**Sustainable Development Goal indicator 6.5.2:**

Percentage of surface area of transboundary basins covered by an operational arrangement:

\[
\left(\frac{(A + C)}{(B + D)}\right) \times 100 = 23
\]

**Spatial information**

If a map (or maps) of the transboundary surface water catchments and transboundary aquifers (i.e., “transboundary basins”) is available, please consider attaching them. Ideally, shapefiles of the basin and aquifer delineations that can be viewed in GIS should be sent.

Figure 1 Boundary of the Mekong River Basin.

Additional information
If the respondent has comments that clarify assumptions or interpretations made for the calculation, or the level of certainty of the spatial information, please write them here:

Does your country have transboundary agreements or arrangements for the protection and/or management of transboundary waters (i.e., rivers, lakes or groundwater), whether bilateral or multilateral?

Yes ☑ No ☐

If yes, list the bilateral and multilateral agreements or arrangements (listing for each of the countries concerned): [fill in]

Thailand has been a member of the Mekong River Commission (MRC) since 1957, based on the main concept of economic recovery of countries in the regions affected by the World War II and economic problems arising from flooding in various basin countries. The member states are Kingdom of Cambodia, Lao People's Democratic Republic (Lao PDR), Kingdom of Thailand and the Socialist Republic of Vietnam, which have signed the following four Mekong River-related conventions critical to the MRC evolution since the Mekong Committee establishment in 1975.

(1) Statute on the Committee for Co-ordination of Investigations of the Lower Mekong Basin (1957)
(2) Joint Declaration of Principles for Utilization of the Waters of the Lower Mekong Basin (1975)
(3) Declaration on the Interim Committee for Co-ordination of Investigations of the Lower Mekong Basin (1978)

Figure 2 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, 5 April 1995.

The MRC establishment aims for:

1. Reasonable and fair use of water

2. Water management for highest benefits and minimal harmful negative effects, and promotion of sustainable development, as well as coordination of sustainable management and development of water sources and other related resources for mutual benefits of the member states and their people's well-being by promoting strategic plans and activities, as well as providing scientific information and policy advice.

3. Conservation of water and related resources in the Mekong basin, covering the following six major fields that are significant to project development.
   3.1 Irrigation
   3.2 Agriculture and land utilisation
   3.3 Household and industrial water usage
   3.4 Water-related disaster prevention
   3.5 Hydropower
   3.6 Communication

China and Myanmar, the countries in the Upper Mekong Basin (UMB), have joined a dialogue partners with the MRC since 1996.

Sorce: http://www.tnmc-is.org/
II. Questions for each transboundary basin, sub-basin, part of a basin, or group of basins (river, lake or aquifer)

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.¹ In some instances, you may provide information on both a basin and one or more of its sub-basins or parts thereof, for example, where you have agreements² or arrangements on both the basin and its sub-basin. You may coordinate your responses with other States with which your country shares transboundary waters, or even prepare a joint report. General information on transboundary water management at the national level should be provided in section III and not repeated here.

Please reproduce this whole section with its questions for each transboundary basin, sub-basin, part of a basin or group of basins for which you will provide a reply.

Name of the transboundary basin, sub-basin, part of a basin or group of basins: [fill in]

Mekong river basin

List of the riparian States: [fill in]


In the case of an aquifer, what is the nature of the aquifer and its relation with the river or lake basin:

N/A

Unconfined aquifer connected to a river or lake  ☐

Unconfined aquifer with no or limited relation with surface water  ☐

Confined aquifer connected to surface water  ☐

Confined aquifer with no or limited relation with surface water  ☐

Other  ☐

Please describe: [fill in]

Unknown  ☑

Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins: [fill in]

Mekong River Basin

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin, sub-basin, part of a basin or group of basins?

   One or more agreements or arrangements exist and are in force  ☑

   Agreement or arrangement developed but not in force  ☐

   Agreement or arrangement developed, but not in force for all riparians  ☑

Please insert the name of the agreement(s) or arrangement(s) [fill in]


   The Governments of The Kingdom of Cambodia, The Lao People's Democratic Republic, The Kingdom of Thailand, and The Socialist Republic of Viet Nam, being equally desirous of continuing to cooperate in a constructive and mutually beneficial manner for sustainable development, utilization, conservation and management of the Mekong River Basin water and related resources,

¹ In principle, section II should be submitted for every transboundary basin, river, lake or aquifer, in the country, but States may decide to group basins in which their share is small or leave out basins in which their share is very minor, e.g., below 1 per cent.
² In section II, "agreement" covers all kinds of treaties, conventions and agreements ensuring cooperation in the field of transboundary waters. Section II can also be completed for other types of arrangements, such as memorandums of understanding.
have resolved to conclude this Agreement setting forth the framework for cooperation acceptable to all parties hereto to accomplish these ends. Since its establishment in 1995 by the signing of the Mekong Agreement, the MRC has adopted a series of procedures, namely the Procedures for Water Quality, Procedures for Data and Information Exchange and Sharing, Procedures for Water Use Monitoring, Procedures for Notification, Prior Consultation and Agreement, and Procedures for Maintenance of Flows on the Mainstream, to provide a systematic and uniform process for the implementation of this accord.

Agreement under Article 5: A decision of the Joint Committee resulting from prior consultation and evaluation on any proposed use for inter-basin diversions during the wet season from the mainstream as well as for intrabasin use or inter-basin diversions of these waters during the dry season. The objective of this agreement is to achieve an optimum use and prevention of waste of the waters through a dynamic and practical consensus in conformity with the Rules for Water Utilisation and Inter-Basin Diversions set forth in Article 26.

- **Acceptable minimum monthly natural flow**: The acceptable minimum monthly natural flow during each month of the dry season.
- **Acceptable natural reverse flow**: The wet season flow level in the Mekong River at Kratie that allows the reverse flow of the Tonle Sap to an agreed upon optimum level of the Great Lake.
- **Basin Development Plan**: The general planning tool and process that the Joint Committee would use as a blueprint to identify, categorise and prioritise the projects and programmes to seek assistance for and to implement the plan at the basin level.
- **Environment**: The conditions of water and land resources, air, flora, and fauna that exists in a particular region.
- **Notification**: Timely providing of information by a riparian to the Joint Committee on its proposed use of water according to the format, content and procedures set forth in the Rules for Water Utilisation and Inter-Basin Diversions under Article 26.
- **Prior consultation**: Timely notification plus additional data and information to the Joint Committee as provided in the Rules for Water Utilisation and Inter-Basin Diversion under Article 26, that would allow the other member riparians to discuss and evaluate the impact of the proposed use upon their uses of water and any other affects, which is the basis for arriving at an agreement. Prior consultation is neither a right to veto the use nor unilateral right to use water by any riparian without taking into account other riparians’ rights.
- **Proposed use**: Any proposal for a definite use of the waters of the Mekong River system by any riparian, excluding domestic and minor uses of water not having a significant impact on mainstream flows.

Under the Mekong Agreement 1995, there are five sets of procedures issued as a mechanism for the joint Mekong water use for sustainability.

**1) Procedures for Data and Information Exchange and Sharing. (PDIE)**:

Recognizing the existing cooperation in data and information collection, exchange, sharing and management through the Mekong cooperation frameworks from 1957 to date; Affirming the imperative for operationalizing an effective, reliable and accessible data and information system for the Mekong River Commission (MRC) and its member countries to implement the AGREEMENT ON THE COOPERATION FOR THE SUSTAINABLE DEVELOPMENT OF THE MEKONG RIVER BASIN, signed in Chiang Rai, Thailand on 5th April 1995, hereinafter referred to as the

(2) Procedures for the Maintenances of Flows on the Mainstream. (PMFM):  
Reaffirming the political commitment to continue to cooperate and promote in a constructive and mutually beneficial manner the utilization and development of water and related resources and protection of the environment of the Mekong River Basin as stated in the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, signed at Chiang Rai, Thailand on 5 April 1995, hereinafter referred to as “the Mekong Agreement”, Pursuant to the Mekong River Commission (MRC) Council Resolution on Water Utilization Program of 18th October 1999, and the decision of the MRC Joint Committee in December 2003 on the establishment of the Technical Drafting Group 3 to prepare the Rules for the Maintenance of Flows on the Mainstream, which was renamed Procedures for the Maintenance of Flows on the Mainstream at the 11th MRC Council Meeting in December 2004, hereinafter referred to as “the Procedures”; Recognizing the natural hydrological variability, changes and developments in time and space, that occur in the basin; Recognizing the comprehensive and adaptive approach in formulating the Procedures, which are an integral part of the Rules for Water Utilization and Inter-Basin Diversions specified in Article 26 of the Mekong Agreement. Recognizing that the sustainable development of the water and related resources in and environment protection of the Mekong River Basin will not be possible if, together with other relevant factors, flows of the Mekong River are not appropriately maintained.

(3) Procedures for Notification, Prior Consultation and Agreement. (PNPCA) :  
Agreement under Article 5: A decision of the Joint Committee resulting from prior consultation and evaluation on any proposed use for inter-basin diversions during the wet season from the mainstream as well as for intra-basin use or inter-basin diversions of these waters during the dry season. The objective of this agreement is to achieve an optimum use and prevention of waste of the waters through a dynamic and practical consensus in conformity with the Rules for Water Utilization and Inter-Basin Diversions set forth in Article 26.

Notification: Timely providing information by a riparian to the Joint Committee on its proposed use of water according to the format, content and procedures set forth in the Rules for Water Utilization and Inter-Basin Diversions under Article 26.

Prior consultation: Timely notification plus additional data and information to the Joint Committee as provided in the Rules for Water Utilization and Inter-Basin Diversion under Article 26, that would allow the other member riparians to discuss and evaluate the impact of the proposed use upon their uses of water and any other affects, which is the basis for arriving at an agreement. Prior consultation is neither a right to veto the use nor unilateral right to use water by any riparian without taking into account other riparians’ rights.

Proposed use: Any proposal for a definite use of the waters of the Mekong River system by any riparian, excluding domestic and minor uses of water not having a significant impact on mainstream flows.

(4) Procedures for Water Use Monitoring. (PWUM) :  
Pursuant to the MRC Council’s Resolution on the Water Utilisation Programme of 18th October 1999, and confirmation of the establishment of the Technical Drafting Group 3 for the Procedures for Water Use Monitoring, hereinafter referred to as “the Procedures”, by the MRC Joint Committee
Recognizing that the reasonable and equitable use of water resources will not be possible if water uses are not monitored;

- Water Use/Utilisation: For the purpose of the present Procedures, it means any use of water which may have a significant impact to the water quality or flows regime of the mainstream of the Mekong River System by any Member State. The Joint Committee may review and revise this definition from time-to-time as required for effective implementation of the Procedures.

- Inter-Basin Water Diversion: The diversion of water from the mainstream or a tributary of the Mekong River System into another basin.

- Water Use Monitoring System: The water use monitoring system of the MRC (Monitoring System) is the system established by the MRC and Member States to monitor water use in the Mekong Basin and inter-basin diversion into another basin. The components of the Monitoring System and its management/operation are stipulated in 4.2.

(5) Procedures for Water Quality, (PWQ):

Pursuant to the Mekong River Commission (MRC) Council Resolution on Water Utilisation Programme of 18 October 1999, and the decision of the MRC Joint Committee in August 2004 on the establishment of the Technical Drafting Group 6 for the Procedures for Water Quality;

The objective of the Procedures is to establish a cooperative framework for the maintenance of acceptable/good water quality to promote the sustainable development of the Mekong River Basin.

The Procedures are applied to maintain the water quality of the Mekong River mainstream. Regarding the transboundary tributaries of the Mekong River Basin, the States concerned shall, based on the Mekong Agreement and the relevant provisions of the Procedures and the Guidelines thereof, make every efforts to maintain acceptable/good water quality.

2. Agreement on Commercial Navigation on Lancang-Mekong River among the Governments of the People's Republic of China, the Lao People's Democratic Republic, the Union of Myanmar and the Kingdom of Thailand:

The Governments of the People’s Republic of China, the Lao People’s Democratic Republic, the Union of Myanmar and the Kingdom of Thailand (hereinafter referred to as "the Contracting Parties"), Aiming at developing on the Lancang-Mekong river the international passenger and cargo transportation among the Contracting Parties, and Desiring to promote and facilitate trade and tourism, and to strengthen cooperation in commercial navigation on the basis of respect for sovereignty, equality, and mutual-benefit

Source: http://www.tnmc-is.org/

Agreement or arrangement is under development

No agreement or arrangement

If there is no agreement or arrangement or it is not in force, please explain briefly why not and provide information on any plans to address the situation: (fill in)

If there is no agreement or arrangement and no joint body or mechanism for the transboundary basin, sub-basin, part of a basin or group of basins then jump to question 4; if there is no agreement or arrangement, but a joint body or mechanism then go to question 3.

