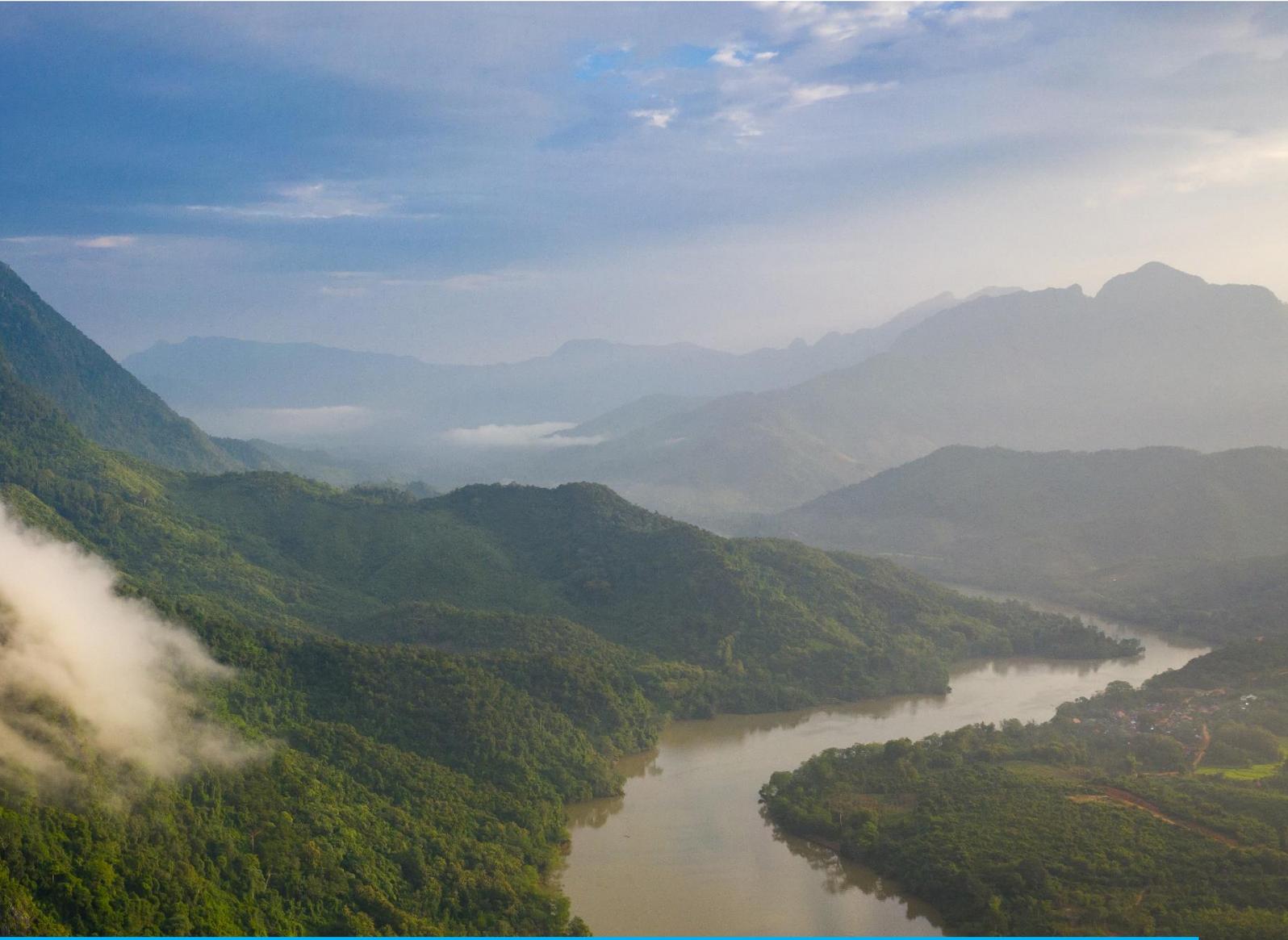




GREATER MEKONG SUBREGION
CLIMATE CHANGE
AND ENVIRONMENTAL
SUSTAINABILITY PROGRAM



Greater Mekong Subregion Climate Change
and Environmental Sustainability Program

26th Annual Meeting of the Greater Mekong Subregion (GMS) Working Group on Environment (WGE)

Meeting Report
26-28 October 2022



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GLOSSARY

ADB	Asian Development Bank
AR6	IPCC Sixth Assessment Report (AR6). The Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) is the sixth in a series of reports which assess scientific, technical, and socio-economic information concerning climate change
ASEAN	Association of Southeast Asian Nations
CBA	Community-based Adaptation
CCA	Climate Change Adaptation
CCESP	Climate Change and Environmental Sustainability Program
CEPA	Communication, Education, and Public Awareness
COP15	UN (United Nations) Biodiversity Conference, held 7-19 December 2022 in Montreal
COP27	27th UNFCCC Conference of the Parties, 6-18 November 2022 in Sharm El-Sheikh
CSL	Climate-Smart Landscapes
DRM/DRRM	Disaster Risk Management/Disaster Risk Reduction and Management
EBA	Environment-based Adaptation
GMS	Greater Mekong Subregion
Lao PDR	Lao People's Democratic Republic
MoNRE	Ministry of Natural Resources and Environment
MSP	Multi-Stakeholder Partnerships
NAP	National Adaptation Plan
NAP	National Adaptation Plans
NBS	Nature Based Solutions
NBSAP	National Biodiversity Strategy and Action Plan
NDC	Nationally Determined Contribution
NRM	Natural Resource Management
PES	Payment for Ecosystem Services
PRC	People's Republic of China
REDD+	Reducing emissions from deforestation and forest degradation
TA	Technical Assistance
TCSL	Transboundary Climate-Smart Landscapes
WGE	Working Group on Environment
WGE-AM 26	26th Annual Meeting of the Greater Mekong Subregion Working Group on Environment

EXECUTIVE SUMMARY

1. The 26th Annual Meeting of the GMS Working Group on Environment was held on 26-28 October 2022 with a focus on: “Building climate and disaster resilience and promoting climate-smart landscapes across the GMS region.” The objectives of the annual meeting included: (i) To share national priorities and strategies of the GMS countries to build climate resilience and strengthen biodiversity conservation; (ii) To examine challenges and opportunities in the light of the UN Biodiversity Conference (COP15) and the UN Climate Change Conference (COP26) for the GMS; (iii) To explore solutions to build climate and disaster resilience and strengthen biodiversity conservation in the GMS on their pathway to the upcoming COP27 and COP15 in 2022; (iv) To discuss national and subregional climate resilience and post-2020 biodiversity conservation frameworks and actions in the GMS in the context of COPs (Conference of the Parties), COVID-19 and the GMS RIF (Regional Investment Framework); and (v) To agree upon priority actions for regional cooperation under the CCESP to improve climate and disaster resilience, and biodiversity conservation in the GMS.
2. The expected output focused on: (i) Better GMS regional understanding of the national and subregional climate resilience and biodiversity conservation frameworks and national priorities and strategies of the GMS countries to build climate resilience and strengthen biodiversity conservation, (ii) Challenges, opportunities and solutions identified to build climate and disaster resilience and strengthen biodiversity conservation in the GMS on their pathway to the upcoming COP27 and COP15 in 2022, and (iii) GMS WGE Annual Meeting Summary Statement with priority actions for regional collaboration.
3. The annual meeting was attended by the Greater Mekong Subregion (GMS) Working Group of Environment (WGE) coordinators and representatives, representatives from GMS agencies for climate change adaptation and biodiversity conservation, academic institutions, resource persons from the relevant private sector, development partners, officers and staff of the Asian Development Bank (ADB) and the Regional Technical Assistance (TA) 9915 Greater Mekong Subregion Climate Change Environmental Sustainability Program (CCESP) TA team.
4. The meeting convened over two days with representatives from GMS countries prioritizing and discussing two themes: Theme 1: building climate and disaster resilience and Theme 3: promoting Climate-smart Landscapes (CSL). This was followed by a half day WGE CCESP program meeting. The sessions covered national priorities and strategies to build climate and disaster resilience and biodiversity conservation in the GMS towards the upcoming COP27 and COP15. Keynote speakers and panel members were invited to share key takeaways, experiences and insights focusing on (i) climate risks, challenges, and possible solutions in the light of the themes identified at COP26 to tackle the root causes of climate vulnerability; and (ii) how climate change and biodiversity loss can be addressed, and how local livelihoods can improve because of these measures—including challenges related to COVID-19.
5. The detailed meeting agenda is in Appendix 1.
6. **Welcome and introduction to agenda** of the WGE annual meeting was given by Mr. Jens Christian Riise, TA-9915 Co-Team Leader, Capacity Building Specialist, Monitoring Evaluation and Learning Specialist, and Facilitator followed by **welcome remarks** by Mr. Thalearnsak Petchsuwan, Deputy Permanent Secretary Ministry of Natural Resources and Environment, Thailand, and Dr. Jiangfeng Zhang, Director, Environment, Natural Resources and Agriculture Division (SEER), Southeast Asia Department (SERD), ADB.

