

Lancang-Mekong Cooperation Special Fund Projects

Study of Environmental Focus Issues in the Lancang-Mekong Subregion (2019)



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Foreword

The six countries connected by the Lancang-Mekong River, namely China, Myanmar, Laos, Thailand, Cambodia, and Vietnam, are natural partners because of high economic relevance and complementarity. The Lancang-Mekong Cooperation (LMC), as a new subregional cooperation mechanism, adheres to cooperation under a multi-participatory framework in line with the principles of consensus, voluntariness, equality and mutual benefit. It not only deepens the geographical relationship between the Mekong countries and China, but also bolsters the economic development of all the riparian countries. A series of small and medium-sized cooperative projects have been implemented, basically with progress and results delivered daily, monthly and annually. Since the establishment of the LMC mechanism, the member states have become more enthusiastic about cooperation and economically integrated. The subregional cooperation has gained a positive momentum of progressing steadily while maintaining stability.

The Lancang-Mekong region is a hot spot for global economic and social development and one of the most biodiverse regions in the world. Local countries and neighboring countries are actively pushing for cooperation mechanisms in the field of ecological environment in the region. Since 2019, China has played an increasingly prominent role in the construction and development of the ever closer Lancang-Mekong environmental cooperation mechanism. As a major contributor to the Lancang-Mekong Cooperation Special Fund, China has provided the Mekong countries with strong economic and technical support in environmental cooperation. This has accelerated the sustainable development of the LMC member states, and produced many beneficial outcomes on the issues of environmental cooperation and climate change.

At present, the LMC mechanism is being aligned with China's Belt and Road Initiative and the Mekong countries' development strategies, and harmonized with the Master Plan on ASEAN Connectivity 2025 to deepen cooperation between China and ASEAN. The Lancang-Mekong environmental cooperation is at a critical stage of transition from cultivation to development. It is necessary to further elevate and expand cooperation to other fields while taking into account the coordination between cooperation mechanisms in the Mekong River Basin. In the face of the impact of ongoing international unilateralism and protectionism, the six riparian countries located in the wind gap area of China-US trade friction have a more urgent need to jointly address external challenges by enhancing regional cooperation on an open, inclusive, reciprocal, and win-win basis.



Chapter 1 New progress in Lancang-Mekong environmental cooperation

1.1 Formal adoption of the Lancang-Mekong Environmental Cooperation Strategy (2018–2022)

In order to implement the outcome documents of the LMC Leaders' Meeting and strengthen the top-level design for the Lancang-Mekong environmental cooperation, the Lancang-Mekong Environmental Cooperation Center (LMEC) mobilized the six riparian countries to jointly draft the Lancang-Mekong Environmental Cooperation Strategy (2018–2022). The document set down the objectives, principles, priority areas, and implementation mechanisms of the Lancang-Mekong environmental cooperation, serving as a guide to the specific projects. After multiple rounds of negotiations, the Lancang-Mekong Environmental Cooperation Strategy (2018–2022) was formally adopted in March 2019.

The nine priority areas identified by the Lancang-Mekong Environmental Cooperation Strategy (2018–2022) include environmental policy dialogue and cooperation, environmental capacity building, ecosystem management and biodiversity conservation, climate change adaptation and mitigation, urban environmental governance, rural environmental governance, environmentally friendly technology and environmental protection industry, environmental data and information management, environmental education and public awareness. As the main implementing agency, the LMEC will continue to push forward the Green Lancang-Mekong Initiative in support of the strategy.

1.2 Progress in the Green Lancang-Mekong Initiative as the flagship project

Guided by the Lancang-Mekong Environmental Cooperation Strategy (2018–2022), the LMEC has launched the Green Lancang-Mekong Initiative as the flagship project, encompassing policy dialogue, environmental policy mainstreaming, capacity building, and demonstration projects and partnerships. Cooperation in such an innovative form has yielded fruitful results.

1. Regional policy dialogue

(1) Roundtable dialogue on strategic impact assessment policies. To support the Second Lancang-Mekong Week under the LMC Mechanism, the Lancang-Mekong Environmental Cooperation Roundtable Dialogue on the Outlook for Strategic Impact Assessment took place in Kunming, Yunnan from March 20 to 22, 2019. At the same time, parallel sessions were organized on topics such as Lancang-Mekong freshwater ecosystem health management and jointly building the green Lancang-Mekong economic development belt (industrial park planning and sustainable development). These meetings provide support for the design of future projects.

(2) Roundtable dialogue on jointly building the green Lancang-Mekong economic development belt. In order to promote pragmatic Lancang-Mekong environmental cooperation, the Strategic Dialogue on Green Lancang-Mekong Economic Development Belt was held under the Green Lancang-Mekong Initiative in Nanjing, Jiangsu on December 5, 2019. The meeting included dialogues and exchanges on topics such as green development policy and experience sharing, and green development and eco-industrial park cooperation.

(3) 2019 Lancang-Mekong Night environmental cooperation exchanges. Under the guidance of the Ministry of Ecology and Environment (MEE) of China and the LMC China Secretariat, the environmental cooperation exchanges were conducted as a part of 2019 Lancang-Mekong Night in Beijing on September 6, 2019. Through exchanges with the representatives of the embassies of the Mekong countries in China, the Chinese delegate disseminated the achievements of the Lancang-Mekong environmental cooperation to promote the joint construction of a green economic development belt in the Lancang-Mekong River Basin.