Questions 2 and 3 to be completed for each bilateral or multilateral agreement or arrangement in force in the transboundary basin, sub-basin, part of a basin or group of basins.

Mekong River Basin

10
2. (a) Does this agreement or arrangement specify the area subject to cooperation?

Yes ☑ / No ☐

If yes, does it cover the entire basin or group of basins and all riparian States?

Yes ☐ / No ☑

Additional explanations? [fill in]

Only the lower part of basin: 4 riparian states. The agreement covers part of the Mekong River basin and only member states under the treaty, namely Cambodia, Lao PDR, Thailand, Viet Nam and so on.

The Mekong River originates from the melting of snowy mountains in Qinghai, China, and the mountains of northern Tibet, which is the origin of two additional rivers: Yangtze and Salween Rivers. The Mekong River flows south flanked by Yangtze River to the east and Salween River to the west. The Mekong River, which the Chinese call ‘Lancang Jiang’, runs through the rocks and gorges to Chiang Rung city, a hillside plain, through Yunnan Province to the border between Lao PDR and Union of Myanmar. Then it flows into the point among Thailand, Lao PDR and Myanmar, also known as the Golden Triangle, at Chiang Saen District, Chiang Rai Province, then eastwards between Thailand and Lao PDR for a short distance to Luang Prabang, then south to Chiang Khan District, Loei Province, then east to the border between Thailand and Lao PDR once again to Nakhon Phanom province, then south again to Khong Chiam District, Ubon Ratchathani Province, and then to Lao PDR and Kingdom of Cambodia, respectively. The Mekong River is separated into two rivers in Phnom Penh, where Tonle Sap River converges with the Great Mekong River. The other small one is Bassac River. The two rivers converge again at Vam Nao, Socialist Republic of Vietnam, before descending into the South China Sea.

The Mekong River flows from its origins to the South China Sea for more than 4,800 kilometres, covering over 795,000 square kilometres of catchment, and is the main river of the Mekong basin. In an overview, this basin basin can be divided into two parts: the UMB and the lower Mekong basin (LMB). The UMB begins from the origin of the Mekong River that flows Tibet and China. As for the LMB, it begins from Yunnan in China and flows through countries of Myanmar, Thailand, Lao PDR, Cambodia and Vietnam before descending to the South China Sea estuary as shown in Figure 1. Basin areas in various countries are shown in Table 1, showing that the LMB from Lao PDR to Thailand and Cambodia covers more areas and holds more impressive water than the UMB does. The country that has the most catchment area of 202,000 square kilometres is Lao PDR with more than 41.2% of the total water volume flowing through it, followed by Cambodia and Thailand, respectively.

UMB

The UMB begins at the Mekong River origin, Tibet Plateau, and flows through China. It covers more than 24% of the entire basin area and yields approximately 15-20% of the water that flows into the Mekong River with steep and narrow waterways, often resulting from soil erosion. More than 50% of the sediment in the Mekong River come from the UMB.

More than 25% of the waterway characteristics of the upper Mekong River are slopes as shown in Figure 3, suitable for study and production development of hydropower. Such study and development concern hydropower dams on the mainstream, partly because the UMB has no branch rivers that can accommodate such dams.
LMB

The LMB begins in Yunnan Province in China. The River flow through countries of Myanmar, Thailand, Laos, Cambodia and Vietnam, before landing in the South China Sea, covering more than 76% of the total basin areas. The waterway characteristics are wide, consisting of coasts, sandy beaches, and a large number of islands found in the area from Lao PDR and the transboundary barrier between Thailand and Lao PDR. Such characteristics make the basin a tourist attraction, and a centre of traditions and culture, activities, sport or amusement of people along the Mekong River banks. The waterway is not very steep compared to the UMB, but it is also studied and developed in the field of hydropower both on the Great Mekong and the Mekong branch rivers.

The LMB has two major branches of rivers, being Chi-Mun Rivers on the Mekong River right-hand right in the northeastern Thailand, and Sesan, Srepok and Sekong Rivers, or 3S, on the left-hand side, flowing through three countries altogether: Lao PDR, Cambodia and Vietnam. When the Mekong River flows into Cambodia, it contains approximately 95% of all water in the River. The path from Cambodia downwards is considered terminal Mekong before descending to the South China Sea. The terrain and the waterway are low lands in nature with an outstanding characteristic of tidal fluctuation in Phnom Penh resulting from the reverse flow of the Mekong River into Tonle Sap. Impacts from water level changes of the River lead to decreased aquatic animals and the sediment naturally flowing together with the current, resulting in abnormally fast coast erosion.

Mekong Basin in Thailand

The Mekong Basin of approximately 178,080 square kilometres in Thailand consists Kok, Tonle Sap, Mekong (upper), Mekong (northeast), Mun and Chi Basins. The area covers most of the northeastern part of Thailand.

The Mekong River in the north flows from Lao PDR to the Thai-Lao border at Wiang Sub-District, Chiang Saen District, Chiang Rai Province and flows all the way to Muang Yai Sub-District, Wiang Kaen District in the same province, before re-entering Lao PDR.

The topography of the Mekong Area (North) covers 10,183 square metres. Most of the basin area covers Chiang Rai and Phayao Provinces. The Mekong Basin (upper) is adjacent to Union of Myanmar in the north and Lao PDR, to Yom Basin in the south, to Lao PDR in the east and to Mae Kok Basin in the west. The typical terrain of the Basin is surrounded by mountains with the altitude of between 300-1,550 metres above the mean sea level. Major mountain ranges include Doi Phu Langa, Doi San Pan Nam, Doi Mae Suk, Doi Khun Mae Tam and Doi Khun Mae Tom Mountains.

In the Northeast, the Mekong River flows from Lao PDR to the Thai-Lao border at Pak Thom Sub-District, Chiang Khan District, Loei Province, until it reaches Khong Chiam Sub-District, Khong Chiam District, Ubon Ratchathani Province. The total basin area is approximately 46,932 square kilometres. It covers the provinces of Loei, Nong Khai, Udon Thani, Nong Bua Lamphu, Sakon Nakhon, Nakhon Phanom, Mukdahan, Amnat Charoen and Ubon Ratchathani.
The topography of the Mekong Basin (northeast) is bordered by Lao PDR in the north; Pa Sak, Chi and Mun Basins in the south; Lao PDR in the east; and Nan Basin in the west. Generally, it is considered a plateau between 100-200 metres above the mean sea level. There are mountains on the Basin’s south and west sides. Main mountain ranges are Phetchabun, Dong Phaya Yen, Phu Phan Phanom Dong Rak Mountain Ranges, dividing the basin area into west and south sides. The terrain has a cant from the south to the north and is the origin of many major rivers, namely the Loei River, Mae Mong River, Suay River, Huai Luang, Songkhram River and Huai Nam Kam (Department of Water Resources, 2004). The Mekong Basin area on the right-hand side of the Mekong River in Thailand is classified by the sub-district boundary within a 15-kilometre radius of the River.
Figure 4 Longitudinal river profile of the Mekong River from source to delta

Source: Mekong River Commission (2005)

Source: (Draft) final report of a study on transboundary environmental impacts and monitoring of the Great Mekong River Hydropower Project (ONWR, 2020)

Or, if the agreement or arrangement relates to a sub-basin, does it cover the entire sub-basin?

Yes ☐ / No ☑

Additional explanations? [fill in] N/A

Which States (including your own) are bound by the agreement or arrangement? (Please list; [fill in]) Cambodia, Lao People's Dem. Rep., Thailand, Viet Nam.

(b) If the agreement or arrangement relates to a river or lake basin or sub-basin, does it also cover aquifers?

Yes ☐ / No ☑

If yes, please list the aquifers covered by the agreement or arrangement: [fill in]

(c) What is the sectoral scope of the agreement or arrangement?

All water uses ☐
A single water use or sector ☐
Several water uses or sectors ☑

If one or several water uses or sectors, please list (check as appropriate):

Water uses or sectors

Industry ☑
Agriculture ☑
Transport (e.g., navigation) ☑
Households ☑
Energy: hydropower and other energy types ☑
Fisheries ☑
Tourism ☑
Nature protection ☑
What topics or subjects of cooperation are included in the agreement or arrangement?

Procedural and institutional issues

Five Procedures are:

1. Procedure for Water Quality (PWQ) aims to maintain the water quality of the Mekong River mainstream. Regarding the transboundary tributaries of the Mekong River Basin, the States concerned shall, based on the Mekong Agreement and the relevant provisions of the Procedures and the Guidelines thereof, make every efforts to maintain acceptable/good water quality.

2. The Procedures for Data and Information Exchange and Sharing (PDIES) aim to operationalise the data and information exchange among MRC Member Countries; make data and information available for public access as determined by the National Mekong Committees; and promote understanding and cooperation among the Member Countries in a constructive and mutually beneficial manner. The Procedures for Data and Information Exchange and Sharing (PDIES) underpins MRC’s ability to develop a comprehensive knowledge base on parameters fundamental to Integrated Water Resources Management.

3. The Procedures for Water Use Monitoring (PWUM) provides a comprehensive and adaptive framework and process to support effective implementation of the intra-basin water use monitoring and the monitoring of inter-basin diversions. The Procedures aim to promote better understanding and cooperation among the Member Countries through transparency and confidence in the water use monitoring system and the undergoing database provides valuable information to support future planning processes.

4. The Procedures for Notification, Prior Consultation and Agreement (PNPCA) provide the MRC Member Countries with a framework for proposed water utilisation and interbasin diversions projects, which are considered with the MRC under Article 5 of the Mekong Agreement. They promote better understanding and cooperation among the MRC Member Countries to ensure the sustainable development, management and conservation of the water and related resources of the Mekong River Basin.

5. The Procedures for Maintenance of Flows on the Mainstream (PMFM) are considered during discussions on new development and provide early warning flow conditions that may fall outside agreed thresholds thereby necessitating investigations by MRC.


Procedural and institutional issues

Dispute and conflict prevention and resolution ✓
Institutional cooperation (joint bodies) ✓
Consultation on planned measures ✓
Mutual assistance ✓

Topics of cooperation

Joint vision and management objectives ✓
Joint significant water management issues ✓
Navigation ✓
Human health
Environmental protection (ecosystem)  ✔
Water quality  ✔
Water quantity or allocation  ✔
Cooperation in addressing floods  ✔
Cooperation in addressing droughts  ✔
Climate change adaptation  ✔

**Monitoring and exchange**

Joint assessments  ✔
Data collection and exchange  ✔
Joint monitoring  ✔
Maintenance of joint pollution inventories  ✔
Elaboration of joint water quality objectives  ✔
Common early warning and alarm procedures  ✔
Exchange of experience between riparian States  ✔
Exchange of information on planned measures  ✔

**Joint planning and management**

Development of joint regulations on specific topics  ✔
Development of international or joint river, lake or aquifer basin management or action plans  ✔
Management of shared infrastructure  ✔
Development of shared infrastructure  ❌

Other *(please list):* [fill in]

(e) What are the main difficulties and challenges that your country faces with the agreement or arrangement and its implementation, if any?

Aligning implementation of agreement or arrangement with national laws, policies and programmes  ✔
Aligning implementation of agreement or arrangement with regional laws, policies and programmes  ✔
Lack of financial resources  ❌
Insufficient human capacity  ✔
Insufficient technical capacity  ✔
Tense diplomatic relations  ❌
Non-participation of certain riparian countries in the agreement  ❌
No significant difficulties  ❌

Other *(please describe):* [fill in]

Concerns about sovereignty in collaboration between the Mekong River members regarding military border issues  ❌

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [fill in]

1. Cooperation and discussion for effective transboundary basin management
2. Exchange of news and operational information of member states
3. Sustainable development and mutual benefits at the regional basin level, and equal sharing of benefits
4. Compliance with the procedures to mitigate transboundary impacts
5. Development of education and instruments to reduce knowledge gaps and to increase awareness
6. Monitoring and evaluation for better bodies of knowledge and decision-making support

(g) Please attach a copy of the agreement or arrangement or provide the web address of the document [please attach document or insert web address, if applicable]: [fill in]


3. Is your country a member of any joint body or mechanism for this agreement or arrangement?

Yes ☑ / No ☐

If no, why not? [please explain]: [fill in]

Where there is a joint body or mechanism

(a) If there is a joint body or mechanism, which kind of joint body or mechanism [please tick one]? 

- Plenipotentiaries ☐
- Bilateral commission ☐
- Basin or similar commission ☑
- Expert group meeting or meeting of national focal points ☑
- Other [please describe]: [fill in]

The MRC consists of three permanent management organizations:

1. The Council consists of one representative of the relevant ministerial level of each member state, meeting once a year. The chairperson has a one-year term, rotating in alphabetical order in English of the member state name. In Thailand, the Minister who oversees the Office of the National Water Resources (ONWR) is a Council member.

2. The Joint Committee consists of representatives of at least the director-general level of each member state, meeting twice a year. The chairperson has a one-year term, rotating in alphabetical order in English of the member state name. In Thailand, the Secretary-General of the ONWR is a Joint Committee member.