7. **Theme 1 Session 1: National priorities and strategies to build climate and disaster resilience in the GMS towards the upcoming COP27** this included presentations by WGE focal points and coordinators presenting their national priorities and strategies to build climate and disaster resilience in the GMS towards the upcoming COP27. The session was facilitated by Dr. Jiangfeng followed by presentations by Mr. Leang Sophal, Chief of Office, Ministry of Environment (MoE), Cambodia; Mr. Zeyu Zhou, Senior Program Officer, Department of Climate Change, Ministry of Ecology and Environment (MEE (Ministry of Ecology and Environment)), PRC; Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, Ministry of Natural Resources and Environment (MONRE), Lao PDR; Ms. Rosalind Amornpitakpun, Director of Climate Measure and Mechanism Development Section, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand and Ms. Dao Minh Khue, Official, Department of Climate Change, Ministry of Natural Resources and Environment, Viet Nam.
8. **Theme 1 Session 2: Climate and disaster resilience, challenges, and priority actions in the GMS** was facilitated by Dr. Albert Salamanca, Senior Research Fellow, Stockholm Environment Institute, Bangkok who also gave a keynote presentation on loss and damage accompanied by a keynote speech on the session by Dr. Xi Jiao, TA-9915 Thematic Lead Building Climate and Disaster Resilience and Co-Team Leader. Panel discussion included Mr. Zhaohui Qian, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC, Mr. Manish Tewani, Global Response Lead for the American Red Cross/ International Federation of Red Cross and Red Crescent Societies, and Ms. Katuscia Fara, Senior Regional Climate and Disaster Risk Reduction Advisor, World Food Programme.
9. **Theme 1 Session 3: Mainstreaming climate and disaster resilience development and establishing multi-stakeholder partnership mechanism in the GMS** was facilitated by Mr. Dao Xuan Lai, Head of Climate Change and Environment Unit, UNDP (United Nations Development Programme), Viet Nam, followed by a keynote presentation by Dr. Sok Ty, TA-9915 National Adaptation Planning Specialist. The panel included Mr. Leang Sophal, Chief of Office, Ministry of Environment, Cambodia, Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, MONRE, Lao PDR, Mr. Akhteruzzaman Sano, Team Leader, Save the Earth, and Dr. Laurent Umans, Climate Change Expert, Former First Secretary Water Management and Climate Change, Embassy of the Kingdom of the Netherlands, Vietnam
10. **Theme 1 Session 4: Enhancing community-based adaptation (CBA) and disaster risk management, and harnessing ecosystem-based adaptation (EBA) and natural-based solutions in the GMS** was facilitated by Mr. Kevin Jeanes, Chief Technical Advisor, FAO (Food and Agriculture Organization), Lao PDR. The keynote presentation given by Mr. Kevin Jeanes, Chief Technical Advisor, FAO, Lao PDR focused on EBA. The keynote presentation was given by Mr. Noel Puno, TA-9915 Community-based CCA and DRM Specialist focused on CBA. The panel discussion included Mr. Ouk Navann, Deputy Director General, General Directorate of Local Community (GDLC), Ministry of Environment, Cambodia, Ms. Mayfourth Luneta, Deputy Executive Director, Center for Disaster Preparedness Foundation Inc., Dr. Niladri Gupta, Senior Water Resources Management Specialist, Asian Disaster Preparedness Center, and Dr. Duong Nong, Lecturer, Vietnam National University of Agriculture.
11. Day 1 was concluded by **Theme 1 Session 5: Identifying adaptation finance needs and gaps and employing innovative financing instruments in the GMS** was facilitated by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB. The keynote presentation was

given by Dr. Ornsaran Pomme Manuamorn. Panel discussion included Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR, Ms. Ying Zhou, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC, Dr. Nguyen Phuong Nam, Founder Climate Innovation Consulting and Services, Klinova JSC., and Dr. Kamal Ahmed, Institutional Lead, Disaster Risk Financing and Insurance, Asian Disaster Preparedness Center.

12. Theme 1 overall had the following key takeaways: Extensive awareness raising, and sensitization is required not only at government level but also within the private sector to upscale the use of Nature Based Solutions (NbS). Policy and Institutional arrangements enhancing laws, regulations, and agreements that identify the distinct roles and responsibilities of agencies or parties in coordinating and delivering adaptation and risk reduction activities. E.g., to mainstream Community Based Adaptation (CBA) / Community Based Disaster Risk Management (CBDRM) in both national and sub-national development planning and comprehensive and cross-sectorial policies, plans, and decision mechanisms for NbS.
13. Multi-disciplinary approaches to problem analysis and mitigating actions merging international, GMS regional and local experience is required. Governments and other stakeholders need to generate good evidence-based results before proposing policies. A bottom-up approach is required to integrate Ecosystem Based Adaptation (EbA) into government policies and plans and how it can address and minimize loss and damage.
14. It is essential to facilitate multistakeholder dialogues engaging civil society organizations, line sector ministries, private sector representatives at country and GMS levels to monitor the progress made from policies and projects. The GMS countries need significant support for capacity building, data and information services, investments, and mechanisms to bring all stakeholders together e.g., engaging on a multistakeholder cooperation platform like the GMS website, support in acquiring, improving, and retaining the necessary human and technical resources needed to implement adaptation actions.
15. CBA/CBDRM approaches should ensure inclusivity (gender, PWDs, and others), participation of CSOs, communities and their representatives in local development planning. Key practices in climate disaster financing needs to be identified and summarized as cases and knowledge products to enhance sharing in the region.
16. **Theme 3 Session 1: National priorities and strategies for biodiversity conservation and post-2020 Global Biodiversity Framework in the GMS towards the upcoming COP15** was facilitated by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB. Presentations were given by GMS WGE and country representatives, including Mr. Sam Oeurn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia, Ms. Jing Guan, Senior Program Officer, Department of Nature and Ecology Conservation, Ministry of Ecology and Environment, PRC, Mr. Theverack Phonekeo, Deputy Director General of Department of Environment, MONRE, Lao PDR, Ms. Benchamaporn Wattanatongchai, Environmentalist, Senior Professional Level, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand, and Ms. Ta Thi Kieu Anh, Official, Viet Nam Environment Administration, Viet Nam
17. **Theme 3 Session 2: Biodiversity conservation and post-2020 global biodiversity framework, challenges and priority actions in the GMS** was facilitated by Mr. Jake Brunner, Head of Indo-Burma Group, The International Union for Conservation of Nature. The keynote presentation was given by Mr. Anouxay Phommalath, Land Use Planning and Spatial Analysis

Specialist. Panel discussions included Mr. Hexiao Chen, Deputy Director, Guangxi Environmental Protection International Cooperation and Exchange Center, PRC, Ms. Regan Pairojmahakij, Senior Programme Officer, RECOFTC, Thailand, and Dr. Beria Leimona, Senior Expert Landscape Governance and Investment Principal Investigator, World Agroforestry (ICRAF).

18. **Theme 3 Session 3: Employing ecosystem-based approaches and natural-based solutions to contribute to mitigation and adaptation to climate change in the GMS** was facilitated by Dr. David Ganz, Executive Director, RECOFTC. The keynote presentation was given by Dr. Michael Victor Galante, Director, Climate Forestry and Secretary-General, The Alliance for Responsible Forest Management. The panel discussion included Mr. Sam Oeurn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia, Mr. Raphael Glemet, Senior Programme Officer, Water, Wetlands and Nature-Based Solutions, The International Union for Conservation of Nature, and Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital.
19. **Theme 3 Session 4: Mobilizing effective financial resources, and leveraging private finance, taking into account national biodiversity finance planning in the GMS** was facilitated by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB. The keynote presentation was by Ms. Jiayi Xu, Programmes Director, Greenovation Hub and Ms. Yunwen Bai is the co-Founder and Executive Director of Greenovation Hub. The panel discussion included Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR, Dr. Yang Bai, Researcher, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, PRC, Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital, and Ms. Niran Nirannoot, Project Manager, BIOFIN Thailand: The Biodiversity Finance Initiative, United Nations Development Programme.
20. Theme 3 overall had the following key takeaways: Forests deliver climate change adaptation and mitigation benefits. Regionally, there has been a focus on forest protection, much less on restoration. The biodiversity financing gap within the region needs to be catered to by comprehensive mapping of financing methods of the region breakdown to sectors and various administrative levels.
21. Knowledge and Information sharing is required to identify climate-related vulnerabilities and risks, define adaptation priorities, design appropriate strategies, and track the progress and results of implementation. This information must be both available and accessible, and must consider indigenous, traditional, experiential, and scientific sources. Each GMS country should enhance the next generation National Biodiversity Strategic and Action Plans (NBSAPs) through prioritization, results-based budgeting, with business and finance sectors getting involved in positive impact biodiversity investment. Overall, well-designed incentives can help promote biodiversity conservation, reducing the needs for rehabilitation expenditures in the future.
22. Regional developments such as green taxonomies must be investigated to support the growth of dynamic thematic bonds markets in the region, which could also serve as a basis to embed more adaptation objectives in green investment.
23. Draft WGE Annual Meeting priority actions were presented by Dr. Srinivasan Ancha Principal Climate Change Specialist, Asian Development Bank who also led the summary of discussion which was prepared and shared with the WGE after the Annual Meeting. A summary of the meeting and closing remarks were presented by Dr. Srinivasan Ancha.

