1. Background

Lancang-Mekong is an international river that runs through China, Lao PDR, Myanmar, Thailand, Cambodia and Viet Nam. The Lancang-Mekong Countries are confronting with alike issues and challenges in terms of environmental protection and sustainable development. The rapid economic development in the region has accompanied by heavy pressure on ecosystems and the climate: expanding unsustainable consumption patterns leads to worsening pollution and degrading the quality of air, water and soil and impose threats to human and environmental health; increasing energy resources development and natural resources are causing environmental challenges and biodiversity loss; increased waste generation from industrial, residential and agricultural development reflects inadequate environmental management capacity in urban and rural areas; large amount of greenhouse gas emissions results in climate change and becoming the major cause of disasters in the region.

At the 17th China-ASEAN Summit held in November 2014, Chinese Premier Li Keqiang proposed the establishment of the Lancang-Mekong Cooperation Framework, which was warmly welcomed by the five Mekong River countries. On 23 March 2016, the First LMC Leaders’ Meeting was successfully held in Sanya of China's Hainan Province, and the Lancang-Mekong Cooperation (LMC) mechanism was officially launched. The shared vision of LMC mechanism is to contribute to the socio-economic development of sub-regional countries, enhance the well-being of local people, narrow down the development gap among countries, support of the ASEAN Community building as well as advance South-South cooperation and enhance the implementation of the UN 2030 Agenda for Sustainable Development. LMC committed to build a Community of Shared Future of Peace and Prosperity among Lancang-Mekong Countries, and to strengthen mutual trust and understanding for addressing economic, social, environmental challenges and non-traditional security threats faced by the sub-region in order to unleash and realize its enormous development potentials. Currently,
there is a broad prospect of cooperation for the Lancang-Mekong Countries which are all at a stage of fast economic growth.

During the First LMC Leader’s Meeting, the Lancang-Mekong Environmental Cooperation Center was proposed to be set up. On 28 November 2017, Lancang-Mekong Environmental Cooperation Center was launched by the six Lancang-Mekong countries. Guided by “implementing outcomes, constructing cooperatively”, the Lancang-Mekong Countries will promote the development of Lancang-Mekong Environmental Cooperation Center, enhance policy dialogue and communications, determine the Lancang-Mekong Environmental Cooperation Strategy, as well as pragmatically promote cooperation in prioritized areas such as cross-sectoral cooperation on environmental policies, environmental management capacity building, ecosystem management and biodiversity conservation, climate change adaptation and mitigation, urban and rural environmental governance, environmental friendly technology communication and environmental protection industry cooperation, management of environmental data and information, and environmental education and public awareness improvement etc., for the purpose to promote regional sustainable development.

On 10 January 2018, the Second LMC Leaders’ Meeting was successfully held in Phnom Penh, Cambodia. The meeting released the Five-Year Plan of Action on Lancang-Mekong Cooperation (2018-2022), and it is proposed to formulate the Lancang-Mekong Environmental Cooperation Strategy in this document to address the environmental issues faced and thus contributing to achieving the overall goals of environmental protection and sustainable development. The Lancang-Mekong Environmental Cooperation Strategy will primarily clarify about the priority areas of Lancang-Mekong Environmental Cooperation, ensure necessary financial supports and determine key nodes and timeline arrangements, based on the Lancang-Mekong Countries’ development stage and their environmental needs respectively, as well as the exiting strategies, plans, and regulatory framework on global, regional and national levels. Meanwhile, under the supports and joint efforts from relevant agencies, this
strategy will serve for the future Lancang-Mekong environmental cooperation by guiding the upcoming project-based action plan.

Nowadays, Environmental cooperation has become a priority topic in global communications, and positive achievements have been reached through global environmental protection cooperation. The Lancang-Mekong Countries are committed to contribute to the global sustainable development and environmental sustainability through regional environmental cooperation and collaboration. The Lancang-Mekong Countries supports the 2030 Agenda for Sustainable Development, which includes a set of 17 United Nations Sustainable Development Goals (SDGs) adopted in September 2015 and Paris Agreement signed in April 2016. All of the six countries are devoted to the accomplishment of Aichi Biodiversity Targets under the Convention on Biological Diversity (CBD), and make contribution to the implementation of SDGs by 2030 through regional environmental cooperation.