3. The Mekong River Commission Secretariat (MRCS) currently has joint offices located in Vientiane and Phnom Penh. Thailand main coordinator is the ONWR.
Figure 5 the Mekong River Commission Governance Structure

Source: http://www.mrcmekong.org/about-mrc/governance-and-organisational-structure/

(b) Does the joint body or mechanism cover the entire transboundary basin, sub-basin, part of a basin or group of basins?
   Yes ☑ / No ☐

(c) Which States (including your own) are members of the joint body or mechanism? *Please list:* [fill in]
   Thailand, Laos, Cambodia, Vietnam

(d) Are there any riparian States that are not members of the joint body or mechanism? *Please list:* [fill in]
   China and Myanmar, the UMB nations, are not members of the MRC but joined a dialogue partnership as shown in Figure 5.

(e) If not all riparian States are members of the joint body or mechanism how does the joint body or mechanism cooperate with them?
   No cooperation ☐
   They have observer status ☐
   Other: *please describe:* [fill in]
   There are specific cooperation mechanisms for mutually beneficial activities, such as the Joint Committee on Coordination of Commercial Navigation on the Lancang-Mekong River among China, Laos, Myanmar and Thailand (JCCCN), a coordination agency between the four Mekong Basin countries: Thailand, Lao PDR, Myanmar and southern China, for further parallel development, such as supporting tourism, border trade, water transportation, particularly for countries that do not have the same border with China but use the same river in connection, etc. In addition, the MRC cooperation has been initiated with other cooperation frameworks, such as MRC–MLC, MRC–GMS MRC–ASEAN, etc.

(f) Does the joint body or mechanism have any of the following features *please tick the ones applicable?*
   A secretariat ☑
If the secretariat is a permanent one, is it a joint secretariat or does each country host its own secretariat? (Please describe): [fill in]

The Secretariat provides technical and administrative services to the Council and the Joint Committee, and is governed by the Joint Committee. The permanent office of the Secretariat shall comply with the Council resolutions, and if necessary, negotiations shall be made on a headquarters agreement with the host country. The MRCS currently has a joint Secretariat located in Vientiane and Phnom Penh with the main coordinator of Thailand being the ONWR.

A new structure for the Secretariat and a leaner, more efficient MRC:

At the first MRC Summit held in Hua Hin, Thailand, in 2010, the Heads of Government of Cambodia, Lao PDR, Thailand and Viet Nam decided that by 2030, the MRC Secretariat (MRCS) would be financially self-sustained by the Member Countries. They also encouraged the MRC to explore modalities for the transfer of the implementation and financing responsibilities of some river basin management activities to the Member Countries. This was the start of the ongoing organisational structure of the MRC.

Up until December 2015, the Secretariat’s structure consisted of 12 programmes under four divisions, operating out of two main offices with a staff of approximately 180 people, and a budget of US$20 million, mostly from donor governments (Development Partners). In line with the ongoing structural and operational reform, as well as the new Strategic Plan 2016-2020, the MRC has set up a transitional structure to gradually prepare for the final structure that could be in place already by 2020.

The MRC Council approved the new structure at its 22nd Meeting, in January 2016. It consists of the Office of the Chief Executive Officer (OCEO) and four Divisions: Administration Division (AD), Planning Division (PD), Environmental Management Division (ED), and Technical Support (Division). It will have 66 professional and support staff.

![MRC SECRETARIAT STRUCTURE](image)

**Figure 6 MRC SECRETARIAT STRUCTURE**
The MRC has three core functions:

1. **Secretariat, Administrative and Management Functions**: promotion of dialogue and communication; reporting and dissemination; stakeholder engagement and communications/public information. These correspond to the corporate services of most organisations, and the Office of the Chief Executive Office, and the Administrative Division carry out these functions at the MRC Secretariat.

2. **Core River Basin Management Functions (CRBMF)**: These are divided into five categories:
   i) Data acquisition, exchange and monitoring
   ii) Analysis, modelling and assessment
   iii) Planning support
   iv) Forecasting, warning, and emergency
   v) Implementation of the five MRC's Procedures

   The CRBMF comprise the main technical work of the MRC under the Planning, Environmental Management, and Technical Support divisions. CRBMF

3. **Consulting and Advisory Services**: provision of technical expertise, databases, models, expert networks to support studies undertaken outside of the MRC, etc. Unlike the other core functions, these services are self-financed.

The permanent joint secretariat (MRCS) includes, for Thailand, the ONWR as the Thai National Mekong Committee Secretariat (TNMCS). The ONWR Secretary-General is the TNMCS Secretary-General.

Source: http://www.mrcmekong.org/about-mrc/governance-and-organisational-structure/

A subsidiary body or bodies

Please list (e.g., working groups on specific topics): [fill in]

There have been a number of subsidiary bodies of MRC on specific topics such as Expert Group on Strategy and partnership, Expert Group on Basin Planning, Expert Group on Data, Modeling and Forecasting, Expert Group on Environmental Management, PNPCA Joint Committee Working Group.

Other features (please list): [fill in]

(g) What are the tasks and activities of this joint body or mechanism?

- Identification of pollution sources
- Data collection and exchange
- Joint monitoring
- Maintenance of joint pollution inventories
- Setting emission limits
- Elaboration of joint water quality objectives
- Management and prevention of flood or drought risks
- Preparedness for extreme events, e.g., common early warning and alarm procedures
- Surveillance and early warning of water related disease

3 This may include tasks according to the agreement or tasks added by the joint body, or its subsidiaries. Both tasks which joint bodies coordinate and tasks which they implement should be included.
Water allocation and/or flow regulation ✓
Policy development ✓
Control of implementation ✓
Exchange of experience between riparian States ✓
Exchange of information on existing and planned uses of water and related installations ✓
Settling of differences and conflicts
Consultations on planned measures ✓
Exchange of information on best available technology
Participation in transboundary EIA
Development of river, lake or aquifer basin management or action plans
Management of shared infrastructure
Addressing hydromorphological alterations
Climate change adaptation ✓
Joint communication strategy ✓
Basin-wide or joint public participation and consultation of, for example, basin management plans
Joint resources to support transboundary cooperation
Capacity-building ✓
Any other tasks *(please list)*: [fill in]

(d) What are the main difficulties and challenges that your country faces with the operation of the joint body or mechanism, if any?

Governance issues

*Please describe, if any*: [fill in]

Unexpected planning delays ✓

*Please describe, if any*: [fill in]

The implementation by the MRC must be in accordance with the consensus of the four member states. Therefore, when any activity/plan/project does not receive such consensus, there is a delay that is not compliant with the operational plan.

Lack of resources

*Please describe, if true*: [fill in]

Lack of mechanism for implementing measures

*Please describe, if true*: [fill in]

Lack of effective measures

*Please describe, if true*: [fill in]

Unexpected extreme events

*Please describe, if any*: [fill in]

Lack of information and reliable forecasts

*Please describe, if any*: [fill in]
As changes in weather patterns are being felt across the Lower Mekong Basin, the impacts of climate change have become a topic of strong public interest. Studies show that the basin is vulnerable to several climate change impacts that include a predicted mean temperature rise of approximately 0.8 degrees Celsius by 2030, as well as a regional increase in annual precipitation of 200mm. With more extreme weather events such as typhoons, the basin is more vulnerable to floods and drought, affecting people’s livelihoods and reducing agricultural productivity.

In the Mekong Delta, saltwater intrusion caused by sea level rise is predicted to take a toll on agriculture, aquaculture and capture fisheries. Sea level rise could also result in the displacement of millions of people throughout the Delta.

As global and local concerns about climate change grow, the Mekong River Commission continues its work to better understand how people in the basin can adapt to it. Adaptation initiatives are underway throughout the basin as part of regional and national projects. Most adaptation strategies focus on water resource management, agriculture, and natural disaster management.

Decision-makers and strategists in the Mekong countries are increasingly aware of the effects of climate change and are integrating the issue into their broader policy-making and basin development plans. The MRC actively supports its Member Countries with technical advice and dialogue-based forums to encourage knowledge sharing and foster an understanding of climate change within its transboundary context.

Climate change is no longer just a threat in the Lower Mekong Basin. Its impact is present and is affecting the livelihoods of millions that rely on the river’s natural resources. Changes in temperature, rainfall, river flow and flooding as a result of climate change affect agriculture and fisheries and, as a result, reduce food security, especially for the poor. Additionally, a predicted rise in sea level will increase salinity and floods in the Mekong Delta, causing damage to crops in the most productive area of the basin.

(i) Does the joint body or mechanism, or its subsidiary bodies meet regularly?

Yes ✓ / No □

If yes, how frequently does it meet?

More than once per year ✓

Once per year □

Less than once per year □

(j) What are the main achievements with regards to the joint body or mechanism? [fill in]

1. The Mekong transboundary cooperation mechanism and coordination of the cooperation in various areas: the Mekong River flows 4,900 kilometres through six countries from the Tibetan Plateau in China to the Mekong delta area of Vietnam. This River is one of the largest and most biodiverse rivers in the world. It is a rich ecosystem with natural resources. The resources management far beyond the border of each country is, therefore, especially important because water resources, aquatic animals as well as sediments flow from one country to another. Even so, countries in the Mekong Basin have always faced challenges in the transboundary management because of national interests and difference in priorities of each country. The MRC supports the four member states in the LMB, namely Cambodia, Lao PDR, Thailand and Vietnam, to conduct transboundary negotiations and to
enhance transboundary cooperation. It is operated through the Mekong Integrated Water Resources Management Project (M-IWRMP) with a consistent planning and management, adopting the MRC procedures, also known as the "Procedures", and technical instruments for planning the use of water resources, including the information sharing between member states, and monitoring the level and volume of river flows in the joint Mekong River management using the IWRM principle both at the basin and national levels.

2. The IWRM-based bilateral cooperation focuses on fisheries management, wetlands, delta areas, lakes and basins. The objective is to manage transboundary water resources issues, such as pressure from urban expansion, infrastructure development and climate change that affects river-side communities. Transboundary discussions bring the common understanding of the four member states on key transboundary water resources issues, seeking a solution to sustainable cohesion and jointly implementing good water resources management. Examples of joint bilateral projects as shown in Figure 3 are as follows.

2.1 Mekong and Sekong fisheries management project between Cambodia and Lao PDR to address transboundary fisheries management issues, particularly on the decline of whitefish species with seasonal migration

2.2 Sesan and Srepok water resources management project to improve transboundary cooperation between Cambodia and Vietnam that is linked to the development of hydropower dam projects

2.3 Water resources management project in the Mekong delta in border provinces of Cambodia and Vietnam to find solutions to mitigate impacts of development projects in upstream areas and climate change

2.4 Sebangian and Nam Kam wetland management project between Lao PDR and Thailand to strengthen the wetland resources management through the knowledge exchange and sharing

2.5 Tonle Sap and Songkhla Lake water resources management coordination project to promote governance of sustainable lake management through communication activities
3. The MRC procedure, which sets out five sets of procedures governing the management of water resources that are common resources among member states. The procedures in accordance with the Mekong Agreement 1995 are as follows.

3.1 PDIES seconded in 2001 to conduct the exchange of information and news water-related indicators that are important in the four Mekong Basin countries

3.2 PWUM seconded in 2003 to create an effective monitoring system for the use of water in the Great Mekong River and its branch rivers by several water use sectors, including domestic use, irrigation and hydropower dams

3.3 PNPCA seconded in 2003 to promote the cooperation between member party states in the use of water and the development of water infrastructure with three specific processes for such development projects

3.4 PMFM seconded in 2006 to determine conditions for assessing and establishing a process for monitoring and maintaining the flow of water in the Great Mekong and Tonle Sap Rivers

3.5 PWQ seconded in 2011 to develop a strong cooperation framework in regard to monitoring and maintaining the water quality of the Mekong and Bassac Rivers per the agreed assessment criteria
Based on these procedures along with research data, technical practices and instruments have been adopted to model the water resources management of the MRC to help facilitate compliance with the IWRM principle in the region.

(d) Did the joint body or mechanism ever invite a non-riparian coastal State to cooperate?

Yes ☑ / No ☐

*If yes, please give details. If no, why not, e.g. are the relevant coastal States also riparian States and therefore already members of the joint body or mechanism? [fill in]*

The MRC is an international cooperation body established in accordance with the Mekong Agreement 1995, consisting of member states being Thailand, Cambodia, Lao PDR and Vietnam, with China and Myanmar (a non-riparian coastal state to cooperate) as dialogue partners. In the policy-level implementation by the MRC, there will Council meetings, which are annual general ministerial meetings to consider the body management policy and to monitor the implementation of international cooperation in the sustainable management of the Mekong Basin. The meetings are hosted by rotating member states. In addition, there are Joint Committee meetings consisting of one member who holds no lower position than the department Director-General per each member state to ensure the compliance with the Council policies and agreements as well as to oversee MRCS activities. For example, the 48th Joint Committee meeting during 24–25 April 2019 at the city of Vung Tau, Socialist Republic of Vietnam consisted of member states being Thailand, Cambodia, Lao PDR and Vietnam and invited China and Myanmar as dialogue partners and riparian states that are not partying to the meeting to determine the direction of transboundary water resources management and to strengthen the sustainable security of water, energy and food in the Mekong Basin.