24. On Day 3, the TA team presented the overall scope of the GMS CCESP third phase, the deliverables, and the workplan for the coming two years (up to the end of 2024).
25. The 26th Annual Meeting was hybrid and hosted by the Ministry of Environment and Natural Resources, Thailand with support from the Asian Development Bank through the Technical Assistance (TA) 9915 being implemented by Ramboll group of experts and consultants.

Day 1 – Wednesday, 26 October 2022

Building Climate and Disaster Resilience

1. Introduction

26. The 26th Annual Meeting of the GMS Working Group on Environment was held on 26-28 October 2022 with a focus on: “Building climate and disaster resilience and promoting climate-smart landscapes across the GMS region.” The objectives of the annual meeting included: (i) To share national priorities and strategies of the GMS countries to build climate resilience and strengthen biodiversity conservation; (ii) To examine challenges and opportunities in the light of the UN Biodiversity Conference (COP15) and the UN Climate Change Conference (COP26) for the GMS; (iii) To explore solutions to build climate and disaster resilience and strengthen biodiversity conservation in the GMS on their pathway to the upcoming COP27 and COP15 in 2022; (iv) To discuss national and subregional climate resilience and post-2020 biodiversity conservation frameworks and actions in the GMS in the context of COPs, COVID-19 and the GMS RIF; and (v) To agree upon priority actions for regional cooperation under the CCESP to improve climate and disaster resilience, and biodiversity conservation in the GMS.
27. The expected output focused on: (i) Better GMS regional understanding of the national and subregional climate resilience and biodiversity conservation frameworks and national priorities and strategies of the GMS countries to build climate resilience and strengthen biodiversity conservation, (ii) Challenges, opportunities and solutions identified to build climate and disaster resilience and strengthen biodiversity conservation in the GMS on their pathway to the upcoming COP27 and COP15 in 2022, and (iii) GMS WGE Annual Meeting Summary Statement with priority actions for regional collaboration.
28. The annual meeting was attended by the Greater Mekong Subregion (GMS) Working Group of Environment (WGE) coordinators and representatives, representatives from GMS agencies for climate change adaptation and biodiversity conservation, academic institutions, resource persons from the relevant private sector, development partners, officers and staff of the Asian Development Bank (ADB) and the Regional Technical Assistance (TA) 9915 Greater Mekong Subregion Climate Change Environmental Sustainability Program (CCESP) TA team.
29. The meeting convened over two days with representatives from GMS countries prioritizing and discussing two themes: Theme 1: building climate and disaster resilience and Theme 3: promoting Climate-smart Landscapes (CSL). This was followed by a half day WGE CCESP program meeting. The sessions covered national priorities and strategies to build climate and disaster resilience and biodiversity conservation in the GMS towards the upcoming COP27 and COP15. Keynote speakers and panel members were invited to share key takeaways, experiences and insights focusing on (i) climate risks, challenges, and practical solutions in the light of the themes identified at COP26 to tackle the root causes of climate vulnerability; and (ii) how climate change and biodiversity loss can be addressed, and how local livelihoods can improve because of these measures—including challenges related to COVID-19.
30. The detailed meeting agenda is in Appendix 1.
31. **Welcome and introduction to agenda** of the WGE annual meeting was given by Mr. Jens Christian Riise, TA-9915 Co-Team Leader, Capacity Building Specialist, Monitoring Evaluation

and Learning Specialist, and Facilitator followed by **welcome remarks** by Mr. Thalearnsak Petchsuwan, Deputy Permanent Secretary Ministry of Natural Resources and Environment, Thailand, and Dr. Jiangfeng Zhang, Director, Environment, Natural Resources and Agriculture Division (SEER), Southeast Asia Department (SERD), ADB

1.1 Welcome remarks from Mr. Thalearnsak Petchsuwan, Deputy Permanent Secretary Ministry of Natural Resources and Environment, Thailand

32. Mr. Thalearnsak Petchsuwan welcomed the distinguished guests underlying the importance of the two themes and a slow start to the program due to the pandemic. He laid the ground to discuss key challenges and viable solutions for the region in the light of the UN Biodiversity Conference (COP15) and the UN Climate Change Conference (COP26) and the upcoming COP27 and COP15 in November and December 2022. He officially declared the 26th WGE Annual Meeting open and gave the floor to Dr. Jiangfeng Zhang, Director, Environment, Natural Resources and Agriculture Division (SEER), Southeast Asia Department (SERD) in ADB, who was attending online from Manila.

1.2 Opening remarks from Dr. Jiangfeng Zhang, Director, Environment, Natural Resources and Agriculture Division (SEER), Southeast Asia Department (SERD), ADB

33. Dr. Jiangfeng mentioned ADB's adoption of various strategies to scale up climate adaptation finance, including (i) moving the discussion on upstream from project level to programming level, which will help in developing pipeline on adaptation; (ii) increasing support for adaptation through policy-based loans and results-based lending; (iii) scaling up support for adaptation focused (Type 2) projects; and (iv) increasing adaptation in private sector operations. He also mentioned working with other MDBs (Multilateral Development Bank) to update the joint-MDB methodology on climate adaptation finance tracking.
34. Dr. Jiangfeng pressed upon the importance of climate change adaptation and biodiversity conservation and reinforced ADB support towards developing member countries dealing with increasing climate risk. He emphasized resilience being at the heart of ADB's Strategy 2030 and committed to provide \$34 billion for climate adaptation finance between 2019-2030 from ADB's own resources.
35. In terms of increasing adaptation investments through innovative approaches, ADB recently approved its first Climate Change Policy-based Loan for the Philippines. This will help strengthen institutions and processes for the agriculture sector to better understand climate risk and scale up climate smart agriculture practices. ADB has also established the Community Resilience Partnership Program (CRPP), a financing partnership facility to provide support to the social sectors increase climate adaptation. Launched at COP26 with an objective to scale up local adaptation investments, CRPP has mobilized \$68 million to date with support from UK (United Kingdom), Nordic Development Fund and French Development Agency.
36. Conserving biodiversity is also a high priority for ADB and therefore in this context, GMS countries like Viet Nam, Cambodia and Lao PDR have led the way by implementing an investment project called Biodiversity Conservation Corridors Initiative—where many lessons from this project are regularly mainstreamed into other projects. He mentioned that climate resilience and biodiversity conservation are interrelated and unless we conserve biodiversity and protect natural capital, climate related disasters will continue to accelerate. Therefore,

implementing nature-based solutions to enhance ecosystem resilience, and thereby community resilience is vital. He encouraged panel members to proactively discuss and identify priorities for furthering the regional cooperation in addressing climate change adaptation and biodiversity issues in such a way that investments in the GMS could deliver enhanced climate resilience and revitalized natural capital.

2. Theme 1 Session 1: National priorities and strategies to build climate and disaster resilience in the GMS towards the upcoming COP27

37. The session included presentations by WGE focal points and coordinators presenting their national priorities and strategies to build climate and disaster resilience in the GMS towards the upcoming COP27. The session was facilitated by Dr. Jiangfeng followed by presentations by Mr. Leang Sophal, Chief of Office, Ministry of Environment (MoE), Cambodia; Mr. Zeyu Zhou, Senior Program Officer, Department of Climate Change, Ministry of Ecology and Environment (MEE), PRC; Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, Ministry of Natural Resources and Environment (MONRE), Lao PDR; Ms. Rosalind Amornpitakpun, Director of Climate Measure and Mechanism Development Section, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand and Ms. Dao Minh Khue, Official, Department of Climate Change, Ministry of Natural Resources and Environment, Viet Nam. Please refer to Appendix 4 Day 1 for presentations.