2. The Review of Lancang-Mekong Environmental Cooperation

All countries in Lancang-Mekong region are at a crucial time of economic development and poverty reduction. Rapid economic development results in an explosive growth of grain and energy supply, which brought great pressures to the natural environment and ecosystem in the region. The Asia-Pacific region accounts for more than 50 percent of the world’s water consumption, and the volume of which trends to be increasing. While water consumption pressure in developing countries, especially the Lancang-Mekong Countries, is relatively high. The Asia-Pacific continues to be the world’s most disaster prone region in 2015, accounting for 47 percent of the global disasters. The Lancang-Mekong Countries are especially prone to be influenced by flood and drought. As a whole, the Lancang-Mekong Countries has not achieved decoupling economic growth from resource consumption1. From the global perspective, the institutional construction of international policy on climate change and

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1 GEO-6: Regional Assessment for Asia and the Pacific.
environmental issues will also result in impacts on sustainable development in Lancang-Mekong region. All the Lancang-Mekong Countries have adopted the SDGs finalized in 2015 and are committed to deliver on Nationally Determined Contributions (NDCs) under the Paris Agreement, as well as adopt the Aichi Biodiversity Targets.

Environmental challenges along Lancang-Mekong River have the features of diversified and wide range, which have brought tremendous impacts on regional socio-economic development and people’s livelihood. Thus, the significance of environmental cooperation has also been increasingly emphasized. In addition, under the support of international organizations, non-governmental organizations (NGOs), and many other institutions, the Lancang-Mekong Countries have launched a number of projects in areas of climate change adaptation and mitigation, biodiversity corridor, environmental performance assessment, rural environmental governance etc., which have reached abundant accomplishment that contributes to regional environmental sustainable development. The main environmental cooperative areas of the Lancang-Mekong Countries, international organizations and NGOs are as follows:

- Biodiversity corridor construction and ecosystem protection: focusing on the trans-boundary biodiversity corridor construction of Lancang-Mekong Countries;
- Climate change adaptation and mitigation: facilitating inter-departmental cooperation on climate change adaptation and mitigation, and promoting low carbon development;
- Improving capacity of environmental governance and management: facilitating capacity building projects on environmental issues and improving environmental governance level and management capacity of the Lancang-Mekong Countries;

The year of 2016 was the originating year of Lancang-Mekong environmental cooperation, in which China put forward the initiative that “China wishes to set up, in collaboration with Mekong countries, an environmental protection cooperation center in order to strengthen the technical cooperation, talent exchanges and information
sharing, aiming at promoting the green, coordinated and sustainable development in the region” in the First Lancang-Mekong Cooperation Leaders’ Meeting. The Second Lancang-Mekong Cooperation Leaders’ Meeting held in January 2018 approved the Five-Year Plan of Action on Lancang-Mekong Cooperation (2018-2022), in which formulating Lancang-Mekong Environmental Cooperation Strategy was officially put forward, and proposed to promote Lancang-Mekong Environmental Cooperation via “Green Lancang-Mekong Plan”. Under the mechanism of Lancang-Mekong Cooperation, the Lancang-Mekong Countries launched several environmental cooperation projects, been promoting the early stage harvest projects on regional environmental management capacity building, and been organizing capacity building activities, trainings and exchange programs. In the previous period, the early stage harvest projects mainly include capacity building activities in air pollution control, water environment management, ecosystem management and sustainable infrastructure. Nearly 300 participants from environmental authorities of the Lancang-Mekong Countries, international organizations, non-governmental organizations, academic institutions and enterprises attended the activities, resulting in a large number of positive outcomes and gradually established the communication and dialogue network for Lancang-Mekong environmental cooperation.

3. Cooperation Objectives and Principles

3.1 Cooperation Objectives

The Lancang-Mekong Countries are at the stage of fast industrialization and urbanization, which gives rise to the issue of how to coordinate between economic development and environmental protection and promote regional sustainable development on economy, society, and environment.

Cooperation objectives are as follows:

1) To facilitate regional sustainable development: jointly meeting with global and regional environmental challenges, and implementing the SDGs in the Lancang-Mekong Countries;
2) To promote cooperation on environmental protection and ecosystem management in Lancang-Mekong region: boosting natural resources governance, protecting regional ecological environment, and preventing trans-boundaries environmental pollution;

3) To Enhance cooperation on climate change response through mitigation and adaptation activities;

4) To establish the platform of Lancang-Mekong Environmental Policy Dialogues: providing platforms for environment and development communications among Lancang-Mekong Countries, strengthening cooperation among local government, environmental experts, and think tanks;

5) To improve regional environmental management capacity: promoting regional environmental management capacity building and improving environmental management capacity of the Lancang-Mekong Countries.

3.2 Cooperation Principles

Lancang-Mekong environmental cooperation should follow the principles of Lancang-Mekong Cooperation, as prescribed by the Sanya Declaration of the First Lancang-Mekong Cooperation Leaders’ Meeting in 2016, which are consensus, equality, mutual consultation and coordination voluntarism, common contribution and shared benefits, and respect for the United Nations Charter and international laws. Accordingly, Lancang-Mekong environmental cooperation should:

1) Ensure Stability and sustainability cooperation;

2) Take full account of national conditions and development stages of the Lancang-Mekong Countries;

3) Adhere to the spirit of openness, inclusiveness and coordinating with existing regional cooperation mechanism;

4) Be open to the participation of other international and regional organizations, NGOs, and private sectors etc;

5) Cooperation initiatives should be determined by the Lancang-Mekong Countries;
6) The cooperation is guided by the principles of respect for national sovereignty, national ownership and independence, equality, non-conditionality, non-interference in domestic affairs and mutual benefit;

7) Any change in the strategy will be subject to the consensus of Lancang-Mekong Countries.

4. Priority Areas

The Lancang-Mekong Environmental Cooperation Strategy (2018-2022) is the main document to guide the next five years’ cooperation. The Lancang-Mekong Environmental Cooperation Center, as the primary implementing agency, will promote the implementation of the "Green Lancang-Mekong Plan" and facilitate relevant work on prioritized areas for Lancang-Mekong environmental cooperation in accordance with the requirement of sustainable development goals, including:

4.1 Dialogue and Cooperation on Environmental Policies

Since environment is closely related to socio-economic development, Lancang-Mekong region would promote environmental policies cooperation both among environmental departments and cross sectors through environmental policy dialogues and joint research to advance countries to implement the UN 2030 Agenda for SDGs;

1) To organize high-level policy dialogues on Lancang-Mekong environmental cooperation and 2030 Sustainable Development Goals annually by self-proposal;

2) To conduct joint research on Lancang-Mekong environmental policy system and environmental cooperation outlook;

3) To carry out cross-sectoral dialogue and government-enterprises roundtable discussion.

4.2 Environmental Capacity Building

Launching “Green Lancang-Mekong: environmental capacity building plan” to contribute to the communication among governments, private sectors and civil society in the Lancang-Mekong Countries, in parallel to apply good governance for
environment as well as enhancing leadership skills in the environmental sector within Lancang-Mekong region, concentrating on regional countries’ requirement and upgrading.

1) To enhance capacity building through organizing Lancang-Mekong environmental planning and management training programs as well as the leadership skill training for environmental sector;

2) To carry out capacity building activities for relevant actors, and initiate capacity building activities on industrial gas emission standards and water quality monitoring;

3) To strengthen partnership with international organizations to carry out capacity building projects on multiple cooperation to improve environmental awareness and capacity of related stakeholders;

4) To organize the Lancang-Mekong Environmental Enterprises Roundtable Dialogue appropriately.