![Figure 8 The 48th Joint Committee of the Mekong River Commission](http://www.tnmc-is.org)

4. Have joint objectives, a common strategy, a joint or coordinated management plan or action plan been agreed for the basin, sub-basin, part of a basin or group of basins?

Yes ☑ / No ☐

*If yes, please provide further details. [fill in]*
The cooperation framework under the Agreement on Cooperation for Sustainable Development of the Mekong Basin and the MRCC procedures outlines the legal framework for four countries. The Agreement states the body’s missions and goals, and roles and responsibilities of the three mechanisms being the Council, the Joint Committee and the Secretariat, as well as strategic objectives of cooperation between member party states. The Agreement has given the MRC a role in maximising benefits from the water use, developing the basin in a balanced way and maximising the Mekong River potential through the basin development plan. For example, the 26th Meeting of MRC Council and related meetings during 25-27 November 2019 with the ONWR Secretary-General being the head of the Thai delegation attending the meeting may be summarised as follows.

1. The Meeting exchanged views on the importance of regional cooperation that promotes the sustainable development of the Mekong Basin. It is necessary to continuously increase the cooperation with one another. The Meeting emphasized the support for the information and news exchange to handle the climate change with significant impacts on drought and flooding in the Mekong region.

2. The head of the Thai delegation discussed the need for the MRC cooperation in response to issues on climate change, severity of drought and flooding, deterioration of the Mekong ecosystem affecting the quality of life of Thai people and the Mekong sub-region as a whole. Thailand is ready to work with member states to resolve issues under the IWRM principle, cooperation promotion and information exchange with dialogue partners (China and Myanmar) for the effective systematic water management, as well as to enhance relations and cooperation within the cooperation framework in the sub-region and other regions.

3. The Meeting approved the Drought Management Strategy (2020-2025) proposed by the MRCS. The Japan-ASEAN Integration Fund supports the budget per such strategy, which has five key operational guidelines: (1) drought index monitoring, (2) drought forecasting and early warning, (3) personnel capacity building, (4) mitigation measures, and (5) information sharing and dissemination.

4. The Meeting approved the Action Plan 2020-2021 of the MRC as proposed by the MRCS that is a two-year plan to support and prepare ahead the transitional budget and operational activities of the beginning of the new MRCS Strategic Plan 2021-2025.

5. The Meeting acknowledged a progress report on operations per the PNPCA where Lao PDR government had put Luang Prabang Dam Hydropower Project in the PC process.

6. The Meeting acknowledged the MRC performance progress, such as the success and closure of the Mekong Integrated Water Resources Management Project, cooperation between the MRC and development partners / dialogue partners, preparation of the LMB Strategy (2021-2030) and the Organisation Strategy (2021-2025), etc.

7. Regional development partners and cooperation organisations proposed significant developments and operations, such as preparation of reports on the Mekong situation covering the upper and lower areas; encouragement for member states to put issues of renewable energy in the countries’ energy plans; support of the information sharing on water levels, water volumes, and near real-time sediments in upstream and downstream areas in all seasons; and so on.

5. How is the transboundary basin, sub-basin, part of a basins or group of basins protected, including the protection of ecosystems, in the context of sustainable and rational water use?

- Regulation of urbanization, deforestation, and sand and gravel extraction
- Environmental flow norms, including consideration of levels and Seasonality

26
Water quality protection, e.g. nitrates, pesticides, faecal coliforms, heavy metals

Water-related species and habitats protection

Other measures (please describe): [fill in]

Maintaining the flow of the Mekong and Tonle Sap Rivers is essential to the basin ecosystem and the way of life of people on the Mekong River banks. If there is no annual flooding, fish will not be able to migrate from thalwegs to flooded areas to spawn. Flood retention in the rainy season promotes irrigation in the drought while the preserved soil sediments improve the soil fertility. The flooding also drains water and pushes out polluted water. In maintaining the natural flow pattern of water, therefore, the MRC and member party states have developed the PMFM, which lays the framework for maintaining the lowest flow volume and the highest average flow rate of the Great Mekong River, and the acceptable reverse flow of the natural water flow in Tonle Sap Lake in Cambodia that connects the Great Mekong River and Tonle Sap River. This reverse flow is a unique phenomenon that occurs during flooding in Tonle Sap Lake. As a result, its area has expanded to six times as large. Also established are academic conditions to assess the optimal water flow level to protect this unique seasonal water flow in the midst of actions, such as modifying the flow of water, water emissions from reservoirs and other actions that may affect the Great Mekong River. Technical guidelines define the amount of seasonal water flow in three categories:

1. The acceptable minimum monthly natural water flow volume during the dry season (December-May)
2. The average daily water flow rate exceeding the average natural water flow rate during the flooding season (June-November)
3. The acceptable amount of the natural water’s reverse flow of Tonle Sap Lake during the season with much water (July-October).

Member party states shall perform (1) daily monitoring of water flow volumes, and (2) assessment of water flow changes. The work has created six conditions to assess the flow of water, three conditions for monitoring and three for planning.

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</tbody>
</table>

**Figure 9** Six conditions to assess the flow of water

6. (a) Does your country regularly exchange information and data with other riparian States in the basin, sub-basin, part of a basin or group of basins?

Yes ☑  / No ☐

(b) If yes, how often:

- More than once per year ☑
- Once per year ☐
- Less than once per year ☐

(c) Please describe how information is exchanged (e.g. in connection with meetings of joint bodies): [fill in]

Please describe how information is exchanged (e.g. in connection with meetings of joint bodies): [The information is exchanged under the procedure of data and information exchange and sharing e.g., outcome 1 studies and outcome 3 guidelines]

Establishing the basis for regional information exchange for water resources management in the Mekong River depends on reliable information in many sectors, from fisheries data to hydrological and water quality studies. The basin’s field data are important to better understand its conditions. Collecting information from member party states, however, is not easy because they have restrictions on sharing inside information with other countries for national security and other reasons. To facilitate the cooperation in the exchange of information between member states, the MRC and member states have the PDIES, which provides a cooperation framework for countries in the Mekong Basin to implement the regional information sharing for better water resources management, including:

1. Workshop on dissemination of bodies of knowledge and information and the application of instruments to help monitor the water situation in the Mekong Basin, by the TNMCS on 29 August 2019 at Pak Ping Ing Khong Hotel in Nakhon Phanom Province. The workshop aimed to disseminate bodies of knowledge and information on water for the management in the Mekong Basin. Participants were representatives of provincial irrigation projects in the Basin, representative of the Mekong River Disaster Prevention and Mitigation Centre, representative of the National Water Directorate Centre of the ONWR, representative of the Basin Management Division of the ONWR, representatives of the Policy and Planning Division of the ONWR, and officials TNMCS.

2. Discussion meeting to consider exchange guidelines for socio-economic information for the social impact monitoring and vulnerability assessment (SIMVA), and the need for empowerment under the Lower Mekong Initiative (LMI) on 22 May 22, 2019. Attended were representatives from relevant authorities along with the ONWR officials.

3. Meeting on drought issues in the Mekong River on 30 July 2019 to discuss technical and academic issues related to the cause of the change in the River, China's drainage information exchange and the management of Xayaburi Dam to determine guidelines and measures to resolve the problem to be properly and efficiently presented to the government and people.
Figure 10 The Meeting to disseminate knowledge Information And the application of tracking tools
Sorce: http://www.tnmc-is.org/newsevents/

(d) If yes, on what subjects are information and data exchanged?

- Environmental conditions
- Research activities and application of best available techniques
- Emission monitoring data
- Planned measures taken to prevent, control or reduce transboundary impacts
- Point source pollution sources
- Diffuse pollution sources
- Existing hydromorphological alterations (dams, etc.)
- Flows or water levels (including groundwater levels)
- Water abstractions
- Climatological information
- Future planned measures with transboundary impacts, such as infrastructure development

Other subjects (please list): [fill in]

Other comments, e.g. spatial coverage of data and information exchange: [fill in]

(e) Is there a shared database or information platform?

Yes ✓ / No □

(f) Is the database publicly available?

Yes ✓ / No □

If yes, please provide the web address: [fill in]

It can be accessed through multiple channels under the MRC information system. The main channel for academic search is the Data and Information Services Portal, which can check the main catalogue
for searching and downloading the information on hydrological studies, flood forecast, water quality, climate change and more.

**Figure 11** Map data showing climate change


(g) What are the main difficulties and challenges to data exchange, if applicable?

- Frequency of exchanges
- Timing of exchanges
- Comparability of data and information
- Limited spatial coverage
- Inadequate resources (technical and/or financial)
- Other *(please describe)*: [fill in]
- Additional comments: [fill in]

(h) What are the main benefits of data exchange on the basin, sub-basin, part of a basin or group of basins? *(please describe)*: [fill in]

Data exchange contributes to the main benefits such as Strategies, Procedures, and Cooperation, for water resources management in LMB.

7. Do the riparian States carry out joint monitoring in the transboundary basin, sub-basin, part of a basin or group of basins?

Yes ✓ / No □
(a) If yes, what does the joint monitoring cover?

<table>
<thead>
<tr>
<th></th>
<th>Hydrological</th>
<th>Ecological</th>
<th>Chemical</th>
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<tbody>
<tr>
<td>Border surface waters</td>
<td></td>
<td></td>
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<tr>
<td>Surface waters in the entire basin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface waters on the main watercourse</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Surface waters in part of the basin</td>
<td></td>
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</table>

please describe [fill in]

A joint inspection by MRC members covers surface water in the mainstream on physiological and hydrological characteristics, climate change, natural resources from the Mekong River.

Transboundary aquifer(s) (connected or unconnected) |              |            |          |

Aquifer(s) in the territory of one riparian hydraulically connected to a transboundary river or lake |              |            |          |

(b) If joint monitoring is carried out, how is this done?

National monitoring stations connected through a network or common stations ✓

Please describe [fill in]

Under the PDIES framework, member party states are asked to collect and share the information, such as that on water resources studies, topography, agriculture, navigation and transportation, water-related disaster management and mitigation, environment and ecology, socio-economy, tourism and other aspects. This information will be exchanged and shared with the MRCS for collection, analysis and dissemination to the public. Over the years in which the MRCS has gathered comprehensive, multidimensional data important for the sustainable basin management and development, including data from 1900 onwards and real-time water resources data in several sectors, these data have been collected through a monitoring network, which includes 45 automated data-collecting meteorological stations (11 of which are domestic), 139 rainwater or water level monitoring stations, 48 water quality sampling stations and more than 100 fishing areas.
Figure 12 The Parameter and Data collection station network
Score : http://www.mrcmekong.org/
Joint and agreed methodologies

Please describe: [fill in]

The MRC and member states have developed the PWUM, a framework to support effective monitoring systems on the water resources use that may affect the Great Mekong River. The water resources use in the Mekong River (use within the basin) and between the Mekong and other basins (water diversions between basins) that may have significant impacts will be monitored.

Joint sampling

Please describe: [fill in]

The four member party states in the Mekong Basin must gather basic data on water use under existing plans and determine indicators for monitoring the water use within the basin, including those on rainfall, water quality parameters, water usage types and a set of other indicators for monitoring water diversion, such as water diversion areas, design requirements and water diversion volumes. A water monitoring system that covers the basin area is required for data collection and storage. Water diversion monitoring across basins must be carried out daily during the dry season and at least once a week during the rainy season. However, the collection of water usage data is not yet fully possible because of limitations and difficulties of the operation, particularly challenges in recording cumulative impacts from small water users, such as small-family farmers, and in monitoring the regional water use as there is no information on the national law as regards water rights systems, such as water licensing and water use reports.

Common monitoring network

Please describe: [fill in]

Monitoring networks for the Mekong water usage are as follows.

1. The eight-Mekong-province people network, which is based on the people on along the Mekong River in eight provinces, the civil society, academics and lawyers who monitor developments on the River and its transboundary impacts, has monitored the initiation of the PNPCA for Luang Prabang Dam Hydropower Project in accordance with the Mekong Agreement 1995 under the Mekong initiatives.

2. The MRCs expert group monitors the basin water use, hydrological models, satellite operations and land utilisation.

Score: http://www.tnmc-is.org/
Common agreed parameters

Please describe \(\text{[fill in]}\)

Development basics require that member states collect real-time water resources data under specific plans and agreements, including data on water resources and meteorology, rainwater and water levels, water quality, fisheries, ecological health, soil sediments, etc, as shown in Figures 11 and 12.