2.1 Cambodia

38. **Mr. Leang Sophal, Chief of Office, Ministry of Environment, Cambodia:** Mr. Leang Sophal is the head of GHG (greenhouse gas) Inventory and Mitigation Office, Department of Climate Change, General Directorate of Policy and Strategy, Ministry of Environment. He has participated in the GHG Inventory Office and has been involved with GHG Inventory since 2011. He presented the Cambodia Climate Change Strategic Plan 2014-2023, which refers to Cambodia's efforts to develop a climate change response strategy at the national and sub-national levels and promote the Climate Action Plan. He mentioned that the plan focuses on the preparation of relevant institutions for both policy and technical implementation, implementing the Climate Change Action Plan (CCAP) and the legal framework, financial monitoring and evaluation, National Recognition Mechanisms (Global Climate Fund and Adaptation Fund), research and management, capacity building and integrating climate change into National and Sub-National Planning.

39. Mr. Leang mentioned that there were eight key strategies to promote the implementation of activities in relevant sectors, and that Cambodia has submitted NDCs (Nationally Determined Contributions) to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) by the end of 2020 to demonstrate its commitment to responding to climate change. It aims at reducing climate impact by 42 percent by 2030 from all sectors. It prioritized 33 and 58 reduction areas and feasible activities such as gender education, governance, information and knowledge sharing, and policymaking and planning to find partners to implement in each sector by facilitating and providing technical assistance from the Ministry of Environment during the implementation. He mentioned that Cambodia is establishing a system

to monitor the implementation of NDCs to COP26 and aimed at facilitating the national contribution to establish COP26.

2.2 People's Republic of China

40. **Mr. Zeyu Zhou, Senior Program Officer, Department of Climate Change, Ministry of Ecology and Environment (MEE), PRC:** Mr. Zeyu Zhou, is the Associate Senior Researcher of the China's National Center for Strategic Research and International Cooperation on Climate Change. He has done relevant research on international cooperation in climate change adaptation and participated in the National Climate Change Adaptation Strategy 2035. Mr. Zeyu's presentation specified that in 2013, China released the first National Climate Change Adaptation Strategy, which defined the objectives and tasks from 2014 to 2020. Subsequently, various relevant departments and local governments carried out comprehensive and systematic work, and achieved positive results, which includes: the continuous improvement of our climate monitoring and early warning level, solid progress in adaptation pilot, and the improvement of adaptation abilities in key areas.
41. Mr. Zeyu mentioned that they had issued the National Climate Change Adaptation Strategy 2035, which selected water resources, terrestrial ecosystems, marine and coastal zones, agriculture and food security, health and public sanitation, infrastructure and major projects, cities and human settlements, sensitive secondary and tertiary industries and other fields as key areas of climate change adaptation, and the adaptation task and measures are described in two dimensions: both natural ecosystem and eco-social system.
42. In addition, they also proposed to strengthen climate change monitoring, early warning, and risk management, as well as building a regional pattern of adaptation, the organization and implementation of adaptation, financial support, scientific and technological support, capacity building, international cooperation, and other tasks. Conclusively, he mentioned that while focusing on implementation, China has carried out a series of supporting work, issued the Guidelines for the Preparation of Provincial Adaptation Action Plans, requiring all regions to form local adaptation action plans by the end of 2023 to strengthen the actions. At the same time, the Notice on Deepening the Pilot Work of Climate Adaptive City Construction is being prepared.

2.3 Lao People's Democratic Republic

43. **Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, Ministry of Natural Resources and Environment (MONRE), Lao PDR:** Mr. Malabou Baylatry is the member of the ASEAN (Association of Southeast Asian Nations) Disaster Management for communities. He presented that Lao PDR is one of the most vulnerable countries to climate risk, in term of loss and damage, especially as it has low adaptive capabilities. He mentioned that the country defined vulnerability to climate change at the provincial and district levels. A recent study showed that only Vientiane capital was categorized as exceptionally low vulnerability, while seven provinces were classified as moderate vulnerability status and ten provinces classified as high vulnerability status. At the district level, nine districts had extremely high vulnerability, 53 districts were classified as high vulnerability, 53 districts were classified as moderate vulnerability, 29 districts were under low vulnerability and another 4 districts were under exceptionally minimal risk.

44. He mentioned that, during the last two decades, the economic loss had significantly increased to USD \$20million per year. He pointed out that the government had mainstreamed climate change in the ninth national socio-economic development plan (2021-2025), national green growth strategy (2018), NDC (2021), decree on climate change, national strategy on disaster risk reduction (2021), and recently in the national strategy on climate change.

2.4 Thailand

45. **Ms. Rosalind Amornpitakpun, Director of Climate Measure and Mechanism Development Section, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand:** Ms. Rosalind Amornpitakpun mentioned that, with reference to the LES that was submitted before COP26, Thailand recognizes the importance of climate change due to which the prime minister of Thailand decided to enhance his ambitions to the following: Carbon Neutrality (2050), Net-Zero GHG Emissions (2065) and NDC to 40 percent (2030) with international support required in capacity building, finance and technology. Key mitigation measures were planned for four main sectors: energy/transport, the industrial processes and product use (IPPU), waste and agriculture.
46. For energy, the focus will be on increasing share of renewable energy, increasing energy efficiency, the use of electric vehicles, carbon capture and storage (CCS) and bioenergy with carbon capture and storage (BECCS) in power sector and green hydrogen. For IPPU the focus will be on clinker substitution, refrigerant substitution, and carbon capture, utilization, and storage (CCUS) technology in cement industry. For waste, the focus will be on municipal solid waste and wastewater management, industrial wastewater management and waste to energy. Lastly for agriculture the focus will be on improving low CH₄ emission rice cultivation, producing biogas from manure and soil management practices. Overall, for land use, land-use change, and forestry (LULUCF) the focus will be on promoting natural and economic forest planting, increasing urban and suburban green areas, and preventing deforestation and forest fire management.
47. Ms. Rosalind stated that to achieve carbon neutral and net zero GHG emission it was essential to focus on policy and law, stakeholder engagement, technology and innovation, and finance and investment. She mentioned that the vision of the national adaptation plan for Thailand was to see Thailand as resilient and adapt to the impacts of climate change to achieve sustainable development.
48. Thailand recognizes the commitments and outcomes at COP27. Thailand has contributed to the global response of climate change and its progression of actions has been recognizing the need to support developing countries. The country is focusing on scaling up action for finance, capacity building and technology transfer. While, supporting adaptation via research and innovation, policy frameworks, legislative experience sharing, capacity building and technical assistance, flexible financing approaches and public-private partnerships.
49. Lastly, Ms. Rosalind mentioned that prior to COP27, Thailand will submit the second updated NDC and Thailand's Long-Term Low GHG Development Strategy to the UNFCCC, submit the fourth national communication, the fourth biennial update report, and the fourth biennial transparency report. Furthermore, it will accelerate the Climate Change Act to provide a legal framework for climate actions, present the outcomes of Thailand Climate Action Conference (TCAC), and promote all forms cooperation at all levels to accelerate financial support,

technology transfer and capacity building to reach the carbon neutrality target by 2050 and reach net zero GHGs (greenhouse gas) emissions target by 2065.

2.5 Viet Nam

50. **Ms. Dao Minh Khue, Official, Department of Climate Change, Ministry of Natural Resources and Environment, Viet Nam:** Ms. Dao Minh Khue has experience in climate change adaptation, environmental economics, solid waste management, water management, energy, carbon market and the application of geographic information systems. Ms. Dao presented Viet Nam's current documents related to climate change adaptation namely the national strategy on climate change until 2050 (2022) and the national plan on adaptation to climate change for the period 2021-2030, vision 2050 (NAP) (2020), showing priorities and orientations in ensuring Viet Nam's climate resilience.
51. She mentioned that the strategy and NAP have the overall objectives of proactively and effectively adapting to climate change, reducing vulnerability, and catering to loss and damage caused by climate change. It further focused on reducing greenhouse gas emissions according to the goal of net zero emissions by 2050 and actively and responsibly contributing to the international community in protecting the earth's climate system. Lastly, it focused on taking advantage of opportunities from climate change response to transform growth models, improve resilience and competitiveness of the economy.
52. Ms. Dao mentioned that specific objectives of the strategy on climate change adaptation are to reduce vulnerability and risk to climate change impacts through (i) enhancing the resilience and adaptive capacity of the system's natural, economic, and social strategies (ii) reducing the damage caused by natural disasters and extreme climate increases due to climate change. The strategy sets goals and tasks to achieve this goal by 2030 and 2050 related to effective management of land and water resources, ensuring forest cover, building smart agriculture, marine conservation, biodiversity, clean water supply, capacity building for disaster warning, monitoring of climate change, disaster risk management, developing climate services, moving out of disaster risk areas, strengthening disaster risk insurance to ensure production, business activities, and assets of enterprises and society.