2. Regional environmental capacity building

(1) Capacity building on industrial environment governance/water environment monitoring. The Capacity Building on Industrial Environmental Governance/Water Environment Monitoring of the Green Lancang-Mekong Initiative was held in Nanning, Guangxi. The capacity building courses covered water pollution management and policy, water resources management, urban water supply and drainage treatment technology, township sewage treatment technology, groundwater and sludge treatment technology, and water environment monitoring technology. Under the guidance of lecturers, participants from the five Mekong countries carried out learning exchanges and field visits.

(2) Capacity building on ecological remote sensing. From November 29 to December 4, 2019, Ecological Remote Sensing Capacity Building of the Lancang-Mekong Countries was held under the Green Lancang-Mekong Initiative in Wuhan, Hubei, focusing on environmental remote sensing monitoring methods and the demonstration in the Lancang-Mekong region. Representatives of Chinese academic institutions were invited to demonstrate the application prospects of remote sensing and geographic information technologies in regional environmental monitoring, management, planning for the students of the five Mekong countries.

(3) Lancang-Mekong Environmental Cooperation Scholarship Program as an innovative capacity building project of the Lancang-Mekong environmental cooperation. In order to innovate the form and content of the Lancang-Mekong environmental cooperation and mobilize partnerships and social resources to support regional environmental cooperation, the LMEC and Bossco Environmental Protection Technology Co., Ltd., launched the Lancang-Mekong Environmental Cooperation Scholarship Program (with a total of five million yuan) under the Green Lancang-Mekong Initiative during the Lancang-Mekong Week in March 2019. Such government-led, socially supported model of international environmental cooperation has produced preliminary results with positive demonstration and leading effects.

3. Environmental policy mainstreaming

(1) Joint research to promote the mainstreaming of environmental policies. The Research Report on Hainan Province's Participation in the Lancang-Mekong Environmental Cooperation Strategy was completed in cooperation with the Hainan Academy of Environmental Sciences. In addition, a group of studies have been conducted with the support of relevant research institutes, including Lancang-Mekong water environment standards and guidelines for textile industrial parks, training for Lancang-Mekong ecological remote sensing capacity building, Lancang-Mekong data collection and analysis and technology cooperation capacity building in water resources, Lancang-Mekong water quality improvement capacity building, investigation and research on Lancang-Mekong water pollution and environmental management, evaluation of China-Laos clean water plan under the Green Lancang-Mekong Initiative, and environmental remote sensing analysis of typical cases of Laos-Myanmar hydropower development projects. These joint studies provide data support for the Lancang-Mekong environmental cooperation in the later period.

(2) Feasibility study on the aid project of environmental protection planning. Entrusted by the China International Development Cooperation Agency (CIDCA), LMEC carried out a field investigation in Vientiane, Laos, September 2019, for the feasibility study on the aid project of land resources and environmental protection planning. It made clear the proposed environmental protection planning and the main technical standards, planning contents and related parameters. At the same time, the team conducted a suitability evaluation on the carrying capacity of resources and the environment, a preliminary analysis of the basic conditions of environmental protection planning, and a cost estimate of planning preparation; and demonstrated the necessity, feasibility, and aid effect of the project from a macro perspective.

4. Demonstration projects of the Green Lancang-Mekong Initiative

Demonstration projects of the Green Lancang-Mekong Initiative have been advanced, noticeably the China-Laos Clean Water Plan Demonstration Project and the China-Laos Atmospheric Environment Automatic Monitoring Demonstration Project. Laos, as the co-chair of the Third LMC Leaders' Meeting, has a strong desire to participate in the Lancang-Mekong environmental cooperation, especially in urban sewage treatment demonstration and atmospheric environmental monitoring. Considering the work on Lancang-Mekong environmental cooperation and the needs of the Lao side, the LMEC conducted further exchanges with the Lao delegation on the above-mentioned demonstration projects during the roundtable dialogue in March 2019. Furthermore, it went to Laos in July and November 2019 to discuss the two demonstration projects and related matters with the Ministry of Natural Resources and Environment of Laos and the National University of Lao. The delegate negotiated on the letter of intent for cooperation, and visited the equipment installation sites to promote the demonstration projects as soon as possible.



Chapter 2 Development trends of regional environmental cooperation mechanisms

At present, the various cooperation mechanisms led by countries and organizations outside the region become more and more active in the Mekong River Basin. External countries have been attentive to and involved in the affairs of the Mekong River Basin out of the consideration to increasing their own regional influence and counterbalance to China while helping the five Mekong countries to strengthen national economic strength and enhance subregional integration. These cooperation mechanisms are similar in project and functional development, which impairs the benign competition and cooperation. Among cooperation mechanisms spontaneously formed by local countries, the Greater Mekong Subregion (GMS) Economic Cooperation Program has a greater influence. In terms of external countries, the United States, Japan, and South Korea have carried out specific project cooperation in the Mekong region. The Lower Mekong Initiative (LMI) led by the United States, the Japan-Mekong Summit led by Japan, and the Korea-Mekong Summit led by South Korea reflect that these parties attach high importance to environmental issues in the Mekong River Basin.