Score: http://www.mrcmekong.org/

(c) Please describe the main achievements regarding joint monitoring, if any: \(\text{[fill in]}\)

Basin-wide monitoring, forecasting, impact assessment and dissemination of results strengthened for better decision-making by Member Countries

(d) Please describe any difficulties experienced with joint monitoring: \(\text{[fill in]}\)

Sovereignty concern on joint sampling btw Thai-Laos in regard to border military issues

8. Do the riparian States carry out joint assessment of the transboundary basin, sub-basin, part of a basin or group of basins?

   Yes \(\checkmark\) / No \(\square\)

   If yes, please provide the date of the last or only assessment, the frequency and scope (e.g., surface waters or groundwaters only, pollution sources, etc) of the assessment, and assessment methodology applied: \(\text{[fill in]}\)

   There is the state of basin report in every five years for status and trends of LMB. Member states will develop a strategic plan for the Mekong River development every five years by assessing the development potential, barriers and factors of the basin for joint development plans per the IWRM principle. For example, the MRC held a regional workshop on cooperation and planning on joint visions on 23 October 2018 at the MRCS, Vientiane, Lao PDR. The workshop aimed to:

   1) Strengthen the understanding of principles and to practise planning on joint visions, collaborative modelling as well as application to case studies in the Mekong Basin and today's global situations.

   2) Enhance the experience of applying models to build the collaboration using information from Council study.

   3) Plan activities in conjunction with the US Army Corps of Engineers (USACE) to support the MRC's relevant operations in connection with the results of the Council study, with executive representatives and technical staff from member states and representatives from the International Basin Management Bureau attending the meeting.
9. Have the riparian States agreed to use joint water quality standards?

Yes ☑ / No ☐

If yes, what standards have been applied, e.g. international or regional standards, please specify which, or have national standards of the riparian States been applied? [fill in]

In monitoring and protection of water quality in the LMB, the MRC and member party states have developed the PWQ, a initiative that ensures the maintaining of acceptable water quality in the Mekong River and its branch rivers. Two types of practices to maintain water quality to acceptable levels for humans, plants and animals are (1) water quality monitoring, and (2) emergency responses. The four states shall regularly monitor the water quality throughout the basin and prepare response mechanisms for water pollution emergencies, such as oil spills and water toxin emissions, to protect the rivers and to reduce impacts on the ecosystem and surrounding communities. To monitor, locations and frequency of water sampling have been identified, and assessment criteria and water quality targets for the health of humans, plants and aquatic animals have been set.
The four member party states have collected water samples from 48 stations, including 17 stations on the Great Mekong River, five stations on Bassac River and other stations on Mekong’s branch rivers. In Thailand, water quality monitoring stations under the care of the MRC are located at Chiang Saen and Chiang Khan Districts in Loei Province, Nong Khai Province, Mukdahan Province and Khong Chiam District in Ubon Ratchathani Province (Mun River). A total of 12 parameters (temperature, pH, salinity, acidity, etc) are analysed monthly, and six parameters (calcium, magnesium, sodium, etc) monitored during the rainy season from April to October. The amount of oxygen that microbes need to decompose organic matters in the water (biochemical oxygen demand, BOD) is evaluated monthly at certain selected stations throughout the year. Following the quality assessment, water samples are classified as ‘excellent’, ‘good’, ‘moderate’, ‘should be improved’ or ‘should be greatly improved’ for human health, and the said water quality criteria are also used for water quality assessment for aquatic animals. Water samples collected are also analysed for irrigation. These sample data are sent to the MRCS annually for inspection and storage in a publicly accessible database. The MRCS will prepare annual reports titled ‘Report of Water Quality Monitoring in the LMB Region’ based on data compiled from 22 main stations on the Mekong and Bassac Rivers.

Figure 15 The Monitoring station and water quality criteria

Score : http://www.mrcmekong.org/
10. What are the measures implemented to prevent or limit the transboundary impact of accidental pollution?

Notification and communication

Coordinated or joint early warning or alarm system for accidental water pollution

Other (please list): [fill in]

No measures

If not, why not? What difficulties does your country face in putting in place such measures? [fill in]

11. What are the measures implemented to prevent or limit the transboundary impact of extreme weather events and climate change?

Notification and communication

Coordinated or joint alarm system for floods

Coordinated or joint alarm system for droughts

Joint climate change adaptation strategy

Joint disaster risk reduction strategy

Other (please list): [fill in]

No measures

If not, why not? What difficulties does your country face in putting in place such measures? [fill in]

12. Are procedures in place for mutual assistance in case of a critical situation

Yes [✓] / No [☐]

If yes, please provide a brief summary: [fill in]

Agreement on Cooperation for The Sustainable Development Of The Mekong River Basin, 1995 Article 10. Emergency Situations Whenever a Party becomes aware of any special water quantity or quality problems constituting an emergency that requires an immediate response, it shall notify and consult directly with the party(ies) concerned and the Joint Committee without delay in order to take appropriate remedial action.

Sorce: http://www.tnmc-is.org/

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, sub-basin, part of a basin or group of basins?

Yes [✓] / No [☐]

If yes, how? (please tick all applicable)

Stakeholders have observer status in a joint body or mechanism

Stakeholders have an advisory role in the joint body

Stakeholders have a decision-making role in the joint body

Stakeholders have no decision-making roles in the Great Mekong River, but do so as Isaan Mekong Basin Committee. This basin is a branch of the Mekong River.
If yes, please specify the stakeholders for the joint body or mechanism. [fill in]

Under the procedure of notification, prior consultation, and agreement: PNPCA

The regional water development cooperation is for finding a balance between the development and the conservation. The MRC and the four member party countries have, therefore, established the PNPCA as a mechanism for joint regional water development planning. It requires that the member states to implement utility development projects on the Mekong River follow three specific cooperation processes for the sustainable and fair water use in the region, and responsibilities of the project’s owner country, countries notified and the MRC. Under the Mekong Agreement 1995, any water development projects in the region that may change the flow of water or the Great Mekong River quality shall follow one of the three processes: notification, PC or agreement. Details are as shown in Figure 16.

1. Notification: the project’s owner shall provide details to other member countries prior to operation announcement.

2. PC: it involves a process of academic evaluation and formal consultation on the project before the commencement by the project’s owner country, with a period of six months.

3. Agreement: negotiations between the member party states are required to reach a consensus on guidelines and conditions of the project before the proposed water use is carried out.

In this regard, the said processes do not affect the endorsement or rejection of the project proposed to the member party states. For example, three out of four projects related to the hydropower dam project on the Great Mekong River in Lao PDR, being Xayaburi Dam (2010), Don Sahong Dam (2013), Pak Bang Dam (2016) and Pak Lai Dam (2018), such as a project of water diversion from the Kok and Ing Rivers in Chao Phraya Basin, large-scale irrigation projects in member states, etc, have passed through the six-month PC, academic assessment, and information and consultation with the public. In the third project, Pak Bang, the four member states issued a joint statement calling on the Lao government to take every effort to avoid, reduce and mitigate potential transboundary impacts in terms of currents, soil sediments, fishways, navigation and socio-economic conditions, and demanded that the MRCS prepare an action plan after the consultation.

![PNPCA process execution](http://www.tnmc-is.org/)

Figure 16  PNPCA process execution

Source: http://www.tnmc-is.org/
Intergovernmental organizations
Private sectors organizations or associations
Water user groups or associations
Academic or research institutions
Other non-governmental organizations
General public
Other (please specify) [fill in]

Availability of information to the public
Consultation on planned measures or river basin management plans
Public involvement
Other (please specify) [fill in]

Please remember to complete section II for each of the transboundary basins, sub-basin, part of a basin or group of basins. Please also remember to attach copies of agreements or arrangements, if any.

III. Water management at the national level

In this section, you are requested to provide general information on water management at the national level as it relates to transboundary waters. Information on specific transboundary basins, sub-basins, part of basins and groups of basins, should be presented in section II and not repeated here.

1. (a) Does your country’s national legislation, policies, action plans and strategies refer to measures to prevent, control and reduce any transboundary impact?

Yes ☑ / No ☐

If yes, please briefly describe the main national laws, policies, action plans and strategies [fill in]

Thailand has established national policies, laws, regulations and plans in supporting the IWRM operations at the national level. Priorities are as follows.

1. Policy Level

1) The constitution of the Kingdom of Thailand has provided on the participation of its people.

Under Section 57 (1), the state must preserve, restore and promote the local wisdom, art, culture, customs and customary traditions, and provide public areas for activities. It must also encourage the participation of its people, communities and local organisations.

Under Section 57 (2), the state must conserve, protect, maintain and restore natural resources, the environment and the biological diversity. It must also ensure the participation and benefits of its people and local communities.

4 Or, where applicable, aquifer management plans.
Under Section 58, the state must take a listen to opinions of stakeholders, its people and relevant communities in the consideration of actions that may affect natural resources, the environmental quality, health and sanitation, etc.

Under Section 78, the state must ensure its people’s participation in the country’s development in various dimensions, preparation of public services, monitoring of the state power use, anti-corruption as well as political decisions and other affairs that may affect the people.

https://www.ilaw.or.th/node/4697

2) The National Strategy (2018-2037) as regards the following related strategic issues

National Strategic Issue 4.4 on social opportunity creation and equality has development goals that focus on pooling the powers of the private sector, the civil society and local communities in implementation by supporting the people’s integration in collective actions, decentralising the authority to local government organisations, strengthening the self-management of communities, and preparing the Thai population in health, economic, social and environmental dimensions to become a quality population that is self-reliant, and beneficial to their families, communities and society for as long as possible. The state provides the security for fair access to quality services and welfare for all, and for environmentally friendly growth.

National Strategic Issue 4.5 on security of water, energy and agriculture that are environmentally friendly has important development goals to achieve the sustainable development in all dimensions, including the society, economy, environment, good governance and integrated partnerships within and outside the country, to formulate area-based strategies and plans, and to allow as much direct participation all parties involved as possible. These operations are based on the mutual growth in terms of economy, environment or quality of life by focusing on balancing the three aspects that will truly lead to the sustainability for the next generation.

Score : http://www.ratchakitcha.soc.go.th/DATA/PDF/2561/A/082/T_0001.PDF

3) National Economic and Social Development Plan No. 12 (2017–2021)

The 12th National Economic and Social Development Plan adopts principles of the sufficiency economy philosophy, sustainable development and people-centred development, with a continuous direction from the National Economic and Social Development Plan No. 9-11 and the adherence to the economic growth principle that reduces the inequality, and drives the growth by increasing the productivity based on the use of wisdom and innovation within the framework of the 20-year national strategic plan. The goal is to drive Thailand’s future in 2036 per the SDGs established by the UN.

The National Economic and Social Development Plan is implemented by adhering to a principle of development distribution to local areas; connecting community-to-country and country-to-community development by using bodies of knowledge, technology, innovation and creativity as driving tools at local and community levels via the integration of all sectors, such as people, media, public, business and private sectors; as well as creating networks for area development, and monitoring and evaluating the operations that are in line with development issues.

Score : http://www.ratchakitcha.soc.go.th/DATA/PDF/2561/A/082/T_0001.PDF

4) Country Reform Plan on Natural Resources and Environment

The country reform plan aims to drive the goals set out on the constitution, namely public order, unity, social fairness, peace and equality in order to create a good quality of life and the participation in the country’s development per the national strategy. The country reform plan on natural resources and the environment has objectives to conserve and restore natural resources and the environment with
upstream, midstream and downstream, including coastal, operations under the King’s guidance on the
plan based on principles of ‘understand, achieve, develop’; use of both the modern knowledge and the
local wisdom; work integration among public, private and community sectors under the civil society
guidelines; research studies for new bodies of knowledge as well as adoption of sample success of
areas, communities or organisations that embrace the King’s approach into practice to achieve similar
success and to encourage the rapid expansion to other areas nationwide, leading to the environmentally
friendly growth on a sustainable development trajectory.

Score : http://www.ratchakitcha.soc.go.th/DATA/PDF/2561/A/024_4/1.PDF

Figure 17 National policy implementation relationship.

Figure 18 The Prime Minister is giving a policy on strategy implementation.

Thailand has the Water Resources Act B.E. 2561 as a tool in managing the entire water
resources system and has assigned ministries that oversee water resources to act accordingly to the
law, consisting of Ministry of Agriculture and Cooperatives, Ministry of Natural Resources and
Environment and Ministry of the Interior because their missions involve water resources and people,
by integrating the use, development, management, maintenance, restoration and conservation of water
resources to ensure balanced and equitable use of water resources. The management is stipulated under
Chapter 3 Water Management Bodies that consist of:

**Chapter 3 Part 1 National Water Resources Committee (NWRC).** The NWRC shall be
established with the authority to manage water resources to achieve objectives to integrate the use,
development, management, maintenance, restoration and conservation of water resources for unity as
provided in Sections 17, 18, 19, 20 and 21.