4.3 Ecosystem Management and Biodiversity Conservation

Lancang-Mekong region is one of the most bio-diverse areas in the world. Thus, Lancang-Mekong environmental cooperation will promote ecosystem management and biodiversity conservation in order to secure the environmentally sustainable development within the region.

1) To carry out joint research on Lancang-Mekong ecosystem management and sustainable development and other relevant areas to promote regional cooperation;

2) To carry out health condition assessment of Lancang-Mekong aquatic ecosystem, which will provide scientific evidence for improving regional aquatic ecosystem management capacity;

3) To promote biodiversity value evaluation and ecosystem services assessment, launch investigation and monitoring of alien invasive species, and facilitate the regional achievements and cooperation of Convention on Biological Diversity and other relevant international conventions and protocols;

4) To promote the sustainability of infrastructure construction and ecosystem
protection in Lancang Mekong Countries;

5) To launch trans-boundary natural protection areas and ecological corridor construction for wildlife migration.

4.4 Climate Change Adaptation and Mitigation

The Lancang-Mekong countries support the "United Nations Framework Convention on Climate Change (UNFCCC)" and the "Paris agreement", adhere to the principle of common but differentiated responsibilities, and respective capabilities, in the light of different national circumstances, will put to climate change adaptation and mitigation as priority to promote synergy of regional environment and sustainable development, and carry out specific actions to adapt to climate change, and actively respond to climate-related disaster mitigation.

1) To carry out joint research on Lancang-Mekong region environmental protection, ecological protection and eco-system based adaptation on climate change in Lancang-Mekong region;

2) To promote the synergistic system of the Lancang-Mekong climate change adaptation and mitigation action oriented evaluation, and to promote the application of the Lancang-Mekong national adaptation methods and tools;

3) To carry out communication in green industrial parks, low carbon, green communities and disasters responses and impacts arising from climate change;

4) To promote the platform establishment on adaptation of climate change through the technological infrastructure, and to facilitate the formulation of good practice guidelines for climate change adaptation and environmental protection, and to promote the implementation of ecosystem-based adaptation options;

5) To develop and implement the climate change resilient investment projects including resilient infrastructures to the local communities of the Lancang-Mekong countries.

4.5 Urban Environmental Governance

Lancang-Mekong environmental cooperation is dedicated to strengthen urban
environment governance cooperation among the Lancang-Mekong Countries and to promote the formulation and enforcement of legal framework for water pollution, air pollution, solid waste pollution control etc., with the main purpose of realizing the sustainable development cities of Lancang-Mekong countries.

1) To encourage sustainable city and sustainable living of urban residents, solar energy up-taking and green building application and to propel Lancnag-Mekong urban water environment management, including managing household sewage and industrial wastewater, implementing public water quality assessment and monitoring programs and promoting integrated urban water environment management approach among countries in the region;

2) To propel Lancnag-Mekong urban water environment management, including household and industrial sewage management and control, promoting integrated urban water environment management approach;

3) To promote monitoring and management of motor vehicle emissions in Lancnag-Mekong cities, including setting emission standards, designing and implementing monitoring projects, and designing and promoting alternative energy transportation;

4) To facilitate communication and cooperation of Lancang-Mekong region municipal waste and other solid waste management;

5) To establish Lancang-Mekong urban sustainable development partnership network, establishing technology sharing platform.

4.6 Rural Environmental Governance

The Lancang-Mekong Countries are all still faced with agricultural non-point source pollution, solid waste pollution, water pollution and other chemical application in agricultural production activities. Lancang-Mekong environmental cooperation will strengthen the experience sharing and technical cooperation on environmental friendly agricultural production together with promoting rural sustainable development within the Lancang-Mekong Countries.

1) To launch rural environmental policy dialogue and strengthen policy
communication among the Lancang-Mekong Countries regarding rural environmental governance;

2) To carry out experience sharing and communication on technology transfer in agricultural waste water treatment technology, rural household waste water treatment technology in the Lancang-Mekong Countries;

3) To explore cooperation on prevention and control of agriculture-caused pollution (both non-point source pollution and point source pollution), and to launch demonstration project cooperation;

4) In cooperation with Lancang-Mekong Countries to carry out the rural waste management practices and awareness, including liquid and solid waste treatment practices in the rural areas together with promoting resource utilization.

4.7 Environmental Friendly Technology and Environmental Protection Industry

It is aimed to carry out regional environmental friendly technology and environmental industry communication and cooperation, drive green economy, environmentally technology and industry cooperation and communication of the region, and uphold demonstration projects for cooperation.

1) To promote urban and rural environmental management, facilitating knowledge and experiences exchange on urban and rural environmental management; and promote the transfer of advanced environmental technologies among Lancang-Mekong Countries.

2) To launch Lancang-Mekong joint research on requirement list of environmental industry and technology: to promote communication between governments, private sectors and academic institutions;

3) To establish regional communication platform of government and social capital, impelling technology communications among enterprises, agencies and projects;

4) To propel cooperation of Lancang-Mekong Eco-industrial Parks.

4.8 Environmental Data and Information Management
It is targeted to improve capacity of the Lancang-Mekong Countries on collecting, handling, analyzing, and using of environmental data and information, and to launch information and knowledge sharing activities.

1) To carry out capacity building activities on collecting, handling, analyzing, using, and accessing of environmental data and information;

2) To organize knowledge sharing and communication dialogue among environmental think tanks of the Lancang-Mekong Countries and promote think tanks network establishment;

3) To launch environmental sharing activities and gradually improve capacity on environmental data sharing of related countries.

4.9 Environmental Education and Public Awareness

1) To strengthen public environmental awareness-raising of the Lancang-Mekong Countries;

2) To establish the Lancang-Mekong Environmental Education Network;

3) To organize the Lancang-Mekong Environmental Youth Forum.

5. Implementation Mechanism

5.1 Institutional Arrangement

1) Lancang-Mekong environmental authorities from Cambodia, China, Lao PDR, Myanmar and Thailand and Viet Nam will provide guidance and support for the implementation of the Lancang-Mekong Environmental Cooperation Strategy;

2) Lancang-Mekong environmental authorities are the appointed official focal points to implement the Lancang-Mekong Environmental Cooperation Strategy;

3) Lancang-Mekong Environmental Cooperation Center will be responsible for the routine contacts of the implementation of the Lancang-Mekong Environmental Cooperation Strategy, which will accomplish the priority cooperative areas along with the Lancang-Mekong Countries.

5.2 Cooperation Forms
The cooperation and collaboration on environment among the Lancang-Mekong Countries will be conducted in the form of multilateral cooperation. While, bilateral cooperation on specific areas between two certain countries could be made when appropriate. The main forms of cooperation include:

1) Workshops, training programs, communications, demonstrations, and joint researches;
2) International and regional organizations, local institutes, private sectors, local communities, non-governmental organizations and other relevant stakeholders will be encouraged to join in the cooperation, which will broaden and deepen Lancang-Mekong environmental cooperation.

5.3 Financial Mechanism

Major funding resources to support the implementation of the Lancang-Mekong Environmental Cooperation Strategy include but are not limited to:

1) Lancang-Mekong Cooperation Fund;
2) Funding provided from Chinese government;
3) Funding support from international partners and third countries;
4) Funding support from other national and regional organizations;
5) Funding support from private sectors;
6) Funding support and in kind support from the Lancang-Mekong Countries.

Funding will be used to support the implementation of Lancang-Mekong Environmental Cooperation Strategy and other related activities agreed by Lancang-Mekong Countries.

5.4 Partnerships

To reach above-mentioned regional environmental cooperation goals, the Lancang-Mekong Environmental Cooperation Center will work along with international partners under the guidance of cooperation principles. Potential partners include but are not limited to:

United Nations Environment, United Nations Development Programme, World