2.1 Environmental cooperation under the GMS Economic Cooperation Program

The GMS Economic Cooperation Program is a regional cooperation mechanism initiated by the Asian Development Bank (ADB) in 1992. Environment was identified as one of the focus areas in 1995. Environmental cooperation under the GMS mechanism is mainly divided into two levels: working group on environment meetings and environment ministers' meetings. The working group on environment (WGE), set up in 1995, convenes an annual meeting and a semi-annual meeting each year to specifically coordinate the development and implementation of environmental projects. The environment ministers' meeting is held once every three years, and five sessions have been held so far. ADB provides financing channels and grants for the ADB-led GMS environmental cooperation, and has developed and implemented the Core Environment Program (CEP) Phases I and II. In December 2019, ADB passed the report on Phase III project GMS Climate Change and Environmental Sustainability Project (CCESP).

In April 2019, the GMS Working Group on Environment 24th Annual Meeting took place in Kunming, China. The ADB representative proposed that the CEP Phase III will be renamed CCESP and will seek the CEP Phases I and II achievements to support the implementation of the GMS CEP Strategic Framework and Action Plan (2018–2022). CCESP is expected to deliver three outcomes: (1) Adoption of more green technologies and sustainable infrastructure in the GMS countries; (2) Increased investment in natural resources and environmental system services; and (3) Integration of climate change and disaster risk management into industrial investment plans. The project name has been changed to reflect the emerging needs, opportunities, and priority tasks of the GMS countries. CCESP conforms to the priority of "tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability" set out in the ADB's Strategy 2030, and helps the GMS countries to achieve the Sustainable Development Goals (SDGs) and the intended nationally determined contributions (INDCs) to the Paris Agreement on climate change.

The CCESP themes include advanced technologies for climate actions and environmental sustainability; financing low-carbon and climate-resilient infrastructure and technologies; pollution control and sustainable waste management; climate-smart ecosystem landscapes; low-carbon transition in agriculture, energy, and transportation sectors; and climate change adaptation and disaster risk reduction. The proposed technical assistance will support the following three types of activities: (1) Investment preparation and financing support; (2) Knowledge management support and technology application; and (3) Policy and strategic planning support. The five-year CCESP project will require an investment of 24–25 million US dollars, of which three million US dollars will be provided by the ADB grants and the rest financed by multiple sources including the Global Environment Facility (GEF), Green Climate Fund (GCF), and bilateral assistance.

2.2 United States-led Lower Mekong Initiative

The Lower Mekong Initiative is a United States-led mechanism for regional cooperation with Mekong countries. In order to promote this initiative, the United States established the Friends of the Lower Mekong, including Australia, New Zealand, the World Bank, the ADB, Japan, South Korea, and the European Union.

On August 3, 2019, the United States Secretary of State Pompeo hosted the Lower Mekong Initiative Ministerial Meeting with the five Mekong countries in Bangkok, Thailand. He outlined new efforts to boost the energy and security of the five Mekong countries that fortify the United States commitment to a free and open Indo-Pacific region, and also expressed concerns about China's actions on controversial issues such as the South China Sea and the Mekong dams. Pompeo announced that the United States will launch the Japan-United States Mekong Power Partnership with an initial commitment of 29.5 million US dollars to develop regional power grids; and the United States plans to provide 14 million US dollars in assistance to the Mekong countries to counter transnational crime and trafficking.

At present, the common long-term objectives of the United States and the five Mekong countries in the environmental field include understanding the impact and effectively tackling

climate change; preventing infectious diseases; expanding the application of technology in education and development, especially in rural areas; and infrastructure development. When it comes to specific environmental issues, the United States has introduced a series of policy measures to assist the lower Mekong countries.

1. Establish basin environmental management partnership

The Mekong River Commission and the Mississippi River Commission have established the Sister River Partnership to exchange experiences in areas of common concern, including climate change adaptation, flood and drought control, hydropower and environmental impact assessment, water source needs and food safety, and water resource protection and management. To this end, the United States Geological Survey (USGS) is developing a model analysis software that can be used to analyze and predict climate change and other environmental challenges to the lower Mekong ecosystem.

2. Enhance environmental education

The United States education-related aid to the Mekong countries reached nearly 15 million US dollars in 2014. The United States supports 1,000 academic exchange programs for students in the Mekong region, of which no less than 20% of the quota are designated for environmental education and training.

3. Scale up investment and scientific investigation

The United States regards the Lower Mekong Initiative as an authoritative forum for cooperation with the lower Mekong countries to overcome the challenges currently faced by public health, infrastructure construction, environmental protection, and education. It also pledges to provide the Mekong River Commission with two million US dollars in aid for the fishery program and one million US dollars for the research on impacts of upper Mekong hydropower projects on the Mekong ecological environment.

In January 2019, the five-year Mekong Security Project was launched. It aims to promote unified investment and environmental protection standards for infrastructure construction in the Mekong region; to strengthen the social and environmental compliance management of infrastructure construction in the Mekong region; and to bolster the effective integration of regional economic and environmental policies. The project is mainly implemented in China, with relevant research activities carried out in the Mekong countries (Cambodia, Laos, Thailand, and Vietnam).