**Chapter 3 Part 3 Basins and Basins Committees.** Section 27 requires that basins committees
be established. Section 35 designates basins committees to have the authority in the preparation of
basin master plan on the use, development, management, maintenance, restoration and conservation
of water resources, and plan on the prevention and the solution of floods and drought by considering
water allocation by priority, and promoting and campaigning to raise people’s awareness in the use,
development, management, maintenance, restoration and conservation of water resources in basin
areas.

**Chapter 3 Part 4 Water User Organisations.** Sections 38 and 39 stipulate that people in the
same area or basin area have the right to establish a water user organisation for mutual benefits of the
use, development, management, maintenance, restoration and conservation of water resources among
members of the organisation.

Score : https://library2.parliament.go.th/giventake/content_nla2557/law135-281261-44.pdf

Thailand has laws and measures to protect, control and reduce transboundary impacts in
accordance with Section 17 (12) of the Water Resources Act B.E. 2561 that requires the National
Water Resources Committee with the authority to manage water for unity as well as the authority to
consider and approve the diversion of international water or foreign water sources that need to be take
into account transboundary impacts. In addition, Thailand has enacted the 20-year water resources
management master plan, on which its dimension 6 requires the transboundary water management as
follows.

1. Preparation of international action plan and operational plans/projects shall be in
accordance with the agreement, coordinate relevant authorities in the plan/project implementation,
prepare roadmaps under the cooperation as well as evaluate the plan performance to review the
plans/projects already undertaken, report on achievement, problems, barriers and ways to improve the
plans/projects so that they comply with the master plan.

2. Development of bodies of knowledge, innovation and expertise of each country as a
database of analysis to prepare a practical plan to develop an international cooperation mechanism for
water resources.

3. Promotion, support and exchange of knowledge and coordination with international basin
organizations

The above law and master plan are adopted in the implementation in accordance with the
Mekong Agreement 1995. Chapter 3 has established 10 cooperation principles for the sustainable
development by preserving the Mekong River’s natural conditions as well as diversing the water across
basins in accordance with Clause 26 in Chapter 4 Rules for Water Utilization and Inter-basin
Diversion. In 2000, the four countries jointly established five steps to achieve the balanced and fair
water use in the basin as a practice guideline, which is constantly revised because all countries want
to develop water resources in their own territories for their survival. All countries must agree to
implement projects in order to achieve the cooperation in balanced resource sharing. In addition, each member will develop a strategic plan for the Mekong River development every five years to form a joint development plan per the IWRM principle as shown in Figure 19

Figure 19 This Strategic Plan 2016-2020 and The Basin Development Strategy for 2016-2020
Score: http://www.mrcmekong.org/highlights/

In addition, Thailand signed the Mekong Agreement 1995 with the governments of the LMB, consisting of Cambodia, Laos and Vietnam, on 5 April 1995 in Chiang Rai Province, Thailand. As a result, the MRC was established as an intergovernmental organisation. Thailand continuously supports the MRC operations in the water resources management in collaboration with international organisations and international cooperation by appointing the TNMC with the following duties.

1. To formulate Thailand’s policies, stance and roles towards obligations in accordance with the Mekong Agreement 1995 and initiatives with international basin organisations
2. To consider and approve basin development plans and plans and projects of relevant authorities that are in line with the MRC strategies
3. To suggest a guide and approaches to the participatory process of all sectors in the Mekong Basin in Thailand that are in line with such process of the member party states per obligations of the Mekong Agreement 1995
4. To evaluate and suggest solutions to problems and conflicts or disputes under the Mekong Agreement
5. Authorised to appoint sub-committees and working groups to perform tasks assigned by the TNMC.

The TNMCS duties are as follows.

1. To be a focal point in coordination with the MRCS, National Mekong Committees of the party countries (Laos, Cambodia and Vietnam), international basin organisations and related authorities in Thailand so that the Mekong development projects achieve their objectives sustainably
2. To be the secretary of the TNMC

3. To recommend policy guidelines and opinions to the Committee, sub-committees and working groups under the TNMC

4. To establish management instruments for the Mekong Basin in Thailand and to suggest the establishment of a mechanism to support the implementation of plans and projects under the Agreement and other initiatives to contribute to the sustainable development of the Mekong Basin.

5. To study, analyse and prepare data systems, monitor and evaluate the performance of sustainable development of the Mekong Basin.

Currently, the TNMC has a Minister who oversees the ONWR as the chairperson, the ONWR Secretary-General as the vice chairperson, the ONWR Deputy Secretary-General as a member and secretary, and the ONWR Assistant Secretary-General as a member and assistant secretary. The ONWR has been assigned to act as the TNMCS with the ONWR Secretary-General as the TNMCS Secretary-General and the ONWR Deputy Secretary-General as the TNMCS Deputy Secretary-General.

Source: https://cabinet.soc.go.th/soc/Program2-3.jsp?top_serl=99331399

(b) Does your country’s legislation provide for the following principles?

<table>
<thead>
<tr>
<th>Principle</th>
<th>Yes ☒ / No ☐</th>
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<tbody>
<tr>
<td>Precautionary principle</td>
<td>Yes ☒ / No ☐</td>
</tr>
<tr>
<td>Polluter pays principle</td>
<td>Yes ☒ / No ☐</td>
</tr>
<tr>
<td>Sustainable development</td>
<td>Yes ☒ / No ☐</td>
</tr>
<tr>
<td>User pays principle</td>
<td>Yes ☒ / No ☐</td>
</tr>
</tbody>
</table>

If yes, please briefly describe how these principles are implemented at the national level: (fill in)

The National Environmental Quality Promotion and Preservation Act B.E. 2535 (1992) has adopted the law concerning advance prevention by authorising the officials to stipulate conditions for licensees of wastewater treatment or waste disposal services as well as to order such licensees to correct their systems to comply with the conditions set forth in Ministerial Regulations as seen in Section 73 of the Act, providing that the Minister of Natural Resources and Environment shall have the authority to issue ministerial regulations to prescribe conditions for such licensees, and Section 82 (2) gives pollution control officials the authority to order owners, controllers or contractors of wastewater treatment or waste disposal services to change, improve or repair their air pollution treatment, wastewater treatment or waste disposal systems or equipment and tools according to the conditions set forth in the ministerial regulations.

Together with the present Thailand has adopted The Water Resources Act 2018, which has adopted the above principles in implementing this law.

(c) Does your country have a national licensing or permitting system for wastewater discharges and other point source pollution? (e.g., in industry, mining, energy, municipal, wastewater management or other sectors)? ประเทศ

Yes ☒ / No ☐

If yes, for which sectors?

44
Industry □  Mining □  Energy □  Municipal □  Livestock raising □  Aquaculture □  Other (please list) [fill in □]

Please briefly describe the licensing or permitting system, indicating whether the system provides for setting emission limits based on best available technology?

If yes, for which sectors? [please list] [fill in □]

The National Environmental Quality Promotion and Preservation Act B.E. 2535, Factory Act B.E. 2535 and Industrial Estate Authority of Thailand Act B.E. 2522 (1979) has prescribed:

1. Environmental quality standards related to the water pollution, including surface water quality, quality of coastal and delta, and groundwater quality standards, for households, communities, industrial estates and operators of businesses that generate the water pollution to control wastewater or waste discharges into public water sources or the environment outside the pollution sources within pollution control standards by source, and the wastewater treated by the government's integrated wastewater treatment system or systems of the abovementioned licensees can be discharged only if the quality is met per industrial wastewater control and industrial estate standards.

2. Methods, frequency and timing of the industry's wastewater sampling in accordance with the law, and the examination of industrial wastewater standards must be in accordance with the water and wastewater analysis guide of the Environmental Engineers Association of Thailand or the Standard Method for the Examination of Water and Wastewater, which have jointly been set by the American Public Health Association, American Water Work Association and US Water Environment Federation.

3. Special and additional instruments to report industrial wastewater drainage, consisting of installation of factory wastewater flow metres, gauges for electricity consumption for the wastewater treatment systems, and BOD and chemical oxygen demand (COD) metres of the wastewater that can continuously provide electricity signals and send them to the factory computers to continuously record data and display historical data. Which industries are to install BOD or COD meters or both require approval by the regulatory authority; that is the Department of Industrial Works.

4. Factories that ask for permission to set up or expand factories with operational wastewater must have a highly effective wastewater treatment system that can treat the wastewater until it can completely be reused or a quarantine system that can hold all effluent without leaking into the groundwater or draining into Chao Phraya River directly or indirectly, such as into main and inter-river canals, which are public water sources.

If not, please explain why not giving the most important reasons; or provide information if there are plans to introduce a licensing or permitting system. [fill in]

(d) Are the authorized discharges monitored and controlled?

Yes ☑ / No ☐

If yes, how? (Please tick the ones applicable):
Monitoring of discharges ✓
Monitoring of physical and chemical impacts on water □
Monitoring of ecological impacts on water □
Conditions on permits □
Inspectorate □
Other means (please list): [fill in]

If your country does not have a discharge monitoring system, please explain why or provide information if there are plans to introduce a discharge monitoring system: [fill in]

(e) What are the main measures which your country takes to reduce diffuse sources of water pollution on transboundary waters (e.g., from agriculture, transport, forestry or aquaculture)? The measures listed below relate to agriculture, but other sectors may be more significant. Please be sure to include these under “others”:

**Legislative measures**
- Norm for uses of fertilizers □
- Norms for uses of manure □
- Permitting system □
- Bans on or norms for use of pesticides ✓
- Others (please list): [fill in]

**Economic and financial measures**
- Monetary incentives □
- Environmental taxes (such as fertilizer taxes) □
- Others (please list): [fill in]

**Agricultural extension services** □

**Technical measures**
- Source control measures
  - Crop rotation □
  - Tillage control □
  - Winter cover crops □
- Others (please list): [fill in]
- Other measures
  - Buffer/filter strips □
  - Wetland reconstruction □
  - Sedimentation traps □
  - Chemical measures □
- Others (please list): [fill in]

**Other types of measures**
If yes, please list: [fill in]
(f) What are the main measures which your country takes to enhance water resources allocation and use efficiency?

Please tick as appropriate (not all might be relevant)

- A regulatory system regarding water abstraction
- Monitoring and control of abstractions
- Water rights are defined
- Water allocation priorities are listed
- Water-saving technologies
- Advanced irrigation techniques
- Demand management activities
- Other means (please list)

(g) Does your country apply the ecosystems approach?

Yes ☑ / No ☐

*If yes, please describe how [fill in]*

Uses the law to control ecosystems, such as the National Environmental Quality Promotion and Preservation Act B.E. 2535, Factory Act B.E. 2535 and Industrial Estate Authority of Thailand Act B.E. 2522 in the wastewater control, the natural water sources conservation, etc.

(h) Does your country take specific measures to prevent the pollution of groundwaters?

Yes ☑ / No ☐

*If yes, please briefly describe the most important measures [fill in]*

Thailand has specific measures to prevent groundwater pollution. According to the Groundwater Act, B.E. 2520, the control of the use, conservation and prevention of groundwater pollution. Currently in the Bangkok area Nonthaburi Province Nakhon Pathom Province Pathumthani Province Phra Nakhon Si Ayutthaya Province Samut Prakan Province And Samut Sakhon Province Groundwater is pumped up to be used in excess of the amount of water flowing into the groundwater. Causing an impact on the environment Land subsidence The spread of salt water into the groundwater. As well as causing the water level in the groundwater to decrease It is expedient to prescribe that government agencies or state organizations that have groundwater drilling and use of groundwater must apply for a license to operate groundwater business, including prescribing rules, procedures and conditions for the payment of groundwater usage and groundwater conservation expenses And allowing private individuals to collect ground water costs and groundwater conservation expenses And established the Groundwater Development Fund To bring money to circulate as expenses for the development of groundwater. And set up a committee to settle cases

In addition, the Pollution Control Department Ministry of Natural Resources and Environment Issue a notification on criteria for determining the suitability of the area Sanitary waste landfill site construction design To prevent pollution contaminating groundwater, such as the construction area should not be the upstream area. Wetlands Flood plain area Natural water resources Water supply pond Areas that are obstructing the flow of water The area should have a deep groundwater level. There is a solid rock structure supported by engineering principles. Construction design and waste disposal must have measures to prevent groundwater contamination. And to have measures for monitoring groundwater quality in accordance with the Notification of the Environment Committee No. 20 (BE 2543) issued under the Promotion and Conservation of National Environmental Quality Act 1992

2. Do your national laws require transboundary environmental impact assessment (EIA)?

Yes ☐ / No ☑

*If yes, please briefly describe the legislative basis, and any related implementing procedures* [fill in].

*If not, do other measures provide for transboundary EIA?* [fill in]

IV. Final questions

1. What are the main challenges your country faces in cooperating on transboundary waters?

- Differences between national administrative and legal frameworks ☑
- Lack of relevant data and information ☐
- Difficulties in data and information exchange ☐
- Sectoral fragmentation at the national level ☑
- Language barrier ☐
- Resource constraints ☑
- Environmental pressures, e.g. extreme events ☐
- Sovereignty concerns ☑

Please list other challenges and/or provide further details: [fill in]

2. What have been the main achievements in cooperating on transboundary waters?

- Improved water management ☑
- Enhanced regional integration, i.e. beyond water ☑
- Adoption of cooperative arrangements ☑
- Adoption of joint plans and programmes ☑
- Long-lasting and sustained cooperation ☑
- Financial support for joint activities ☑
- Stronger political will for transboundary water cooperation ☑
- Better knowledge and understanding ☑
- Dispute avoidance ☑
- Stakeholder engagement ☑

Please list other achievements, keys to achieving success, and/or provide concrete examples: [fill in]

- Cooperation to be tangible
- Exchange of information
- And consideration of river sharing
- By respecting the water use rights of the upstream country
- Middle water country
- And downstream countries

3. Please indicate which institutions were consulted during the completion of the questionnaire

- Joint body or mechanism ☐
- Other riparian or aquifer countries ☐
- National water management authority ☑
- Environment agency/authority ☐
Basin authority (national)
Local or provincial government
Geological survey (national)
Non-water specific ministries, e.g. foreign affairs, finance, forestry and energy
Civil society organizations
Water user associations
Private sector
Other (please list): (fill in)

Please briefly describe the process by which the questionnaire was completed: (fill in)

1. Basins committee meetings and the preparation of the basin master plan
2. Interviews of stakeholders in basins and operating direct officials in this field
3. Meetings of related working groups, sub-committees, committees at ministry and department levels
   3.1 Meeting of the working group under the sub-committee to drive the master plan of water resources management, area 6, management To prepare a draft report And various related government meetings To hear opinions Summarize the overall issues to be included in the report.
   3.2 Meeting of the Subcommittee to Drive the Water Resources Management Master Plan To consider giving preliminary approval and listening to opinions from the subcommittee And revise according to comments
4. Submit a draft report to the National Water Resources Committee for consideration and approval and report to the Cabinet for acknowledgment and further submission to UNDP.
5. Submit a report to the Office of the National Economic and Social Development Council. And a standing development board To link the development as a whole.
4. If you have any other comments please add them here: (insert comments): (fill in)

5. Name and contact details of the person(s) who filled out the questionnaire (please insert): (fill in)
   Date: (fill in)   Signature: (fill in)

Dr. Somkiat Prajamwong
Secretary-General of ONWR
8 February 2021

Thank you very much for taking the time to complete this report.
Appendix
AGREEMENT ON THE COOPERATION FOR THE SUSTAINABLE DEVELOPMENT OF THE MEKONG RIVER BASIN 5 APRIL 1995

MEKONG RIVER COMMISSION
AGREEMENT ON THE COOPERATION FOR THE SUSTAINABLE DEVELOPMENT OF THE MEKONG RIVER BASIN

The Governments of The Kingdom of Cambodia, The Lao People's Democratic Republic, The Kingdom of Thailand, and The Socialist Republic of Viet Nam, being equally desirous of continuing to cooperate in a constructive and mutually beneficial manner for sustainable development, utilization, conservation and management of the Mekong River Basin water and related resources, have resolved to conclude this Agreement setting forth the framework for cooperation acceptable to all parties hereto to accomplish these ends, and for that purpose have appointed as their respective plenipotentiaries:

The Kingdom of Cambodia:
H.E. Mr. Ing Kieth
Deputy Prime Minister and Minister of Public Works and Transport

The Lao People's Democratic Republic:
H.E. Mr. Somsavat Lengsavad
Minister of Foreign Affairs

The Kingdom of Thailand:
H.E. Dr. Krasae Chanawongse
Minister of Foreign Affairs

The Socialist Republic of Viet Nam:
H.E. Mr. Nguyen Manh Cam
Minister of Foreign Affairs

Who, having communicated to each other their respective full powers and having found them in good and due form, have agreed to the following:

CHAPTER I. PREAMBLE

RECALLING the establishment of the Committee for the Coordination of Investigations of the Lower Mekong Basin on 17 September 1957 by the Governments of these countries by Statute endorsed by the United Nations,

NOTING the unique spirit of cooperation and mutual assistance that inspired the work of the Committee for the Coordination of Investigations of the Lower Mekong Basin and the many accomplishments that have been achieved through its efforts,

ACKNOWLEDGING the great political, economic and social changes that have taken place in these countries of the region during this period of time which necessitate these efforts to re-assess, re-define and establish the future framework for cooperation,

RECOGNIZING that the Mekong River Basin and the related natural resources and environment are natural assets of immense value to all the riparian countries for the economic and social well-being and living standards of their peoples,

REAFFIRMING the determination to continue to cooperate and promote in a constructive and mutually beneficial manner in the sustainable development, utilization, conservation and management of the Mekong River Basin water and related resources for navigational
and non-navigational purposes, for social and economic development and the well-being of all riparian States, consistent with the needs to protect, preserve, enhance and manage the environmental and aquatic conditions and maintenance of the ecological balance exceptional to this river basin,

**AFFIRMING** to promote or assist in the promotion of interdependent sub-regional growth and cooperation among the community of Mekong nations, taking into account the regional benefits that could be derived and/or detriments that could be avoided or mitigated from activities within the Mekong River Basin undertaken by this framework of cooperation,

**REALIZING** the necessity to provide an adequate, efficient and functional joint organizational structure to implement this Agreement and the projects, programs and activities taken thereunder in cooperation and coordination with each member and the international community, and to address and resolve issues and problems that may arise from the use and development of the Mekong River Basin water and related resources in an amicable, timely and good neighbourly manner,

**PROCLAIMING** further the following specific objectives, principles, institutional framework and ancillary provisions in conformity with the objectives and principles of the Charter of the United Nations and international law.

**CHAPTER II. DEFINITIONS OF TERMS**

For the purposes of this Agreement, it shall be understood that the following meanings to the underlined terms shall apply except where otherwise inconsistent with the context:

**Agreement** under Article 5: A decision of the Joint Committee resulting from prior consultation and evaluation on any Proposed use for inter-basin diversions during the wet season from the mainstream as well as for intra-basin use or inter-basin diversions of these waters during the dry season. The objective of this agreement is to achieve an optimum use and prevention of waste of the waters through a dynamic and practical consensus in conformity with the Rules for Water Utilization and Inter-Basin Diversions set forth in Article 26.

**Acceptable minimum monthly natural flow**: The acceptable minimum monthly natural flow during each month of the dry season.

**Acceptable natural reverse flow**: The wet season flow level in the Mekong River at Kratie that allows the reverse flow of the Tonle Sap to an agreed upon optimum level of the Great Lake.

**Basin Development Plan**: The general planning tool and process that the Joint Committee would use as a blueprint to identify, categorize and prioritize the projects and programs to seek assistance for and to implement the plan at the basin level.

**Environment**: The conditions of water and land resources, air, flora, and fauna that exists in a particular region.

**Notification**: Timely providing information by a riparian to the Joint Committee on its Proposed use of water according to the format, content and procedures set forth in the Rules for Water Utilization and Inter-Basin Diversions under Article 26.
**Prior consultation:** Timely notification plus additional data and information to the Joint Committee as provided in the Rules for Water Utilization and Inter-Basin Diversion under Article 26, that would allow the other member riparians to discuss and evaluate the impact of the **Proposed use** upon their uses of water and any other affects, which is the basis for arriving at an agreement. **Prior consultation** is neither a right to veto the use nor unilateral right to use water by any riparian without taking into account other riparians' rights.

**Proposed use:** Any proposal for a definite use of the waters of the Mekong River system by any riparian, excluding domestic and minor uses of water not having a significant impact on mainstream flows.

**CHAPTER III. OBJECTIVES AND PRINCIPLES OF COOPERATION**

The parties agree:

**Article 1. Areas of Cooperation**

To cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin including, but not limited to irrigation, hydro-power, navigation, flood control, fisheries, timber floating, recreation and tourism, in a manner to optimize the multiple-use and mutual benefits of all riparians and to minimize the harmful effects that might result from natural occurrences and man-made activities.

**Article 2. Projects, Programs and Planning**

To promote, support, cooperate and coordinate in the development of the full potential of sustainable benefits to all riparian States and the prevention of wasteful use of Mekong River Basin waters, with emphasis and preference on joint and/or basin-wide development projects and basin programs through the formulation of a basin development plan, that would be used to identify, categorize and prioritize the projects and programs to seek assistance for and to implement at the basin level.

**Article 3. Protection of the Environment and Ecological Balance**

To protect the environment, natural resources, aquatic life and conditions, and ecological balance of the Mekong River Basin from pollution or other harmful effects resulting from any development plans and uses of water and related resources in the Basin.

**Article 4. Sovereign Equality and Territorial Integrity**

To cooperate on the basis of sovereign equality and territorial integrity in the utilization and protection of the water resources of the Mekong River Basin.

**Article 5. Reasonable and Equitable Utilization**

To utilize the waters of the Mekong River system in a reasonable and equitable manner in their respective territories, pursuant to all relevant factors and circumstances, the Rules for Water Utilization and Inter-basin Diversion provided for under Article 26 and the provisions of A and B below:
A. On tributaries of the Mekong River, including Tonle Sap, intra-basin uses and inter-basin diversions shall be subject to notification to the Joint Committee.

B. On the mainstream of the Mekong River:
   1. During the wet season:
      a) Intra-basin use shall be subject to notification to the Joint Committee.
      b) Inter-basin diversion shall be subject to prior consultation which aims at arriving at an agreement by the Joint Committee.
   2. During the dry season:
      a) Intra-basin use shall be subject to prior consultation which aims at arriving at an agreement by the Joint Committee.
      b) Any inter-basin diversion project shall be agreed upon by the Joint Committee through a specific agreement for each project prior to any proposed diversion. However, should there be a surplus quantity of water available in excess of the proposed uses of all parties in any dry season, verified and unanimously confirmed as such by the Joint Committee. an inter-basin diversion of the surplus could be made subject to prior consultation.

Article 6. Maintenance of Flows on the Mainstream

To cooperate in the maintenance of the flows on the mainstream from diversions, storage releases, or other actions of a permanent nature; except in the cases of historically severe droughts and/or floods:

A. Of not less than the acceptable minimum monthly natural flow during each month of the dry season;

B. To enable the acceptable natural reverse flow of the Tonle Sap to take place during the wet season; and,

C. To prevent average daily peak flows greater than what naturally occur on the average during the flood season.

The Joint Committee shall adopt guidelines for the locations and levels of the flows, and monitor and take action necessary for their maintenance as provided in Article 26.

Article 7. Prevention and Cessation of Harmful Effects

To make every effort to avoid, minimize and mitigate harmful effects that might occur to the environment, especially the water quantity and quality, the aquatic (eco-system) conditions, and ecological balance of the river system, from the development and use of the Mekong River Basin water resources or discharge of wastes and return flows. Where one or more States is notified with proper and valid evidence that it is causing substantial damage to one or more riparians from the use of and/or discharge to water of the Mekong River, that State or States shall cease immediately the alleged cause of harm until such cause of harm is determined in accordance with Article 8.
Article 8. State Responsibility for Damages

Where harmful effects cause substantial damage to one or more riparians from the use of and/or discharge to waters of the Mekong River by any riparian State, the party(ies) concerned shall determine all relative factors, the cause, extent of damage and responsibility for damages caused by that State in conformity with the principles of international law relating to state responsibility, and to address and resolve all issues, differences and disputes in an amicable and timely manner by peaceful means as provided in Articles 34 and 35 of this Agreement, and in conformity with the Charter of the United Nations.

Article 9. Freedom of Navigation

On the basis of equality of right, freedom of navigation shall be accorded throughout the mainstream of the Mekong River without regard to the territorial boundaries, for transportation and communication to promote regional cooperation and to satisfactorily implement projects under this Agreement. The Mekong River shall be kept free from obstructions, measures, conduct and actions that might directly or indirectly impair navigability, interfere with this right or permanently make it more difficult. Navigational uses are not assured any priority over other uses, but will be incorporated into any mainstream project. Riparians may issue regulations for the portions of the Mekong River within their territories, particularly in sanitary, customs and immigration matters, police and general security.

Article 10. Emergency Situations

Whenever a Party becomes aware of any special water quantity or quality problems constituting an emergency that requires an immediate response, it shall notify and consult directly with the party(ies) concerned and the Joint Committee without delay in order to take appropriate remedial action.

CHAPTER IV. INSTITUTIONAL FRAMEWORK

A. MEKONG RIVER COMMISSION

Article 11. Status
The institutional framework for cooperation in the Mekong River Basin under this Agreement shall be called the Mekong River Commission and shall, for the purpose of the exercise of its functions, enjoy the status of an international body, including entering into agreements and obligations with the donor or international community.

Article 12. Structure of Mekong River Commission

The Commission shall consist of three permanent bodies:

- Council
- Joint Committee, and
- Secretariat
Article 13. Assumption of Assets, Obligations and Rights

The Commission shall assume all the assets, rights and obligations of the Committee for the Coordination of Investigations of the Lower Mekong Basin (Mekong Committee/Interim Mekong Committee) and Mekong Secretariat.

Article 14. Budget of the Mekong River Commission

The budget of the Commission shall be drawn up by the Joint Committee and approved by the Council and shall consist of contributions from member countries on an equal basis unless otherwise decided by the Council, from the international community (donor countries), and from other sources.

B. COUNCIL

Article 15. Composition of Council

The Council shall be composed of one member from each participating riparian State at the Ministerial and Cabinet level, (no less than Vice-Minister level) who would be empowered to make policy decisions on behalf of his/her government.

Article 16. Chairmanship of Council

The Chairmanship of the Council shall be for a term of one year and rotate according to the alphabetical listing of the participating countries.

Article 17. Sessions of Council

The Council shall convene at least one regular session every year and may convene special sessions whenever it considers it necessary or upon the request of a member State. It may invite observers to its sessions as it deems appropriate.

Article 18. Functions of Council

The functions of the Council are:

A. To make policies and decisions and provide other necessary guidance concerning the promotion, support, cooperation and coordination in joint activities and projects in a constructive and mutually beneficial manner for the sustainable development, utilization, conservation and management of the Mekong River Basin waters and related resources, and protection of the environment and aquatic conditions in the Basin as provided for under this Agreement;

B. To decide any other policy-making matters and make decisions necessary to successfully implement this Agreement, including but not limited to approval of the Rules of Procedures of the Joint Committee under Article 25, Rules of Water Utilization and Inter-Basin Diversions proposed by the Joint Committee under Article 26, and the basin development plan and major component projects/programs; to establish guidelines for financial and technical assistance of development projects and programs; and if considered necessary, to invite the donors to coordinate their support through a Donor Consultative Group; and,
C. To entertain, address and resolve issues, differences and disputes referred to it by any
Council member, the Joint Committee, or any member State on matters arising under
this Agreement.

Article 19. Rules of Procedures

The Council shall adopt its own Rules of Procedures, and may seek technical advisory
services as it deems necessary.

Article 20. Decisions of Council

Decisions of the Council shall be by unanimous vote except as otherwise provided for in
its Rules of Procedures.

C. JOINT COMMITTEE

Article 21. Composition of Joint Committee

The Joint Committee shall be composed of one member from each participating riparian
State at no less than Head of Department level.

Article 22. Chairmanship of Joint Committee

The Chairmanship of the Joint Committee will rotate according to the reverse alphabetical
listing of the member countries and the Chairperson shall serve a term of one year.

Article 23. Sessions of Joint Committee

The Joint Committee shall convene at least two regular sessions every year and may con-
vene special sessions whenever it considers it necessary or upon the request of a mem-
ber State. It may invite observers to its sessions as it deems appropriate.

Article 24. Functions of Joint Committee

The functions of the Joint Committee are:

A. To implement the policies and decisions of the Council and such other tasks as may be
   assigned by the Council.

B. To formulate a basin development plan, which would be periodically reviewed and
   revised as necessary; to submit to the Council for approval the basin development plan
   and joint development projects/programs to be implemented in connection with it; and
   to confer with donors, directly or through their consultative group, to obtain the financial
   and technical support necessary for project/program implementation.

C. To regularly obtain, update and exchange information and data necessary to implement
   this Agreement.

D. To conduct appropriate studies and assessments for the protection of the environment
   and maintenance of the ecological balance of the Mekong River Basin.

E. To assign tasks and supervise the activities of the Secretariat as is required to imple-
ment this Agreement and the policies, decisions, projects and programs adopted thereunder, including the maintenance of databases and information necessary for the Council and Joint Committee to perform their functions, and approval of the annual work program prepared by the Secretariat.

F. To address and make every effort to resolve issues and differences that may arise between regular sessions of the Council, referred to it by any Joint Committee member or member state on matters arising under this Agreement, and when necessary to refer the matter to the Council.

G. To review and approve studies and training for the personnel of the riparian member countries involved in Mekong River Basin activities as appropriate and necessary to strengthen the capability to implement this Agreement.

H. To make recommendations to the Council for approval on the organizational structure, modifications and restructuring of the Secretariat.

Article 25. Rules of Procedures

The Joint Committee shall propose its own Rules of Procedures to be approved by the Council. It may form ad hoc and/or permanent sub-committees or working groups as considered necessary, and may seek technical advisory services except as may be provided for in the Council's Rules of Procedures or decisions.

Article 26. Rules for Water Utilization and Inter-Basin Diversions

The Joint Committee shall prepare and propose for approval of the Council, inter alia, Rules for Water Utilization and Inter-Basin Diversions pursuant to Articles 5 and 6, including but not limited to: 1) establishing the time frame for the wet and dry seasons; 2) establishing the location of hydrological stations, and determining and maintaining the flow level requirements at each station; 3) setting out criteria for determining surplus quantities of water during the dry season on the mainstream; 4) improving upon the mechanism to monitor intra-basin use; and, 5) setting up a mechanism to monitor inter-basin diversions from the mainstream.

Article 27. Decisions of the Joint Committee

Decisions of the Joint Committee shall be by unanimous vote except as otherwise provided for in its Rules of Procedures.

D. SECRETARIAT

Article 28. Purpose of Secretariat

The Secretariat shall render technical and administrative services to the Council and Joint Committee, and be under the supervision of the Joint Committee.

Article 29. Location of Secretariat

The location and structure of the permanent office of the Secretariat shall be decided by the Council, and if necessary, a headquarters agreement shall be negotiated and entered into with the host government.
Article 30. Functions of the Secretariat

The functions and duties of the Secretariat will be to:

A. Carry out the decisions and tasks assigned by the Council and Joint Committee under the direction of and directly responsible to the Joint Committee;

B. Provide technical services and financial administration and advise as requested by the Council and Joint Committee;

C. Formulate the annual work program, and prepare all other plans, project and program documents, studies and assessments as may be required;

D. Assist the Joint Committee in the implementation and management of projects and programs as requested;

E. Maintain databases of information as directed;

F. Make preparations for sessions of the Council and Joint Committee; and,

G. Carry out all other assignments as may be requested.

Article 31. Chief Executive Officer

The Secretariat shall be under the direction of a Chief Executive Officer (CEO), who shall be appointed by the Council from a short-list of qualified candidates selected by the Joint Committee. The Terms of Reference of the CEO shall be prepared by the Joint Committee and approved by the Council.

Article 32. Assistant Chief Executive Officer

There will be one Assistant to the CEO, nominated by the CEO and approved by the Chairman of the Joint Committee. Such Assistant will be of the same nationality as the Chairman of the Joint Committee and shall serve for a co-terminus one-year term.

Article 33. Riparian Staff

Riparian technical staff of the Secretariat are to be recruited on a basis of technical competence, and the number of posts shall be assigned on an equal basis among the members. Riparian technical staff shall be assigned to the Secretariat for no more than two three-year terms, except as otherwise decided by the Joint Committee.
CHAPTER V. ADDRESSING DIFFERENCES AND DISPUTES

Article 34. Resolution by Mekong River Commission

Whenever any difference or dispute may arise between two or more parties to this Agreement regarding any matters covered by this Agreement and/or actions taken by the implementing organization through its various bodies, particularly as to the interpretations of the Agreement and the legal rights of the parties, the Commission shall first make every effort to resolve the issue as provided in Articles 18.C and 24.F.

Article 35. Resolution by Governments

In the event the Commission is unable to resolve the difference or dispute within a timely manner, the issue shall be referred to the Governments to take cognizance of the matter for resolution by negotiation through diplomatic channels within a timely manner, and may communicate their decision to the Council for further proceedings as may be necessary to carry out such decision. Should the Governments find it necessary or beneficial to facilitate the resolution of the matter, they may, by mutual agreement, request the assistance of mediation through an entity or party mutually agreed upon, and thereafter to proceed according to the principles of international law.

CHAPTER VI. FINAL PROVISIONS

Article 36. Entry into Force and Prior Agreements This Agreement shall:

A. Enter into force among all parties, with no retroactive effect upon activities and projects previously existing, on the date of signature by the appointed plenipotentiaries.

B. Replace the Statute of the Committee for Coordination of Investigations of the Lower Mekong Basin of 1957 as amended, the Joint Declaration of Principles for Utilization of the Waters of the Lower Mekong Basin of 1975, the Declaration Concerning the Interim Committee for Coordination of Investigations of the Lower Mekong Basin of 1978, and all Rules of Procedures adopted under such agreements. This Agreement shall not replace or take precedence over any other treaties, acts or agreements entered into by and among any of the parties hereto, except that where a conflict in terms, areas of jurisdiction of subject matter or operation of any entities created under existing agreements occurs with any provisions of this Agreement, the issues shall be submitted to the respective governments to address and resolve.

Article 37. Amendments, Modification, Supersession and Termination

This Agreement may be amended, modified, superceded or terminated by the mutual agreement of all parties hereto at the time of such action.

Article 38. Scope of Agreement

This Agreement shall consist of the Preamble and all provisions thereafter and amendments thereto, the Annexes, and all other agreements entered into by the Parties under this Agreement. Parties may enter into bi- or multi-lateral special agreements or arrange-
ments for implementation and management of any programs and projects to be undertaken within the framework of this Agreement, which agreements shall not be in conflict with this Agreement and shall not confer any rights or obligations upon the parties not signatories thereto, except as otherwise conferred under this Agreement.

Article 39. Additional Parties to Agreement

Any other riparian State, accepting the rights and obligations under this Agreement, may become a party with the consent of the parties.

Article 40. Suspension and Withdrawal

Any party to this Agreement may withdraw or suspend their participation under present Agreement by giving written notice to the Chairman of the Council of the Mekong River Commission, who shall acknowledge receipt thereof and immediately communicate it to the Council representatives of all remaining parties. Such notice of withdrawal or suspension shall take effect one year after the date of acknowledgment or receipt unless such notice is withdrawn beforehand or the parties mutually agree otherwise. Unless mutually agreed upon to the contrary by all remaining parties to this Agreement, such notice shall not be prejudicial to nor relieve the noticing party of any commitments entered into concerning programs, projects, studies or other recognized rights and interests of any riparians, or under international law.

Article 41. United Nations and International Community Involvement

The member countries to this Agreement acknowledge the important contribution in the assistance and guidance of the United Nations, donors and the international community and wish to continue the relationship under this Agreement.

Article 42. Registration of Agreement

This Agreement shall be registered and deposited, in English and French, with the Secretary General of the United Nations.

IN WITNESS WHEREOF, the undersigned, duly authorized by their respective governments have signed this Agreement.

DONE on 5 April 1995 at Chieng Rai, Thailand, in English and French, both texts being equally authentic in the case of any inconsistency, the text in the English language, in which language the Agreement was drawn up, shall prevail.
For The Kingdom of Cambodia:

Deputy Prime Minister and Minister of Public Works and Transport

For The Lao People’s Democratic Republic:

Minister of Foreign Affairs

For the Kingdom of Thailand:

Minister of Foreign Affairs

For the Socialist Republic of Viet Nam:

Ministry of Foreign Affairs
PROTOCOL TO THE AGREEMENT ON THE COOPERATION FOR THE SUSTAINABLE DEVELOPMENT OF THE MEKONG RIVER BASIN FOR THE ESTABLISHMENT AND COMMENCEMENT OF THE MEKONG RIVER COMMISSION

The Governments of the Kingdom of Cambodia, Lao People's Democratic Republic, Kingdom of Thailand, and Socialist Republic of Viet Nam, have signed on this day the AGREEMENT ON THE COOPERATION FOR THE SUSTAINABLE DEVELOPMENT OF THE MEKONG RIVER BASIN.

Said AGREEMENT provides for in Chapter IV the establishment of the Mekong River Commission as the institutional framework through which the AGREEMENT will be implemented.

BY THIS PROTOCOL, the signatory parties to the AGREEMENT do hereby declare the establishment and commencement of the MEKONG RIVER COMMISSION, consisting of three permanent bodies, the COUNCIL, JOINT, COMMITTEE and SECRETARIAT, effective on this date with the full authority and responsibility set forth under the AGREEMENT.

IN WITNESS WHEREOF, the undersigned, duly authorized by their respective governments have signed this Protocol.

DONE on 5 April 1995 at Chiang Rai, Thailand.

For The Kingdom of Cambodia:

[Signature]

Deputy Prime Minister and
Minister of Public Works and Transport

For The Lao People's Democratic Republic:

[Signature]

Minister of Foreign Affairs

For the Kingdom of Thailand:

[Signature]

Minister of Foreign Affairs

For the Socialist Republic of Viet Nam:

[Signature]

Ministry of Foreign Affairs