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## The Role of River Basin Organizations on the Damming of the Mekong and the Safeguarding of Fisheries

### Topic and Research Question

The Mekong River, flowing through six countries in mainland Southeast Asia and providing natural resources to the population of these countries, is being dammed. Thirteen hydropower dams have been completed in the mainstream river while an additional nine are being planned. Hydropower development projects on the mainstream river could fuel economic growth and reduce energy security issues but they can also result in environmental degradations for local ecosystems. Among them, fisheries are very vulnerable to hydropower dams being built on the mainstream river.

Preserving fisheries is important for the sake of environmental biodiversity but also for the sustenance of local populations who use fish for protein intake and as a source of additional income. Several authors reviewed also believe that the reduction in size of fisheries could result in economic trade-offs between the loss of fisheries and production of hydropower energy. However few solutions exist to stop governments of riparian countries to dam the river.

Local organizations might provide tools to reduce the effects of this phenomenon. Regional organizations in particular, especially River Basin Organizations (RBO) focus on these issues. Because they are relevant for this topic, three RBOs are being reviewed, the Mekong River Commission, the Greater Mekong Subregion Program and the Lancang-Mekong Cooperation Program. Their tools and actions will be assessed in Cambodia, China, Lao PDR and Vietnam.

### State of the Art

The state of the Art has been divided into four topics. The first looks into the literature relevant for water diplomacy and River Basin Organizations. Important points of this part is the role of Integrated Water Resources Management, for which Cook and Bakker (2012), Molle (2008) and Van Beek and Arriens (2016) were especially considered, while for the role of RBOs within water diplomacy, Lautze et al. (2013), Schulze and Schmeier (2012) and Schmeier (2015) were among the major works. The second is correlated to the structure and organization of RBOs. For this part, a review of several RBOs in the world was made. Many examples provided can be found in Kittikhoun and Schmeier (2020). The third part looks at the situation of the damming in the Mekong River Basin and the overall situation in this region. The literature for this part is

extensive and the most important sources were Campbell and Barlow (2020) Sarkkula et al. (2009), Urban, Siciliano and Nordensvard (2018) and Yoshida et al. (2020). Finally, the literature for tools and role of RBOs in this specific region was reviewed, for which various primary sources were used.

### Methodology and Approach

The analysis is based mostly on a comparative approach. The end goal is to assess whether the three RBOs can provide tools and platforms to discuss and solve issues related to damming and fisheries. This has been done mainly by looking at “endogenous” aspects, i.e. RBOs themselves, and “exogenous” aspects which are the political and socio-economic aspects of the region, when they are relevant for the analysis. The theoretical framework has been divided into three parts:

- *Structure of River Basin Organizations*
- *Situation in the Mekong Region and external aspects*
- *Tools and actions of River Basin Organizations*

The objective is to contrast the existing RBOs with the overall situation of the Mekong Basin and analyses whether they can provide tools and synergies for safeguarding fisheries and reduce the impacts of damming.

### Main Facts

The literature shows that the countries of the region are divided in several ways. On one side, the countries of mainland Southeast Asia do not form a unified block besides being members of ASEAN. Lao’s government is keen to ramp up its hydropower production in order to export electricity while Vietnam, at the tail end of the Mekong River, is concerned about the lack of sediment and the erosion of its delta. On the other end, China’s Belt and Road Initiative adds more complexity to the equation as the BRI promotes the construction of such infrastructure in the region. China itself built 11 dams on its part of the mainstream river while only two were built in the lower part of the river, in the Laotian territory.

It must be understood that, while governments of countries such as Cambodia and Lao are willing to build dams on the Mekong River and its tributaries, impacts on the environment exist and are fought by local NGOs and activists. Entities specialized in water resources management such as River Basin

Organizations can provide facts and resources to governments but also to the civil society, local NGO and local populations. According to Schulze and Schmeier (2012), RBOs in the world provide mostly mechanisms for **data-sharing, discussions and negotiations, dispute-resolutions and stakeholders’ involvement**. A part called “projects” was added to showcase concrete steps taken by RBOs for safeguarding fisheries and reduce damming.

There are numerous River Basin Organizations in the Mekong but the literature shows that three of them are influent and “owned” by countries in the region, as the analysis did not consider RBOs created by external powers such as the Lower Mekong Initiative, started in 2009 under impulsion of the USA. The RBOs considered were:

- *Mekong River Commission* : Established in 1957 under the name Mekong Committee, the MRC has developed advanced regulatory tools and showcases good practices for water resources management
- *Greater Mekong Subregion Program* : Created in 1992 by the Asian Development Bank, this RBO mostly focuses on economic development
- *Lancang-Mekong Cooperation*: Started in 2015 by China, this new entity has been very active in several domains including areas such as security and cultural exchanges, deviating from traditional RBOs

### Results

The analysis presented the following insights:

**General state of the Mekong River Basin:** Many countries have divergent intent and economic goals. ASEAN members are not united in a common vision for the river and the development of hydropower dams. On one hand countries such as Cambodia and Lao are willing to develop hydropower in the mainstream. On the other Vietnam is worried by the lack of sediment, which could result in less fish and erosion of the Delta. China has built 11 dams on its part of the Mekong and is pushing hydropower development through the Belt and Road Initiative.

**Effects of damming on fisheries of the Mekong:** The literature shows that damming the mainstream has negative effects on local fisheries. The main issues are the lack of sediment that is blocked by dam systems and obstacles that dams create for migratory fish.

Pessimistic estimates show that close to 90% of fish species might disappear if all planned dams are built while each dam might hinder 50% of fish going up, an effect that will add up with each dam. Lack of sediment is also believed to participate in the delta’s erosion.

**Mekong River Commission:** Having advanced mechanisms for data-sharing, the necessity of prior notification and consultation as well as a mechanism for stakeholder involvement, the MRC is still hindered by its weak regulatory tools and the non-membership of China and Myanmar. For these reasons, the MRC cannot provide effective tools to safeguard fisheries but provide tools for governmental and public consultation when new dams are built.

**Greater Mekong Subregion Program:** The ADB-dominated RBO has done well to integrate its member states and has been very active on projects and development programs. The focus on economic development and infrastructure has left environmental concerns aside and the GMS does not provide tools to safeguard fisheries.

**Lancang-Mekong Cooperation:** The China-dominated organization, linked to the BRI, has been extremely active since 2015, providing several seminars, trainings and projects on hydropower development. The large agenda of the RBO has severely reduced the importance of environmental issues. Following the BRI, infrastructure and economic development is prevalent. The importance of China in the RBO itself raises questions of independence and the role of other member states in the RBO.

### References

All references are available at [www.xy.at](http://www.xy.at)

### About the Author

Christophe Scheurer holds a Bachelor of Art in Chinese Language and Culture from the University of Geneva. He spent a year in Nanjing University to learn advanced Chinese language. He has several years of work experience in the public and private sectors in China and Switzerland.



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