2.3 Japan-Mekong environmental cooperation

Japan has been trying to play a more important role in environmental affairs while actively pursuing environmental influence in the Mekong region. It has strengthened environmental cooperation with the Mekong region through official development assistance (ODA), hoping to establish a Japan-led Region of Hope and Development under the principles of trust, development and stability. Since the 21st century, Japan has begun to institutionalize cooperation with the Mekong countries, and continued to expand its influence of environmental assistance at the institutional level.

On November 4, 2019, the 11th Japan-Mekong Summit took place in Bangkok, Thailand. The meeting adopted the Joint Statement of the 11th Japan-Mekong Summit and the Japan-Mekong Initiative for Sustainable Development Goals towards 2030. During the meeting, heads of the states agreed to further strengthen alignment, emphasizing the importance of combining economic development with protecting the environment, reducing the impact of climate change, improving the resilience to climate change, and effectively managing and using Mekong water resources. The cooperation with the Mekong River Commission will be strengthened to implement the Green Mekong Initiative and the Japan-Mekong Initiative for Sustainable Development Goals towards 2030, and apply the achievements of the Fourth Industrial Revolution to promote economic and social development in the Mekong River Basin.



2.4 Korea-Mekong environmental cooperation

Korea, as a regional medium power, is also actively involved in the development projects of the Mekong countries. The Korea-Mekong Foreign Ministers' Meeting have been held nine times since the first in October 2011. With the support of the Korea-Mekong Cooperation Fund, a three-year action plan was launched in 2014, and has made some progress in cooperative projects for ports, information and communications technology (ICT), culture, education, forest protection, and sustainable agriculture.

On November 27, 2019, the First Korea-Mekong Summit was held at the Busan Convention and Exhibition Center, South Korea. At the meeting, heads of the five Mekong countries and Korea signed the Mekong-Han River Declaration to strengthen bilateral cooperation and build partnership for people, prosperity, and peace. The declaration stipulated cooperation between the two sides to achieve peace on the Korean peninsula and to share economic development experience for common prosperity. It identified seven new priority areas, including culture and tourism; human resources development; agriculture and rural development; infrastructure; ICT; environment; and non-traditional security challenges. The summit marked that the Korea-Mekong cooperation mechanism has been raised to the head-of-government level and the Korea-Mekong cooperation has entered a new historical stage.

Environment is an important area for cooperation between Korea and the Mekong countries. The Mekong-Han River Declaration issued at the Korea-Mekong Summit 2019 outlined the areas of Korea-Mekong environmental cooperation, including water resources management, biodiversity, forest management, environmental infrastructure, and climate change.

1. Water resources management

On cooperation in water resources management, the declaration made it clear to "Establish the Mekong-Korea Water Resources Joint Research Center in the Korea and continue cooperative projects to promote and improve the Mekong-Korea cooperation on sustainable and integrated water resources management to ensure the sustainability of Mekong River Basin development and to address the common challenges in the region; Welcome the joint efforts to enhance the cooperation in water resources management by signing an Memorandum of Understanding on water resources joint research among the Korea, the Mekong River Commission, and the related organizations in the Mekong countries." Water resources have always been a priority area of cooperation between Korea and the Mekong countries. Korea has supported Laos and Cambodia in succession to reform the Mekong River through assistance. The Korean government announced in 2008 to provide Laos with a 40 million US dollar credit from the Korea-Mekong Cooperation Fund to support the development projects in Vientiane along the Mekong River, together with Korea's mature experience in river management in a substantial assistance. During Moon Jae-in's visit to Laos in September 2019, heads of the two sides decided to further scale up the comprehensive management project for the Mekong river banks.

Korea Water Resources Corporation (K-water) plays an important role in the water resources corporation between Korea and the Mekong countries. On November 21, K-water stated that it will sign the Korea-Mekong Water Resources Management Cooperation Agreement with the five Mekong countries after the Korea-ASEAN Special Summit. On November 29, it established the Korea-Mekong Water Resources Joint Research Center at the K-Water Institute. K-Water said that the center will carry out practical research and technical exchanges, such as the exchanges between researchers from Korea and the Mekong countries, the education and training of engineers from various countries, and the relevant joint research.

2. Biodiversity

On biodiversity cooperation, the summit agreed to "establish the Mekong-Korea Biodiversity Center to contribute to biodiversity conservation in the Mekong subregion

and sustainable utilization of biological resources in a fair and equitable way for mutual cooperation and green growth development." During the summit, the National Institute of Biological Resources (NIBR), a subsidiary of the Ministry of Environment of Korea, hosted a special exhibition on biodiversity cooperation between Korea and the Mekong countries. The exhibition highlighted the rich biological resources of the Mekong region and their important role in the Korean skin care and cosmetics industry. Through joint research and donation activities, the NIBR researchers obtained 200 specimens of wildlife in the Mekong region, including the endangered Burmese star tortoises and sloths, and published 19 illustrated guides of species in the exhibition. The Mekong-Korea Biodiversity Center, proposed to be set up under the NIBR, will carry out research on biodiversity conservation in the Mekong River region and research on sustainable utilization of biological resources to support Korea economic development.

3. Forest management

On forest management cooperation, heads of the six countries pledged to "support the Peace Forest Initiative proposed by Korea to enhance peace and confidence-building through cooperation on the rehabilitation and restoration of degraded land and forest and strengthen forest cooperation to promote sustainable development in the region and to cope with challenges caused by natural disasters in forest, under the framework of the Korea-Mekong Forest Cooperation Center and the Asian Forest Cooperation Organization." The Korea-Mekong Forest Cooperation Center has been established to create a stable environment for Korea's overseas forest investment and revitalize the forest investment of the private sector. To achieve the goals, the center will serve as bridge in developing forest planning and investment cooperation with the Mekong countries in support of Korean forest investment companies and establishing a cooperative network through the operation of the Forest Policy Committee.

4. Environmental infrastructure and climate change

In addition, the Mekong-Han River Declaration stated that the two sides will strengthen cooperation in environmental infrastructure and climate change. In August 2008, the then President of South Korea, Lee Ming Bo, launched the Low-carbon and Green Growth Strategy for economic revitalization. In order to expand the influence of this strategy, the Korean government encourages the domestic organizations to actively "go out" and drive the green and low-carbon growth of surrounding developing countries. The East Asia Climate Partnership implemented by the Korea International Cooperation Agency aims to assist developing countries in tackling climate change and achieving green growth. Following the large-scale flooding in Laos, the Global Green Growth Institute and the Department of Climate Change of the Ministry of Natural Resources and Environment of Laos brought together city leaders and stakeholders in November 2019 to discuss climate change, the importance of urban development, and the response of sustainable cities to the impact of climate change. In addition, Korea and Myanmar have carried out cooperation on climate change in recent years, such as forest management capacity building to cope with climate change. The Climate Change Center of Korea has teamed up with the Ministry of Agriculture, Livestock and Irrigation of Myanmar to donate climate change mitigation materials such as high-efficiency stoves.

Chapter 3 New trends in the LMC development

The Lancang-Mekong environmental cooperation stands as an important regional environmental cooperation mechanism that is open and inclusive with both regional and global effects. It has given rise to a preliminary pattern of cooperation featuring the leadership of China and active engagement of the riparian countries. By fully mobilizing relevant stakeholders, this innovative model of regional environmental cooperation will embrace greater opportunities for development in the future, detailed as follows:

3.1 Openness and inclusiveness

The Lancang-Mekong environmental cooperation is both open and inclusive. First, with an open and inclusive attitude towards the riparian countries, the LMC mechanism fully mobilizes the enthusiasm and participation of the riparian countries in environmental cooperation to create an environmental cooperation platform for equitable participation and friendly consultation. Second, on relation to other mechanisms and regions, the establishment of the LMC mechanism does not mean the replacement of the existing environmental cooperation mechanisms such as the GMS. Maintaining an open and inclusive attitude, the Lancang-Mekong Environmental Cooperation welcomes institutions from countries in the Lancang-Mekong region and beyond to participate in the discussions and promote the implementation of the Lancang-Mekong Environmental Cooperation Strategy (2018–2022), as well as the SDGs by 2030.

3.2 Regional and global effects

The Lancang-Mekong environmental cooperation has both regional and global characteristics. On the one hand, the LMC mechanism marks the first subregional cooperation mechanism established by the six riparian countries based on the principles of consultation, joint contribution, and shared benefits. It provides a new platform for South-South cooperation, and can truly reflect the development needs of the riparian countries. In the process of environmental cooperation, the six countries can conduct discussions on topics of concern. The Lancang-Mekong Environmental Cooperation Strategy (2018–2022) and the Green Lancang-Mekong Initiative jointly adopted by the riparian countries draw a beautiful blueprint for harmonizing economic development and environmental protection in the riparian countries and jointly building a green economic development belt in the Lancang-Mekong River Basin. On the other hand, the LMC mechanism represents the world's first concrete action to respond to the Post-2015 Development Agenda adopted by the United Nations Summit. Environmental cooperation under this mechanism also offers a new platform for exploring and promoting South-South environmental cooperation. The in-depth development of the Lancang-Mekong environmental cooperation will inject a powerful impetus to jointly building the green Lancang-Mekong economic development belt. Rising as an excellent model of global green development, the Lancang-Mekong environmental cooperation will produce a positive impact and demonstration effect on a global scale.

3.3 China-led cooperation pattern with active engagement of the riparian countries

In recent years, China has carried out multiple diplomatic events, including launching the Belt and Road Initiative International Green Development Coalition and hosting the World Environment Day 2019 activities and the upcoming 15th Conference of Parties to the Convention on Biological Diversity. It has also got actively involved in international negotiations to address climate change. All these efforts fully demonstrate China's role as an important participant, contributor, and torchbearer in building the global ecological civilization. China's breakthrough progress in environmental governance has aroused strong interest in the Mekong countries and produced strong demonstration effect. Cambodia and

Laos have initiated with China, the preparations for the China-Cambodia Environmental Cooperation Center and the China-Laos Environmental Cooperation Project Office respectively, in a pragmatic effort to advance the establishment of a green community. Myanmar, Thailand, and Vietnam also take an active part in the relevant activities under the Lancang-Mekong environmental cooperation, expecting to enhance their level of green development. A pattern of cooperation led by China and actively participated by the riparian countries has initially taken shape.

3.4 Multi-stakeholder participation

The core principles of the LMC mechanism are consultation, joint contribution, and shared benefits. Both cooperative planning and project setting are jointly decided by the six riparian countries through equal consultation to directly reflect the actual interests and needs of each country. Upholding these principles, the LMEC has actively strengthened exchanges with relevant government departments, research institutions, enterprises, and international organizations, and continued to expand partnerships for exploring and mobilizing more international resources and social forces as financing sources. It has initially constructed a regional environmental cooperation network for sustainable development, which paves a solid foundation for boosting the Lancang-Mekong environmental cooperation.