3. Theme 1 Session 2: Climate and disaster resilience, challenges, and priority actions in the GMS

53. The session was facilitated by Dr. Albert Salamanca, Senior Research Fellow, Stockholm Environment Institute, Bangkok who also gave a keynote presentation on loss and damage accompanied by a keynote speech on the session by Dr. Xi Jiao, TA-9915 Thematic Lead Building Climate and Disaster Resilience and Co-Team Leader. Albert is a Senior Research Fellow at the Stockholm Environment Institute's Asia Centre where he leads its Climate Change, Disasters and Development cluster. Albert has over 20 years of experience working on climate change adaptation, natural resources management, conservation, development, and sustainable livelihoods issues in several countries in Southeast Asia. Please refer to Appendix 4 Day 1 for presentations.

3.1 Keynote

54. **Dr. Xi Jiao, TA-9915 Thematic Lead Building Climate and Disaster Resilience and Co-Team Leader:** Dr. Xi Jiao presented the current situation of climate and disaster risks and impacts in the GMS, reflects on the COP26 progresses and implications for adaptation, and identifies challenges and potential solutions to build climate and disaster resilience in the GMS. Adverse impacts of climate change and transboundary climate risks in the GMS on rural infrastructure, communities, and ecosystems are projected to be severe. Climate change and disaster resilience have been recognized as a priority of GMS and CCESP.
55. Dr. Xi mentioned that loss and damage is becoming more and more relevant to the GMS countries; however, it is difficult to definitively and clearly identify the amount of funding needed and available for it. In general, the adaptation finance gap is widening, and the GMS countries may face even larger gaps. She stressed that progress (e.g., new financial pledges, Glasgow Dialogue) made at COP26 provides great opportunities for the GMS countries in preparation on their pathway to COP27.
56. There are five proposed priority actions identified:
- a. Mainstream climate and disaster resilience development and incorporate into sectoral and development planning. Carry out climate risk and vulnerability assessments in key sectors (i.e., agriculture, energy, and transport) in the GMS. Identify priority adaptation options for key sectors and translate adaptation planning into investment plans.
 - b. Establish multistakeholder partnership mechanisms and a GMS-wide platform for policy dialogues to engage regional and national multi-stakeholders across governments, development partners, research institutions, civil society and the private sector for joint adaptation efforts and actions.
 - c. Enhance community-based adaptation (CBA) and disaster management, piloting of innovative gender-responsive community resilience projects that build sustainability and adaptive capability and inform the integration of climate change considerations into community-level planning.
 - d. Harness ecosystem-based adaptation (EBA) and natural based solutions. Integrate more holistic responses to address multidimensional challenges to climate, biodiversity, and poverty in the GMS. There needs to be alignments between climate change and biodiversity conservation planning and policies, as well as between EBA and CBA.
 - e. Map out adaptation finance needs and gaps and employ innovative financing instruments. Undertake more robust assessment and data on adaptation finance needs and gaps in the GMS countries to inform and leverage financing resources, to access and tag relevant available funds, and more importantly to engage and mobilize private sector finance. Pilot of innovative financial instruments such as climate and disaster risk financing initiatives.

3.2 Keynote

57. **Dr. Albert Salamanca, Senior Research Fellow, Stockholm Environment Institute on Loss, and Damage:** Albert's presentation focused on loss and damage and its importance to the COP27. He mentioned that UNFCCC defined loss and damage as "the actual and/or

potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems.” IPCC Sixth Assessment Report (AR6) showed that, even under the most optimistic emissions mitigation scenarios, where net-zero is reached by around 2050, global warming will continue in the short to medium term. This meant that adaptation was needed but due to the limits of adaptation, loss and damage needs to be considered in policy and planning. There were several features of loss and damage risk, including:

- a. Extreme weather events and slow-onset processes caused by climate change are unprecedented in intensity, frequency, location, timing and with compound events being more probable or severe.
- b. Loss and damage risks are dynamic, highly uncertain and will increase unpredictably over time.
- c. Consecutive and compounding climate impacts produce unpredictable cascades of losses and damages.
- d. Losses and damage disproportionately impact marginalized groups and people living in poverty.
- e. Estimations of loss and damage exclude forms of loss and damage incurred by marginalized groups and disregard the impact of non-economic losses and damages on those groups, particularly Indigenous Peoples.
- f. Loss and damage risks depend upon people’s values and lived experiences and are highly differentiated.
- g. Loss and damage risks and impacts are highly context specific.

3.3 Panel Discussion

58. Panel discussion included Mr. Zhaohui Qian, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC, Mr. Manish Tewani, Global Response Lead for the American Red Cross/ International Federation of Red Cross and Red Crescent Societies, and Ms. Katuscia Fara, Senior Regional Climate and Disaster Risk Reduction Advisor, World Food Programme. Please refer to Appendix 4 Day 1 for presentations.

3.3.1 Mr. Zhaohui Qian, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC

59. Mr. Qian Zhaohui, is an associate researcher on ecological remote sensing with the Foreign Environmental Cooperation Center, Ministry of Ecology and Environment of China and Lancang-Mekong Environmental Cooperation Center. His presentation focused on the Southeast Asian region, and how climate change has been leading to further intensification of extreme disasters such as droughts and heavy precipitation. According to the Global Competitiveness Report from the World Economic Forum and Global Infrastructure Hub, countries in the GMS have a huge gap in infrastructure stock and demand. Meanwhile sustainable infrastructure is critical to achieving the UN 2030 Sustainable Development Goals. Therefore, in the context of the urgent need to address climate change and the huge gap in infrastructure development, how could countries achieve sustainable infrastructure investment and construction. He emphasized that if sustainable infrastructure can be accelerated, it will

promote the green development of the regional economy and the climate and disasters resilience.

60. Therefore, to strengthen regional cooperation in the field of sustainable infrastructure, the governments of Cambodia, China, Laos, Myanmar, Thailand, and Vietnam issued a joint statement and developed the Lancang-Mekong knowledge hub for low-carbon, green, and sustainable infrastructure last year. The knowledge hub included a roundtable dialogue mechanism for mainstreaming climate in infrastructure investment, a knowledge library, and a capacity building partnership. The objective of the hub is to share good practices and experience of countries within and outside the region in promoting low-carbon development, and jointly enhance regional capacity for low-carbon sustainable development.
61. For key takeaways, Mr. Qian mentioned that sustainability should be considered with reference to infrastructure resilience in a long-term environmental context. It can be argued that disaster resilience is an inherent characteristic of sustainability. On one level, designing and building infrastructure that can withstand disasters will reduce the negative environmental impact, such as debris from damaged structures, spills of hazardous materials and other contaminants, and the carbon footprint of reconstruction activities. Infrastructure designers should, therefore, include such life-cycle environmental impacts in their decision-making.
62. Mr. Qian stated that Infrastructure resilience will require the capacity to meet demands that may change drastically over its life cycle. Such changes may include urban growth and increases in population. It will be essential to focus on rising sea levels that redefine coastlines and changes in the probabilities of hazardous events, including hurricanes, extreme rainfalls, droughts, temperature extremes, landslides, and floods. Climate change will not only put coastal infrastructure, such as port and harbor facilities, at risk, it will also stress water supplies, wastewater treatment facilities, and transportation systems. Therefore, it is essential to define how infrastructure systems can be designed to both reduce risk and support sustainable cities and how infrastructure systems can be designed for disaster resilience—for today, as well as for the future.

3.3.2 Mr. Manish Tewani, Global Response Lead for the American Red Cross/ International Federation of Red Cross and Red Crescent Societies

63. Mr. Manish Tewani leads American Red Cross partnerships in the region with the International Red Cross Red Crescent network and other partners to support communities affected by disasters or likely to be affected by hazards. He emphasized the importance of local organizations, be it civil society organizations or community-based organizations, particularly to increase their capacity on disaster risk management (DRM) and climate change adaptation (CCA).
64. He mentioned that towards this objective, there should be investment in sub-national risk and vulnerability mapping (that includes mapping of coping capacity), as this type of mapping should guide the use of adaptation funds. For key takeaways, he mentioned that urban and rural areas have separate needs and effects of climate change. Hence, separate climate action or CCA strategies should be considered for them. Urban areas may be more likely, though not necessarily always affected by heat waves, flash property and higher infrastructure loss. Rural areas, however, may be more likely to have higher agricultural, livestock and livelihoods loss, and displacement over larger areas. Both urban and rural areas may need a significant investment in livelihoods transition/adaptation particularly with new skills development and market linkage and strengthening.

65. Mr. Manish highlighted that through strengthening local disaster risk governance on Disaster Risk Reduction (DRR) and CCA the overall community resilience could be exponentially increased. This could be done through more investment in adaptation and creating or strengthening the linkage of local disaster risk governance systems and processes with longer-term development leadership and plans. He pointed out that it has been proven by several countries how simulation exercises and drills can be extremely beneficial and that there should be investment to strengthen early warning systems and their understanding and use by communities. To end, he mentioned that community level funds able to undertake anticipatory action should be created and supported. This will help strengthen local civil society organizations working on Disaster Risk Management (DRM) and CCA and reduce the impact of hazards affecting communities in the Mekong River basin region.

3.3.3 Ms. Katuscia Fara, Senior Regional Climate and Disaster Risk Reduction Advisor, World Food Programme

66. Ms. Katuscia Fara has over 20 years of experience in climate and disaster risk management, sustainable development, and community-based adaptation. Ms. Katuscia mentioned that climate change is part of the WFP mandate, and that with the 2-degree scenario hundreds of millions of people will go hungry, and that 80 percent of WFP beneficiaries are in vulnerable areas related to extreme weather events. She mentioned that 1.2 trillion dollars were lost in recent years but there were other impacts beyond economic losses. Actions were required to avoid hazards and reduce disaster and better understand the drivers of risk and vulnerability at all levels and the impacts of climate change on food security and nutrition.

67. Ms. Katuscia pressed upon the importance of finding solutions to support national governments to strengthen their capacity and skills to anticipate and manage forecasts, to be better prepared on what is going to happen and where will the impact be, to have mechanisms in place to reduce loss, and to focus on community level intervention to work with local community level decision makers. She emphasized the importance of tools to be implemented, especially climate finance to support nations and partnerships, and the acknowledgement and integration of traditional knowledge.

68. To conclude, Albert's key takeaways from the session indicated that some of the most at-risk countries to the impacts of climate change are in the GMS; drought is an important risk driver in the region and accounts for more than 60 percent of disaster losses; actions by GMS countries are ongoing but are not sufficient to respond to the climate countries; and it is not only big disasters that matter. Small-scale events such as localized drought or rainfall events can have potential negative impacts to households and communities if their asset and capital endowments are reduced and weakened by other vulnerabilities.

4. Theme 1 Session 3: Mainstreaming climate and disaster resilience development, and establishing multi-stakeholder partnership mechanism in the GMS

69. The session was facilitated by Mr. Dao Xuan Lai, Head of Climate Change and Environment Unit, UNDP, Viet Nam. Mr. Dao Xuan Lai is working in UNDP country offices in Bhutan, Indonesia, Myanmar, and Viet Nam and has more than 25 years of working experience in policy advocacy and policy formulation in the areas of climate change, disaster risk reduction,

climate resilience, green growth, energy, circular economy, and environmental protection. Followed by a Keynote presentation by Dr. Sok Ty, TA-9915 National Adaptation Planning Specialist. Please refer to Appendix 4 Day 1 for presentations.

70. Mr. Dao highlighted that GMS countries are prone to natural disasters and vulnerable to significant impacts of climate change, and exposed to changing rainfall intensity, heat waves, floods, typhoons, droughts. The economic costs of climate damage in GMS countries are significant and will be fifty-fold by 2050.
71. The GMS countries have made significant efforts in climate change adaptation and disaster risk management and advanced their policies through strategies, Nationally Determined Contributions (NDC), National Adaptation Plans (NAP), and vulnerability assessment and mapping. However, countries face several difficulties such as limited capacity for vulnerability and risk assessment at the national and subnational level due to lack of climate data sharing, insufficient financial resources, lack of coordination between inter-ministries and sectors, innovative finances, and disaster loss insurances, etc.

4.1 Keynote

72. **Dr. Sok Ty, TA-9915 National Adaptation Planning Specialist** has been involved in leading a wide range of development and research projects for national and international agencies. His expertise is in disaster management, climate change policy and water resources within the Mekong region. Dr. Sok highlighted that for the development of climate and disaster resilience for key sectors, it is essential to promote policies and funding for adaptation, integrate and coordinate across ministries, develop and engage innovative technologies, incorporate loss, and damage assessment into the development plan, and promote the multi-stakeholder partnerships (MSP) mechanism.
73. The MSP mechanism will help solve many challenges of the climate and disaster resilience development as mentioned. The ASEAN-China dialogue relations can be adopted as an MSP specifically for the GMS countries. Dr. Sok proposed organizing GMS-wide policy dialogues for climate change adaptation and disaster risk management; establishing a GMS-wide platform on climate and disaster resilience in partnership with the Global Commission on Adaptation; engaging regional and national multi-stakeholders across governments, development partners, research institutions, civil society, and the private sector for joint adaptation efforts and actions; and empowering and gathering sectoral stakeholders, development partners, NGOs (Non-Government Organizations), and private sectors.

4.2 Panel Discussion

74. The panel included Mr. Leang Sophal, Chief of Office, Ministry of Environment, Cambodia, Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, MONRE, Lao PDR, Mr. Akhteruzzaman Sano, Team Leader, Save the Earth, and Dr. Laurent Umans, Climate Change Expert, Former First Secretary Water Management and Climate Change, Embassy of the Kingdom of the Netherlands, Vietnam. Please refer to Appendix 4 Day 1 for presentations.

4.2.1 Mr. Leang Sophal, Chief of Office, Ministry of Environment, Cambodia:

75. Mr. Leang Sophal presented the Cambodia Climate Change Strategic Plan (CCCSP) and Updated NDC which will help Cambodia become a green, low-carbon, climate-resilient, equitable, sustainable, and knowledge-based society. It will focus on promoting climate resilience through improving food, water, and energy security; reducing vulnerability of sectors, regions, gender, and health to climate change impacts; ensuring climate resilience of critical ecosystems; promoting low-carbon planning and technologies to support sustainable development of the country; and improving capacities, knowledge and awareness about climate change responses etc., as shown in the presentation in Appendix 4. The multi-Stakeholder Mechanism is important, and Cambodia has tried to promote the multi-stakeholder partnerships (MSP) Mechanism from the national to community level.
76. Cambodia has identified the high-risk community, and included them in climate change adaptation actions, and considered them in the national plan. Mr. Leang mentioned that actions that integrate both adaptation and mitigation have higher potential to reduce the uncertainty of climate change and the complexity of responses to climate impacts. These synergies subsequently generate mutual “co-benefits,” which are defined as additional benefits beyond the initial increase in resilience and reduction in GHG emissions. Lastly, adaptation co-benefits present an opportunity for pursuing climate-resilient pathways that have potential for significant positive outcomes at all levels of development.

4.2.2 Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, MONRE, Lao PDR

77. Mr. Malabou accentuated that in Lao PDR, the agriculture sector has already acted in DRR, and several ministries have implemented forecasting and tracking processed, and provided information to the public as well as recommendations to farmers for practices in field. With respect to adaptation, he mentioned that to help increase farmer resilience, water resources, etc., ministries are working with energy services on flood modelling to anticipate the rainy season and are engaging with several other ministries for village level analysis. However, challenges still exist in terms of scaling, information management and knowledge sharing and databases for loss and damage and climate change. He emphasized that the public budget for disaster recovery was too low.

4.2.3 Mr. Akhteruzzaman Sano, Team Leader, Save the Earth

78. Mr. Akhteruzzaman Sano is the chair of the Global Environment Facility (GEF) CSO (Civil Society Organization) Network, working with GEF partner 184 countries, and is experienced in leading community-led and community-owned adaptation and rural infrastructure in enhancing flood and drought resilience at community levels. Mr. Akhteruzzaman defined innovative ways to address climate disaster caused vulnerabilities. He emphasized the importance of quantifying age and sex-disaggregated baseline focusing on the level of vulnerability, economic status, ecosystem, and capacity. He suggested that multistakeholder dialogues should be facilitated to engage civil society organizations, line sector ministries, and private sector representatives at the country and GMS levels twice a year using the quantitative and qualitative scorecard to monitor the progress made from policy and strategy, programs, and monitoring and evaluation.
79. He recommended that for both community and institutional levels, self-driven progress monitoring mechanisms may be introduced following the same scorecards. For community resilience, innovative financing schemes should be introduced, while for economic analysis,

resilience efforts among the key sectoral levels should be introduced, implemented, and measured by all parties in the GMS.

4.2.4 Dr. Laurent Umans, Climate Change Expert, Former First Secretary Water Management and Climate Change, Embassy of the Kingdom of the Netherlands, Vietnam

80. Dr. Laurent Umans is an international senior advisor, expert and diplomat specialized in rural development and institutional development. Dr. Laurent mentioned that the nexus of climate-water-agriculture is of crucial importance to build more resilience as is the nexus of knowledge-policy-plan-practice. In both cases multistakeholder mechanisms are critical. He mentioned that these were not so much about seeking participation of people in the outsiders' projects but engaging as outsiders (government and development partners) meaningfully in the lives of people and communities. Dr. Laurent outlined that the principles for locally led adaptation endorsed by 80 organizations during COP26 in Glasgow, provide guidance for this. These need to be further operationalized and put in practice through specific multistakeholder mechanisms that recognize the value and contributions of local people and their organizations. He highlighted that it would be a good signal if the GMS countries and ADB could endorse these principles as did the Dutch government.

81. Mr. Dao underlined that mainstreaming climate change and disaster risk reduction into socio-economic development planning is essential to ensure the development of the country and reducing the impacts of climate change and disaster risks. The GMS countries need significant support for capacity building, data and information services, investments, and mechanisms to bring stakeholders together, including the private sector. A multi-stakeholder cooperation platform to promote dialogues, information and knowledge sharing among countries, development partners, businesses and local communities could promote cohesive policies and actions. It will be important to maintain diversity and pluralism in multi-cultural relations to facilitate societal transformation and emphasize learning and sustainability.

5. Theme 1 Session 4: Enhancing community-based adaptation (CBA) and disaster risk management, and harnessing ecosystem-based adaptation (EBA) and natural-based solutions in the GMS

82. The session was facilitated by Mr. Kevin Jeanes, Chief Technical Advisor, FAO, Lao PDR. The keynote presentation was given by Mr. Kevin Jeanes, focusing on EBA. Mr. Kevin has a disciplinary background in landscape ecology, hydrology, and project implementation. He has a 41-year career focusing on natural resource and environmental management, food production systems, biodiversity conservation and institutional support under programs of development aid. His presentation included a summary of lessons learnt accumulated over 6.5 years implementation (2016 – 2022) of the FAO GEF Climate Change Adaptation in Wetland Areas (CAWA) of Lao PDR Project in its efforts to address the multiple objectives of food security, community income resilience, climate change risk and wetland and biodiversity loss. Please refer to Appendix 4 Day 1 for presentations.

5.1 Keynote

83. The **keynote presentation was given by Mr. Noel Puno, TA-9915 Community-based CCA and DRM Specialist** focused on CBA. He mentioned that the GMS subregion is very much vulnerable to disasters and climate change and the magnitude and frequency of climate-related disasters are expected to increase in the coming years. Communities endure most of the impact of disasters and climate change. However, communities know better and have firsthand local knowledge of the situation. They have inherent capacities for adaptation and risk reduction.
84. Mr. Noel mentioned that community capacities however need to be reinforced and enhance in the following areas:
- a. **Capacity development** requires further support in acquiring, improving, and retaining the necessary human and technical resources needed to implement adaptation actions.
 - b. **Policy and institutional arrangements** are required to enhance current set of laws, regulations, and agreements that identify the different roles and responsibilities of agencies or parties in coordinating and delivering adaptation and risk reduction activities. Specifically, the need to mainstream Community-Based Adaptation (CBA)/Community-Based Disaster Risk Management (CBDRM) in both national and sub-national development planning. Likewise, enact an overarching policy on CBA/CBDRM.
 - c. **Knowledge and information sharing** with reference to data, information, and knowledge are needed to identify climate-related vulnerabilities and risks, define adaptation priorities, design appropriate strategies, and track the progress and results of implementation. This information must be both available and accessible, and must consider indigenous, traditional, experiential, and scientific sources. A systematic monitoring and evaluation systems to understand the effectiveness of adaptation initiatives and facilitate learning at local level should also be put in place
 - d. **Finance** is required for increasing and devolving financial resources to local government and communities themselves to design, deploy and manage appropriate adaptation and risk reduction actions. The sources of finance can be public or private, domestic, or international. Likewise, financing should put equal emphasis on both grey and green infrastructure.
85. Lastly, as an overriding principle, CBA/CBDRM approaches should ensure inclusivity (gender, PWDs, others), participation of CSOs, communities and their representatives in local development planning.

5.2 Keynote

86. Mr. Kevin Jeanes shared reflections shared on project design, interventions, and delivery approach of a combined landscape, ecosystem, and community-based approach to integrate climate change adaptation, disaster risk management and natural resource management within the flood prone floodplains and wetland complexes surrounding Lao PDR's two Ramsar Sites in lowland southern Laos. Specific lessons were shared on CAWA project achievements and results, origin of approach, challenges experienced with objectives, problem analysis and action approach and summary of actions delivered. The overall combined CCA-DRM-Natural

Resource Management (NRM) approach to floodplain-wetland-fishery management was presented as a model for regional up-scaling under food security and rural development programs.

5.3 Panel Discussion

87. The panel discussion included Mr. Ouk Navann, Deputy Director General, General Directorate of Local Community (GDLC), Ministry of Environment, Cambodia, Ms. Mayfourth Luneta, Deputy Executive Director, Center for Disaster Preparedness Foundation Inc., Dr. Niladri Gupta, Senior Water Resources Management Specialist, Asian Disaster Preparedness Center, and Dr. Duong Nong, Lecturer, Vietnam National University of Agriculture. Please refer to Appendix 4 Day 1 for presentations.

5.3.1 Mr. Ouk Navann, Deputy Director General, General Directorate of Local Community, Ministry of Environment, Cambodia

88. Mr. Ouk Navann is responsible for administrative work and supporting the livelihood of people who live in or around protected areas, where GDLC has managed to establish 190 Community Protected Areas (CPA) comprising of 356 villages with number of families of 71,723 persons and cover forest areas of 324 238 hectares. He mentioned that EbA (Ecosystem Based Adaptation) is a real climate adaptation measure that must be scaled-up across the country as it is implemented worldwide and can consequently improve local livelihood. He mentioned that agroforestry practices are essential for locals to be trained in and for land area and production.

89. Mr. Ouk prioritized water supply, security and safety and mentioned that this should be a priority for every climate change adaptation measure. He stated that green industry ecotourism should be “local people and private sectors” oriented; and that private sector can promote the market and success for the ecotourism for the local people. Lastly, he underlined the importance of complete circle agriculture and its benefits to locals.

5.3.2 Ms. Mayfourth Luneta, Deputy Executive Director, Center for Disaster Preparedness Foundation Inc.

90. Ms. Mayfourth has more than twenty years of experience in community-based disaster risk reduction, climate and disaster risk management, sustainable development, and community-based adaptation. Ms. Mayfourth mentioned that community needs be taken into consideration, and that they should be involved in assessments to create more ownership and accountability—not only for DRR but also for early warning systems. Community participation is essential and should be included systematically and financially in systems to allow for interventions to be meaningful for communities. She mentioned that climate change adaptation and DRR must be on top of the agenda in terms of policy.

5.3.3 Dr. Niladri Gupta, Senior Water Resources Management Specialist, Asian Disaster Preparedness Center

91. Dr. Niladri Gupta is a Water Resources Management professional, focusing on climate change adaptation to build resilience of the water sector. He has over 18 years of technical and research experience in geoinformatics, system dynamics and analysis, fluvial geomorphology, and integrated water resources management. During the session Dr. Niladri pointed out that EbA is a commonly used term and has gained significance due to its inclusion in the Paris Agreement and other global frameworks as an adaptation option. He mentioned that the primary thing to decide is what qualifies as EbA. It must be a sustainable management option

and should support conservation, and restoration of ecosystems to provide services that enable people to adapt to the impacts of climate change. Any conventional adaptation option should not be considered as an EbA just because it has a green component.

92. He highlighted that as climate change is being manifested through extreme events increasing in frequency and intensity, there is a need to understand if the EbA measure can help communities adapt to these extreme conditions. Additionally, it was essential to understand whether EbA can support, address, and minimize loss and damage.
93. ADPC's experience in Sri Lanka on NbS (Natural Based Solutions) for landslide risk management was shared, which showed that NbS must have an economic value to communities who will ensure the sustainability of the measure. The example of a plant manual developed as part of a World Bank funded project was mentioned which specified the identification of plants having an economic value for protection of selected slopes and provision of livelihood security to communities.
94. Dr. Niladri mentioned that the challenge of upscaling NbS in terms of green solutions may not have reached the level of confidence decision makers have on grey solutions. This required extensive awareness raising and sensitization at government and private sector level. He mentioned that EbA measures should be included in government's annual budget plans rather than depending on donor funds, as ownership and integration was only possible if this was a part of government planning process.
95. Conclusively, Dr. Niladri mentioned that a bottom-up approach is required to integrate EbA into government policies and plans, and that it may be particularly challenging due to its cross-sectoral nature—and a people centric approach can be ensured which is the main pre-requisite of an EbA measure or a NbS.

5.3.4 Dr. Nong Huu Duong, Lecturer, Vietnam National University of Agriculture

96. Dr. Nong Huu Duong focuses on forest resources management, GIS (Geographical Information System) and remote sensing for resource manager, agroforestry, and natural resources management. During the session he mentioned that given the success in establishing climate smart villages for Climate Smart Agriculture (CSA), NbS implementation in enhancing adaptive capacity, and resilience in climate-vulnerable and marginalized communities of northern Vietnam, it was learnt that it is important to generate good evidence-based results for making recommendations for adoption of good work into national/international development programs at subnational and national levels. He underscored that when a policy is developed based on some good evidence from the ground, only then can work be scaled effectively at the subnational/national levels.
97. Mr. Kevin summarized the key takeaways for the session and highlighted the following points: Lao PDR Government and UN-FAO commenced addressing need for combined CCA and DRM action, based on community-, ecosystem-, and nature-based approach, a decade ago (2013) in bid for GEF6 funding
98. Contrasting other WGE 26th AM GMS partner presentations, highlighting upper-level national frameworks, future plans, and broad national results for combined CCA, DRM and biodiversity conservation action, Lao government with GEF funding has completed 6.5 years of on-ground action and derived good lessons on practical pilot approaches to the actions applied at community and landscape level.

99. Lao government – FAO, in Theme 1, Session 4 ‘Harnessing ecosystem-based adaptation (EBA) and natural-based solutions in the GMS – Lao PDR Case Study’ has presented these lessons from practical experience with key conclusions:

- a. Community-based adaptation and disaster risk management in Lao PDR, based on a landscape-, ecosystem- and nature-based approach, has been proven to be feasible and practical, delivering improved outcomes for: community climate change and disaster risk, food security; livelihood resilience and local incomes; and wetland site protection, ecosystem function and fish biodiversity/productivity.
- b. Multi-stakeholder and multi-sectoral partnerships of local community and district-provincial agencies were found well-capable of delivering integrated multi-sectoral CCA-DRM-NRM outcomes based on local action and practical low-cost interventions.
- c. Local institutional and community capacity to deliver the above was raised through a ‘learning-by-doing’ approach to deliver results at maximum cost efficiency with minimum external input.
- d. The model pilot-tested combined CCA-DRM-NRM and multi-stakeholder and multi-sectoral approach, with focus on combined floodplain-wetland-fishery landscape management, is ready for GMS regional up-scaling under food security, rural development, and climate smart landscape programs.
- e. Implementation lessons in lowland Lao floodplain and wetland sites stress that care is needed to focus on:
 - i. Multi-disciplinary approaches to problem analysis and mitigating actions merging international, GMS regional and local experience.
 - ii. Lowland approach merging multi-sector development, environmental and natural resource management not an upland approach of protected area management under one ministry.
 - iii. Multi-objectives for every intervention to reduce CC and DRM risk, reduce NRM pressures, increase food security and provide option of input-low cost-more profitable livelihoods, in that order of importance.
 - iv. Interventions and boundaries which are landscape and nature-based, support improvement of natural ecosystem and hydrological function, fish migration and micro-reserve interconnectivity.
 - v. CCA-DRM-NRM immediate problems of typhoons, flooding, drought, food insecurity and global wetland habitat/native fish biodiversity loss, not future projected issues (e.g., temperature change).
 - vi. Reality that:
 - a) ecosystem-based alone will not deliver, it needs to be supported by landscape and nature-based hydrology approaches
 - b) community-based alone will not deliver, it needs district agency and government technical and legal support, and provincial broader-scale river basin, development, and environment planning
 - c) NRM, conservation and site management interventions will not be sustainable, unless supported by strong local community site and resource ownership, and clear positive livelihood and food security outcomes from site and landscape management.

6. Theme 1 Session 5: Identifying adaptation finance needs and gaps, and employing innovative financing instruments in the GMS

100. Day 1 was concluded by identifying adaptation finance needs and gaps and employing innovative financing instruments in the GMS, facilitated by Dr. Srinivasan Ancha, Principal

Climate Change Specialist, ADB. The keynote presentation was given by Dr. Ornsaran Pomme Manuamorn. Dr. Ornsaran is currently a senior consultant to the World Bank, working on climate finance in South Asia, and to the Climate Bonds Initiative (CBI), promoting sustainable finance and Paris-aligned climate transition in ASEAN. Concurrently, she is also an advisor for Thailand's Fiscal Policy Research Institute (FPRI), working on a UNDP-financed project on an integrated financing framework for sustainable development goals (SDGs). She has more than 18 years of international work experience on a range of issues, including climate change, climate and sustainable finance, environment and natural resource governance, landscape management (agriculture-forest landscapes), weather insurance and agricultural risk financing, with country experiences from Southeast and South Asia. Please refer to Appendix 4 Day 1 for presentations.

6.1 Keynote

101. **Dr. Ornsaran Pomme Manuamorn, Climate and Sustainable Finance Expert, World Bank, Climate Bonds Initiative, and Fiscal Policy Research Institute.** Dr. Ornsaran's presentation summarized that the GMS is among the world's most vulnerable regions to climate change and must therefore scale up investment to adapt to its impacts. Climate change adaptation does not only involve disaster risk management, but also addresses challenges from slow-onset events, including sea level rise, rising average temperatures, changing rainfall regimes, desertification, biodiversity loss etc. Adaptation finance is needed for both. She mentioned that climate-related shocks also affect the most vulnerable populations in the GMS disproportionately. This underscores the social dimensions of vulnerability to climate change, and therefore the need to invest in social protection measures, in addition to physical infrastructure and nature-based solutions, as part of investment for adaptation and resilience.

6.2 Panel Discussion

102. The panel discussion included Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR, Ms. Ying Zhou, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC, Dr. Nguyen Phuong Nam, Founder Climate Innovation Consulting and Services, Klinova JSC., and Dr. Kamal Ahmed, Institutional Lead, Disaster Risk Financing and Insurance, Asian Disaster Preparedness Center. Please refer to Appendix 4 for presentations.

6.2.1 Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR

103. Mr. Nakhalin Vorasarn is the assistant for One Planet Network NFP of Lao PDR, and the coordinator of SWITCH Asia II Program Implementation for Lao MONRE. He specializes in circular economy, sustainable consumption and production, strategic environmental assessment, comprehensive waste management, IT, IEC materials and information dissemination. Mr. Nakhalin mentioned that to help communities access the climate financial fund for coping and adapting to climate change, there are two main options as direct support and indirect support to the local communities. Direct financial support can be described via an example of micro-finance programs. Micro-financial programs will directly contribute funds to communities and farmers who face climate risk directly which will help improve their livelihoods and help farmers cope with climate change. Indirect financial support can be provided via funds

that focus on institutional capacity building, legal frameworks, and livelihood capability of communities.

6.2.2 Ms. Ying Zhou, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC

104. Ms. Ying Zhou is an Associate Researcher of the China-ASEAN Environmental Protection Cooperation Center/Lancang-Mekong Environmental Cooperation Center. In recent years, she has engaged in research on China-EU environmental cooperation, China-EU circular economy cooperation, marine debris control, green value chain establishment, and has been deeply involved in several regional environmental cooperation projects. She summarized the climate finance situation in China and ASEAN region, including the financial gap and trend. In her presentation, she pointed out that climate finance is still lacking in the region, and the finance on climate adaptation is even less. Under the current global situation and climate change, she emphasized that it is crucial to ensure the finance for climate change mitigation and especially adaptation.

6.2.3 Dr. Nguyen Phuong Nam, Founder Climate Innovation Consulting and Services, Klinova JSC.

105. Dr. Nguyen Phuong Nam is a senior specialist in environmental-related issues with over 17 years working closely with development partners and Vietnamese governmental agencies. He has delivered substantial contributions in research, policy advising and consulting. He has engaged in enhancing institutional and policy systems on environment with focus on financial instruments, analyzing, developing, and testing no-regret measures and market-based instruments including databases, MRV/M&E systems, and institutional and regulatory frameworks.

106. