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National Human Rights Commission  
Office of the National Human Rights Commission  
Government Complex Commemorating His  
Majesty the King's 80<sup>th</sup> Birthday Anniversary  
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Bangkok 10210

October 3, 2024

Regarding: The development of hydropower projects on the mainstream Mekong River in the Lao PDR

To: The Prime Minister

Attached documents: A summary of potential impacts on Thailand and the status of the four hydropower projects on the mainstream Mekong River in the Lao PDR.

The National Human Rights Commission of Thailand (NHRC) has received a complaint from citizens who are concerned that they will be affected by the development of four hydropower projects on the mainstream Mekong River in the Lao PDR. These projects stem from the electricity purchase process between Thailand and the Lao PDR. The projects are the Sanakham Dam, the Phu Ngoy Dam, the Pak Chom Dam, and the Ban Kum Dam. The petitioners have requested an investigation into potential human rights violations, as they fear that these projects will cause cross-border impacts and affect the way of life of Thai communities both upstream and downstream of the dams.

The NHRC has compiled and examined facts derived from the statements of relevant agencies, academics, experts, and members of civil society. The NHRC would thus like to inform you of concerns regarding the potential cross-border impacts of these projects on the Thai people. The latest status, considerations and recommendations are as follows:

1. Summary of potential cross-border impacts arising from the development of the projects

1.1 Environmental aspects: The construction of the dams may cause flooding in important areas and on agricultural land and riverbanks, erosion of riverbanks, impacts on the migration of aquatic animals, and overall impacts on the Mekong River ecosystem. In particular, the backflow of water from the Mekong River into the Mun River and other tributaries in Thailand will affect the management of water in the Pak Mun Dam and in tributary rivers. This will make it more difficult to solve the problem of recurring flooding in Ubon Ratchathani Province, which is an area that receives water from various rivers in Northeastern Thailand. It may also cause important places and tourist attractions

to be permanently flooded, such as the Ruean Sukhanthi (royal residence), Kaeng Tana National Park, and Pha Taem National Park in Ubon Ratchathani Province, and Kaeng Khut Khu in Loei Province, etc.

1.2 Hydrology and hydraulics: From the study and monitoring of transboundary environmental impacts from hydropower projects on the Mekong mainstream over the period of 2014-2018 (including electricity generation from the Xayaburi Dam) by the Office of National Water Resources, it was found that the release of water from dams on the mainstream Mekong River causes water flows to be faster and stronger and water levels to fluctuate rapidly. This causes more riverbank erosion, affecting the Mekong River ecosystem, which is rich in biodiversity.

These impacts particularly affect the ability of many species of large fish and local fish to lay eggs. In addition, this affects the viability of fishing methods that have been developed over hundreds of years through the wisdom of local people.

1.3 In terms of Thai-Lao border security, the construction of dams may cause changes in the deep-water channel, which would affect negotiations around the Thai-Laos border, which are still underway through the Joint Boundary Commission (JBC).

1.4 Regarding economic, social, and livelihood impacts, most people living along the banks of the Mekong River work in riverbank agriculture, fishing and tourism. If these areas are flooded due to the backwater effect, they will lose their main sources of income. In addition, changes in the direction of water flow will also affect farmers and citizens who need water for consumption.

1.5 In terms of public safety, the transboundary impact assessment data for these four projects is unclear. There is no advance warning system for dam storage and discharge, no preparedness plan or warning devices or a public warning system in case of an emergency.

## 2. The latest status of the four hydropower projects on the mainstream Mekong River

2.1 The Sanakham Hydropower Project is still in the Procedures for Notification, Prior Consultation and Agreement (PNPCA) process under the 1995 Mekong Basin Framework Agreement on Cooperation for the Sustainable Development of the Mekong River Basin, and is currently in the planning stage. The dam site would be approximately 2 kilometers from the Thai border.

2.2 The Phu Ngoy Hydropower Project: At the meeting of the Thai National Mekong River Commission on 22 April 2022, the project developers were requested to collect additional transboundary impact assessment data in the areas of hydrology and hydraulics, fisheries and ecology, and economic and social impacts so that the study is complete and covers all dimensions. The project has not yet entered the Prior Consultation (PC) process under the PNPCA procedures.

2.3 The Pak Chom and Ban Kum Hydropower Projects: At the 21 April 2021 meeting of the Thai National Mekong River Committee, it was resolved to approve a joint study of the development of hydropower dams on the Mekong River. The National Water Resources Office is urging the Lao PDR to draft a Memorandum of Understanding (MoU) on integrated water resources management between Thailand and the Lao PDR to be used as supporting information for further consideration of the project.

Further details may be found in the attached documents.

### 3. Considerations

3.1 The Constitution of the Kingdom of Thailand B.E. 2560 guarantees the rights of individuals and communities to participate with the state in the management and use of natural resources and the environment in a balanced and sustainable manner. Moreover, the International Covenant on Economic, Social and Cultural Rights guarantees the rights of individuals to live in a healthy environment. In addition, the 1995 Mekong River Basin Agreement on Cooperation for the Sustainable Development of the Mekong River Basin requires that member states agree to use water in a rational and equitable manner without affecting the sovereignty and territorial integrity of neighboring countries.

3.2 The Cabinet resolved to approve and announce the National Action Plan on Business and Human Rights (NAP) Phase 2 (2023 - 2027) on 25 July 2023. The plan emphasizes the importance of sustainable and environmentally friendly development, including international investment in development projects, and encourages the business sector to adopt comprehensive human rights due diligence (HRDD) principles in accordance with the UN Guiding Principles on Business and Human Rights (UNGPs).

3.3 Considering the facts and human rights principles detailed above, the NHRC is concerned that even though the hydropower projects on the mainstream Mekong River are being built and operated under the sovereignty of the Lao PDR, all four projects are located adjacent to Thailand and pose a high risk of cross-border impacts in terms of the environment, hydrology and hydraulics, fisheries, and economic, social, and livelihood impacts, particularly in Loei and Ubon Ratchathani provinces, as well as risks to border security and the territorial integrity of Thailand. In addition, the Thai government may have to build embankments to protect the banks of the Mekong River and its tributaries, which would be expensive (approximately 100 million baht per kilometer), as the projects may cause increased riverbank erosion. As for the role of the business sector, the project co-developers, which for all four projects are Thai registered juristic persons, are responsible for conducting business in line with human rights standards as set out in the UNGPs.

### 4. Suggestions

The NHRC therefore sees fit to make recommendations to the Prime Minister to instruct relevant agencies to take action to prevent potential problems as raised in the above concerns, as follows:

4.2.1 The Office of National Water Resources should propose that the National Mekong River Commission examine the information available on all aspects of cumulative impacts that have occurred since the construction of the Xayaburi Dam, as well as measures to prevent continuous impacts, to determine whether that information is complete. In doing so, National Mekong River Commission should take into account the equal importance of sovereignty and territorial integrity and respect for the rights and interests of others in considering implementation of the four projects, as they are at risk of violating the human rights of the Thai people and violating Thailand's sovereignty.

4.2.2 The Ministry of Energy should review the power purchase plan and the amount of Thailand's electricity reserves to determine that they are within the appropriate criteria and do not create a burden for Thai citizens. This should include consideration of alternative energy sources that do not cause social and environmental impacts and do not violate human rights.

4.2.3 The relevant agencies should oversee state enterprises and Thai investors to ensure that they are conducting business in line with human rights standards as follows:

1) The Ministry of Finance should stipulate that the provision of public services by state enterprises, including EGAT, must be subject to human rights risk and impact assessments in accordance with the UNGPs and as specified in the National Action Plan on Business and Human Rights Phase 2.

2) The Securities and Exchange Commission of Thailand (SEC) and the Department of Rights and Liberties Protection under the Ministry of Justice should take the necessary measures to ensure that the business operations of the developers of all four projects, which are Thai registered juristic persons, are in line with the UNGPs by preparing a comprehensive project impact and risk assessment report, including measures to mitigate impacts and prevent risks as consistent with human rights principles.

I thus submit this information for your consideration. I would be very grateful if you were to inform the NHRC of your response.

With deepest respect,

(Ms. Pornprapai Kanchanarin)

Chairwoman of the National Human Rights Commission

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## **A summary of the potential impacts on Thailand and the status of the four mainstream Mekong River hydropower projects in the Lao PDR.**

### **1. The Sanakham Hydropower Project**

#### **1.1 Project information**

The project would be located between Xayaburi Province and Vientiane, Lao PDR, 155 kilometers from Vientiane, and 83.7 kilometers downstream of the Pak Lay Hydropower Project. The dam construction site is located at a bend in the river 2 kilometers from the confluence of the Heuang River and the Mekong River, which is very close to the Thai border. The Sanakham Dam would be more than 900 meters wide, with a ship passage on the left (in the direction of the water flow), water drainage buildings on both sides, a power plant in the middle, and a fish passage near the bank of the Heuang River. It is one in a cascade dam projects, run of river type, with a power generation capacity of 684 megawatts. The water storage level in front of the dam is 220 meters above mean sea level (MSL). The dam crest is 56.20 meters high and 909 meters long.

#### **1.2 Project developers**

China Datang Overseas Investment Co., Ltd. (a Chinese registered legal entity) and Gulf Energy Development Public Company Limited (a Thai registered company).

#### **1.3 Potential impacts on Thailand**

- Severe erosion of the riverbank and loss of land along the Mekong riverbanks. Due to the project's location and physical characteristics, it will affect the direction of water flow. In particular, the rapid rise and fall of water will be a stimulus, causing the riverbanks to collapse more. With increased riverbank collapse, Thailand will have to allocate budget to build riverbank protection embankments along the entire length of the Mekong River (approximately 100 million baht per kilometer), which will also reduce the amount of sediment in the water.

- Changes in the deep-water channel will affect the demarcation of the Thai-Lao border, which will impact Thai-Lao border negotiations, which are still ongoing under the Joint Boundary Commission (JBC).

- Fisheries, ecosystem, and livelihood impacts will occur. Most people living along the Mekong River are riverbank farmers, fishers, and works in the tourist industry. If farming areas and important tourist attractions such as Kaeng Kut Ku are flooded, this will result in a loss of income for local people. Change in the direction of the water flow will also affect local fisheries in the Mekong River.

#### **1.4 Implementation under the Procedures for Notification, Prior Consultation and Agreement (PNPCA) in accordance with the 1995 Mekong Agreement**

-On September 9, 2019, the Lao PDR proposed the project through the Mekong River Commission Secretariat (MRCS) to enter into the Prior Consultation (PC) process under the PNPCHA.

- On 21 September 2020, the MRCS submitted the first draft of the Technical Review Report (TRR) to the Thai National Mekong Committee (TNMC).

-From September 2020 to June 2022, the TNMC did not receive TRR Report No. 1, No. 2, No. 2.1 or the final report.

- On October 29, 2021, the MRCS submitted a Rapid Assessment report.

-On January 19, 2022, Thailand rejected the termination of the PC process because the results of the study were unclear. Thailand was thus unable to hold an information forum within the country.

- May 3, 2022, Lao PDR submitted the Final Report on Optimization Study of Mekong Mainstream Hydropower in 2009 (CNR 2009) and the Pak Beng and Sanakham Feasibility Study Review 2015 (CNR 2015).

- On December 9, 2022, the MRCS submitted additional study reports, including Technical Report: Assessment of Hydraulics and Sediment Transport of Propose power Project (SNHPP) and Report for the Sanakham (Laos) Hydrographic Survey Cross Sections & River Sediment Sampling.

- On May 17, 2023, the MRCS submitted an updated and revised study report, consisting of Technical Report: Assessment of Hydraulics and Sediment Transport of Proposed Sanakham Hydropower Project (SNHPP) and Report for the Sanakham (Laos) Hydrographic Surveys of River Cross Sections & River Sediment Sampling.

- On June 9, 2023, the Academic Subcommittee under the TNMC adopted a resolution confirming that data on the transboundary impacts on hydrology, river morphology, ecosystems, fisheries, and socio-economic impacts are required.

-On August 30, 2023, the Office of National Water Resources (ONWR), as the Secretariat of the Thai National Mekong River Commission (TNMCS), held a technical meeting with the MRCS, the Lao National Mekong River Commission Secretariat, and the Lao Ministry of Energy and Mines to determine the project roadmap.

-On 22 April 2024, the 2/2567 meeting of the Academic Subcommittee of the National Mekong River Commission of Thailand was informed of the progress of the Prior Consultation process (PC) under the Procedures for Notification, Prior Consultation and Agreement (PNPCA) and the progress of the implementation of the work plan. The meeting jointly considered the relevant documents submitted by the MRCS for member countries to consider. The conclusions are as follows:

(1) The Technical Note for Assessment of Hydraulics and Sediment transport Proposed Sanakham Hydropower Project (revised in February 2024) is complete, and the information can be used for further work in other areas.

(2) The report on the collection of economic and social data is still incomplete. It is recommended that the MRCS conduct further studies, and the ONWR will coordinate with the MRCS periodically. When the documents are complete, the ONWR will submit them to the National Mekong River Commission of Thailand.

### 1.5 Current status

Waiting for additional economic and social study data from the MRCS.

## 2. The Phu Ngoy Dam Hydropower Project

### 2.1 Project information

The location is between the Ban Kum Dam and Don Sahong Dam in Pakse, Champasak Province, Lao PDR, 61 kilometers from the confluence of the Mekong River and the Mun River in Khong Chiam District, Ubon Ratchathani Province, and 52 kilometers from the Thai border in Ubon Ratchathani Province along the Mekong River. It is a run of river dam with a power generation capacity of 728 megawatts. The dam has power plants on both sides, which is different from other dams. The water storage level in front of the dam is 98 meters. The emphasis is on storing water in the Mekong River for a length of 80 kilometers.

### 2.2 Project developers

Charoen Energy and Water Asia Co., Ltd. (a Thai registered company), in a joint venture with a Korean registered legal entity.

### 2.3 Potential impacts on Thailand

- The backwater effect from the Mekong River flowing into the Mun River and its tributaries in Thailand will affect the management of the Pak Mun Dam and tributary rivers. Solving the recurring flooding problem in Ubon Ratchathani Province will also become more difficult, as it is an area that receives water from various rivers in the northeastern region of Thailand before flowing into the Mekong River.

- In terms of hydrology and hydraulics, when a backwater effect occurs, the water in the river becomes stagnant, causing the sediment in the river to decrease. This will affect the Mekong River ecosystem, which is rich in biodiversity, and will especially impact a large number of large fish and local fish, which not be able to lay their eggs. Importantly, it will affect deep-water whirlpools where fish reside. If sediment does not flow into these deep-water whirlpools, the fish will not be able to survive. In addition, the centuries-old fishing methods developed through the wisdom of local fishers my no

longer be viable. One example of this is the use of *luang* in the Mekong River basin, which is a public area where fish naturally reside with rules for the shared use of fishery resources jointly managed by communities on both the Thai and Lao sides of the river.

-Changes may occur in the deep-water channel affecting the Thai-Lao border demarcation, as with construction of the Sanakham Dam. This includes changes to the islands in the Mekong River, as changing water currents will affect the deep-water channel.

-In terms of fisheries, the ecosystem, community livelihoods, most people living along the Mekong River work as riverbank farmers and fishers. If these areas are flooded by the backwater effect, there will be a loss of income. Also, important places and tourist attractions such as Ruean Sukhanthi (royal residence) and Kaeng Tana National Park, which are important sources of plant species, may be affected by the backwater effect and be submerged.

#### 2.4 Implementation under the Procedures for Notification, Prior Consultation and Agreement (PNPCA) in accordance with the 1995 Mekong Agreement

- In 2020, Lao PDR submitted the Phu Ngoy dam project to the MRCS, but at that time, the Sanakham dam project was still in the PNPCA process. Therefore, the MRC Joint Committee could not accept the Phu Noi dam project into the process until consideration of the Sanakham dam project was completed.

- In 2022, the TNMCS received initial documents for the Phu Ngoy dam project, consisting of the Feasibility Study Report and the Environmental and Social Impact Assessment (ESIA) Report. Since the project has not yet entered the PNPCA process and based upon the experience of past projects, the TNMCS wanted to consider the documents thoroughly. It has thus requested some additional documents, and in 2023 the MRCS sent an additional Supplementary Report.

- In 2024, the 2/2567 meeting of the Academic Subcommittee under the National Mekong River Commission of Thailand on 22 April 2024 resolved to acknowledge the progress on the implementation of the plan. It is now at the stage where the project developers are collecting additional information as recommended, and assessing the cross-border impacts. They will submit these documents to the MRCS for consideration before sending them to member countries. However, the project has not yet entered the PC process under the PNPCA procedures, and the meeting jointly considered the relevant documents that the MRCS sent to member countries for consideration, with the following conclusions:

(1) The final report document is a simulation of the flooding conditions of the Phu Ngoy dam project. During the meeting, it resolved to review the base year used to simulate the situation. It was determined that the simulation should use a year that reflects the impacts on the drainage of the Mun River, or the year with the highest water volume in the Mun River, which is expected to be in 2022.



(2) The Draft Fisheries Explanatory Document (April 2024 edition) and the Draft Economic and Social Explanatory Document are not complete and lack clarity on some issues.

## 2.5 Current status

- The Lao PDR is preparing to submit the project to the PNPCA process.

- ONWR is in the process of coordinating to request additional information from relevant parties and informing the MRCS to request the project developers to revise the above documents. If the relevant documents are found to have complete information, ONWR will submit them to the TNMC.

## 3. The Pak Chom Dam and Ban Kum Dam projects

### 3.1 Information on the Pak Chom Dam and Ban Kum Dam projects

3.1.1 The Pak Chom Dam project is located on the Mekong River between Thailand and the Lao PDR at Ban Kok Wa, Hat Khamphi Sub-district, Pak Chom District, Loei Province. It is located between the Sanakham Dam and the Ban Kum Dam, and has a power generation capacity of 1,079 megawatts.

3.1.2 The Ban Kum Dam project is located on the Mekong River between Thailand and the Lao PDR in the Ban Kum area, Huai Phai Sub-district, Khong Chiam District, Ubon Ratchathani Province, and is between the Pak Chom Dam and the Phu Ngoy Dam. It has a power generation capacity of 2,000 megawatts and the water storage level in front of the dam, according to a study conducted by the Thai Ministry of Energy, is 192 m. MSL.

### 3.2 Developers of the Pak Chom Dam and Ban Kum Dam projects

Energy Absolute Public Company Limited (a Thai registered juristic person), Vega Digital Public Company Limited (a Thai registered juristic person), Charoen Sekong Energy Public Company Limited (a Lao registered juristic person) and PSI Solutions Public Company Limited (a Lao registered juristic person) are jointly developing both projects.

### 3.3 Possible impacts on Thailand

- Backwater effects along the Mekong River
- Flooding in Pha Taem National Park and areas along the Mekong River
- Impacts on border security and changes to the Thai-Lao border
- Impacts on fisheries, the ecosystem, and livelihoods
- Out-migration of villagers living along the Mekong River

### 3.4 Implementation under the Procedures for Notification, Prior Consultation and Agreement (PNPCA) according to the 1995 Mekong Agreement

-On July 29, 2020, Energy Absolute Public Company Limited informed the Securities and Exchange Commission of Thailand about the signing of a Memorandum of Understanding (MOU) with the Government of the Lao PDR to conduct a feasibility study and be a co-developer of the Pak Chom Dam and the Ban Kum Dam projects.

- On January 10, 2022, Energy Absolute Public Company Limited sent a letter to the Governor of Loei Province to request to survey the project area. However, Loei Province has requested to postpone the operation because there is no information indicating the cooperation framework between Thailand and Laos, and this may affect the relationship between the two countries as well as border security.

### 3.5 Current status

The latest status of both projects: At the TNMC meeting No. 1/2021 on 21 April 2021, it was resolved to approve a joint study of the development of hydropower dams on the Mekong River. The ONWR is expediting the Lao PDR to draft a Memorandum of Understanding (MOU) on integrated water resources management between Thailand and Lao PDR to be used as information for consideration of future projects. As of 2024, there has been no progress on this matter.