3.5 Innovative regional environmental cooperation model

In view of the limited fiscal support for environmental cooperation demonstration projects, taking into account project sustainability and more pragmatic cooperation, the LMEC has actively sought and explored social resources and fully leveraged private capital through careful design. It has fostered a preliminary model of regional environmental cooperation characterized by government guidance and social support. By facilitating the participation of Chinese enterprises, the model creates a diversified, stable, and sustainable capital investment mechanism to improve the capacity building of the Lancang-Mekong environmental cooperation towards a flagship project of regional environmental cooperation.



Chapter 4 Potential challenges for the Lancang-Mekong environmental cooperation

4.1 The tight strategic competition between China and the United States has intensified regional geopolitical game, adding the risk of regional conflicts arising from environmental protection.

Since taking office, Trump has pursued an America First national strategy that emphasizes the revitalization of the US economy, and meanwhile, regarded China as a strategic competitor that undermines the US prosperity. The complicated structural situation of long-term China-US strategic competition has greatly increased international political and economic uncertainties. Countries around the world are adapting their policies to different degrees, seeking to enhance regional cooperation for maximum national interests. The Mekong region is a key area of concern to all countries. Since the 1990s, international systems led by external countries such as the United States, Japan, India, and Korea have been successively established on the IndoChina Peninsula. They overlap to a large extent in terms of membership and focus issues (as shown in Table 1), causing the congestion and naturally the completion of international systems in the IndoChina Peninsula. This squeezes, to a certain extent, China's external space for seeking the international support from the Mekong countries.

Table 1 Overview of major international institutions in the Mekong region

No.	System	Initiator	Time of establishment	Membership	Content/Areas
1	GMS Economic Cooperation Program	ADB	1992	China, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam	Agriculture, energy, environment, health and human resources development, ICT, tourism, transportation and trade, and urban development
2	Mekong River Commission	Four riparian countries	1995	Thailand, Viet Nam, Cambodia, Lao People's Democratic Republic	Transportation, water development, tourism, and economic and trade relations
3	ASEAN-Mekong Basin Development Cooperation	ASEAN	1996	China, ASEAN Ten	Basin development, water resources protection, disaster prevention and mitigation, shipping safety, etc.
4	Mekong-Gang Cooperation Initiative	India	2000	India, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam	Tourism, education (human resources development), culture, transportation, etc.
5	Irrawaddy-Chao Phraya-Mekong Economic Cooperation Strategy	Thailand	2003	Thailand, Lao People's Democratic Republic, Cambodia, Myanmar, Viet Nam	Seamless alignment, economic synergy, smart and sustainable development, etc.
6	Cambodia-Laos, Myanmar-Vietnam (CLMV) cooperation mechanism	Four riparian countries	2004	Lao People's Democratic Republic, Cambodia, Myanmar, Viet Nam	Agriculture, industry, energy, communications, information industry, science and technology, tourism, human resources development, etc.
7	Japan-Mekong cooperation mechanism	Japan	2009	Japan, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam	Infrastructure, etc.
8	US-led Lower Mekong Initiative	U.S.A.	2009	U.S.A., Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam	Health, education, environmental protection, infrastructure, etc.
9	Korea-Mekong cooperation mechanism	Korea	2011	Korea, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam	Infrastructure, information technology, environmental protection, water resources conservation, agriculture and rural development, human resources development, etc.
10	LMC mechanism	China	2016	China, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam	Connectivity, production capacity, cross-border economy, water resources, agriculture, and poverty reduction based on the three pillars of political security, economy and sustainable development, and social and cultural exchanges

In recent years, countries have scaled up their aid and investment in the Mekong region. For example, Japanese Prime Minister Shinzo Abe vowed, at the 10th Mekong-Japan Summit in 2018, that Japan will make full use of ODA and other public funds to leverage and support more private sector investment in the Mekong region in the next three years. Korean President Moon Jae-in raised the Korea-Mekong cooperation mechanism to the head-of-government level in 2019, and promised to increase economic assistance and investment in the Mekong region with the aim of further expanding its influence. Some Mekong countries are willing to accept assistance from developed countries based on a balanced diplomatic strategy to offset China's growing influence in the Mekong region.

In 2020, many important conferences will take place in the Lancang-Mekong region. In addition to the upcoming LMC Leadership Summit, the CLMV Cooperation Summit and the Irrawaddy-Chao Phraya-Mekong Economic Cooperation Strategy Summit will be held in Laos and Cambodia respectively. Besides, the US-led Lower Mekong Initiative Ministerial Meeting, the Japan-Mekong Summit, and the Korea-Mekong Summit will be staged during the ASEAN Summit in Vietnam's rotating presidency. In the near future, with the further rise of China and the spread of nationalism in the Mekong countries, the possibility can not be ruled out the United States, Japan, and Australia will incite the relevant countries to create regional contradictions and conflicts on issues of environmental protection, climate change, and water resources management in the international context, creating an atmosphere of international public opinions unfavorable for China.



4.2 Some Mekong countries are deeply in debt, making it more difficult to build a green Lancang-Mekong economic development belt

The debt levels of the Mekong countries are on the rise. Mounting new debts coupled with legacy debts threaten the stability of economic development of the Mekong countries. A report released by the World Bank in 2018 pointed out that six countries in South East Asia, led by Laos, are facing increasing pressure of external debt. Four of these six countries are located in the Mekong region, namely Laos, Cambodia, Vietnam, and Thailand. According to international practice, a reasonable level of external debt for developing countries should not exceed 26% of their gross domestic product (GDP), but the debt-to-GDP ratio of the above-mentioned four countries has hit 93.1%, 54.4%, 45.6%, and 31.4% respectively. Economic growth must match debt repayment capability. Excessive debt will make these Mekong countries empty the treasury in advance. Huge debt stock will seriously undermine the space and flexibility of the newly added debts, hindering the sustainable development of the Mekong countries by increasing the reliance on international aid and loan maintenance. Restrictions on domestic industries and markets in the Mekong region have led to serious imbalances between investment and returns. A large number of infrastructure projects with high investment in the early stage are facing high debt risk, pushing up the pressure to build sustainable infrastructure. For example, 78.20% of China-Laos Railway was completed as of September 30, 2019. The debt problem becomes more and more prominent as the infrastructure project is about to come to an end. It is likely that the transportation capacity will not be fully realized due to insufficient sources of freights and passengers. Lingering debt risks will put the Mekong countries in a financial dilemma that they do not have enough funds to invest in high-tech industries. As a result, they will be unable to change the existing model of extensive economic development, let alone to achieve green industrial upgrading. This further adds the difficulty of building a green Lancang-Mekong economic development belt.

4.3 The rapid rise of Vietnam will have a potential impact on the regional environmental cooperation pattern.

Since Vietnam launched the reform and opening up, its economy has expanded rapidly. In the first three quarters of 2019, Vietnam's economy actually grew by 6.98% to approximately reach 173.16 billion US dollars. Vietnam is generally considered as one of the biggest beneficiaries of this round of China-US trade war as the export earnings already exceed than the GDP, ranking among the world's few super exporters. In 2018, Vietnam's Industrial Production Index climbed by 9.4%, of which the index of the manufacturing sector ascended by 14.5%. Vietnam's total annual imports and exports set a new record of 482.2 billion US dollars, with the largest ever trade surplus of 7.2 billion US dollars.

At the same time, Vietnam's relationship with the United States has developed rapidly against the backdrop of intensified strategic competition between China and the United States. Vietnam has become one of the key partners of the United States to contain China. On the South China Sea issue, Vietnam has always been in the vanguard of the US containment to China. In 2020, Vietnam will gain the rotating presidency of the ASEAN and non-permanent membership of the United Nations Security Council. Taking this as an opportunity, Vietnam is likely to make use of the South China Sea issue to expand its influence on a regional and global scale. In particular, the rotating president of the ASEAN has the right to formulate the agenda of that year and to launch initiatives for consideration by all member states, which will impose important influence in the region. Judging from the relevant speeches of the Vietnamese government, Vietnam also plans to put the South China Sea issue high on the agendas of major relevant meeting in 2020. It is widely expected that Vietnam will harden its attitude towards China.

Nowadays, Vietnam's role as a spearhead in the US containment to China has a tendency to extend to the Mekong region. The rapid rise of domestic economy and the favorable

change in international geopolitics enable Vietnam to gradually re-emerge as an important force affecting the Mekong region. On the affairs of the Mekong region, Vietnam sometimes exerts pressure on countries friendly with China, such as Laos and Cambodia. It tries to use transportation and economic dependence to control Laos and Cambodia through the construction of the East-West Economic Corridor. Moreover, it has actively offered economic assistance to Laos and Cambodia with high sovereign debts in recent years, in an attempt to eliminate China's political and economic influence. Vietnam is also trying to enhance its traditional influence on Laos and Cambodia. In April 2019, during the Belt and Road Forum for International Cooperation, China proposed to team up with Laos and Cambodia towards a China-Laos Community of Shared Future and a China-Cambodia Community of Shared Future. In early October, Vietnam invited Lao Prime Minister Thongloun and Cambodian Prime Minister Hun Sen to visit the country, and in the meeting and the following joint statement with the heads of two countries, Vietnam strongly highlighted the "traditional friendship, special solidarity, and comprehensive partnership with Laos and Cambodia. The move demonstrates Vietnam's obvious intention of strengthening its influence through Laos and Cambodia. Besides, since joining in the LMC mechanism, Vietnam has remained suspicious about and precautionary against the Lancang-Mekong environmental cooperation. It has been less enthusiastic about the cooperation than other Mekong countries, which is particularly reflected in the reversals and delays in drafting and adopting the Lancang-Mekong Environmental Cooperation Strategy. Vietnam's attitude will have a certain degree of process effects that potentially impede China's further deployment of environmental cooperation within the region.

4.4 The complicated situation in Myanmar brings uncertainties to the priority areas of the Lancang-Mekong environmental cooperation

Since democratic political transformation was launched in 2011, Myanmar's political situation has been generally stable, but still complex and sensitive, with fragile peace maintained among all ethnic groups. The government led by the National League for Democracy (NLD) is committed to improving governance performance by combating corruption and raising the business capacity and public welfare for public servants. However, there are many challenges and pressures. First, the weak financial system and high exchange rate risk seriously restrict economic development. Second, social and economic development cannot keep up with democratic transformation. As safeguard and supporting facilities lag behind in all aspects, the pre-mature consumption of democracy leads to inefficient governance and weak government. Third, the existing legal system is not yet perfect. Policies are fragmented and may change unexpectedly, arousing many concerns about foreign investment. Finally, frequent wars in Northern Myanmar, especially the crisis of Rohingya people that broke out at the end of August 2017, have attracted increasing international attention and become one of the major non-traditional security issues in the Mekong region. Because of these problems, the NLD-led government has been highly questioned by the outside world. To meet the upcoming general election in 2020, the surging undercurrents and constant moves of related parties will further exacerbate the sensitivity and complexity of Myanmar's political situation.

In 2020, Myanmar will take over as the co-chair of the LMC mechanism, and China-Myanmar environmental cooperation will become a priority under the Lancang-Mekong environmental cooperation. However, in the context of Myanmar's sensitive political situation, given the lessons learned from the Myitsone Hydropower Station put on hold for environmental impact assessment, some international NGOs may be suspicious and hostile to China's bilateral environmental cooperation and other activities under the banner of environmental protection. This will lead to certain uncertainties in the prospects of the Lancang-Mekong environmental cooperation.

Chapter 5 Recommendations for work to address challenges in the Lancang-Mekong environmental cooperation

In the context of the long-term strategic competition between China and the United States, in order to gradually eliminate the geopolitical game and weaken the impact of external countries in the Mekong region, it is advisable to employ the LMC mechanism to systematically and design pragmatic cooperation projects while guarding against subregional environment problems that impair our international image. The following four work recommendations are offered to further promote the Lancang-Mekong environmental cooperation under the new situation:

5.1 Strengthen the LMC mechanism and push forward the Green Lancang-Mekong Initiative

There are wide cooperation mechanisms and many policy dialogues, but less pragmatic cooperation in the Lancang-Mekong region. In view of this, the Lancang-Mekong environmental cooperation should strengthen China-centered mechanism building. We should advance the implementation of the Green Lancang-Mekong Initiative as the flagship project, which includes policy dialogue, environmental policy mainstreaming, capacity building, and demonstration cooperation and partnership, and make joint efforts to build a green economic development belt in the Lancang-Mekong River Basin. Based on the LMEC and the China-Cambodia Environmental Cooperation Center, a point-to-face regional environmental governance network will be fostered to support the demonstration and steadily optimize the coverage of the Lancang-Mekong environmental cooperation, creating a regional environmental cooperation model project. This is an effective way to enhance the attractiveness and competitiveness of the LMC mechanism, and a solid foundation for coping with environmental challenges from countries outside the region.

5.2 Actively explore the model of benign competition and cooperation with Japan and South Korea in the field of ecological environment

Environment is a low-cost area for the United States, Japan and Korea to get involved in the affairs of the Mekong region. Both the Japan-Mekong Summit and the Korea-Mekong Summit have attached high importance to the Mekong environmental issues. In recent years, the China-Japan-Korea cooperation has gradually recovered, and heads of the three countries have decided to explore and promote cooperation with other Asian countries in the 3+X model. From the perspective of realizing the complementary advantages of the three countries and the actual needs of Asian countries, environmental sustainability and climate change can become the preferred field for the new 3+X cooperation model. It will help China, Japan, and Korea to boost trust and defuse doubt to avoid the zero-sum game in the Mekong region. It is recommended to make full use of the 3+X model to develop cooperation with interested Mekong countries in climate change, marine litter governance, and biodiversity conservation, and simultaneously to explore the model benign competition and cooperation with Japan and South Korea, so that green development can benefit more people.



5.3 Deepen practical cooperation with Myanmar and other countries under the Lancang-Mekong environmental cooperation mechanism

Myanmar will serve as the co-chair of the LMC mechanism after March 2020. There will be new opportunities for promoting the China-Myanmar environmental cooperation under the LMC framework. China and Myanmar can strengthen cooperation on areas of common concern under the guidance of the Lancang-Mekong Environmental Cooperation Strategy (2018-2022). Based on the existing cooperation, the two sides can carry out various forms of pragmatic cooperation, such as policy dialogue and capacity building, in the priority areas of green economic development belt, water environment management, sustainable infrastructure, and green industrial parks. At the same time, with continuous attention to Myanmar's changing political situation, we will disseminate the achievements of the Lancang-Mekong environment cooperation and formulate an appropriate public opinion response plan.

5.4 Grasp and enhance the international voice on the Mekong issues

Grasping and enhancing the international voice on the Mekong issues is crucial to the environmental cooperation of the riparian countries and the construction of the Lancang-Mekong community of shared future. We should keep alert to issues such as the Lancang-Mekong environmental protection and environmental risk management. We need to grasp the power of voice, pay close attention to international and regional public opinions, and maintain sensitivity and effective response to related topics. We can enhance trust and dispel doubt by means of external multilingual exchanges, so as to provide adequate support for building a green Lancang-Mekong economic development belt.



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About LMEC: Lancang-Mekong Environmental Cooperation(LMEC), established in 2017 in Beijing, China, aims to boost the capacity of environmental governance of each country and achieve regional sustainable development through the promotion of environmental cooperation among the Lancang-Mekong Countries.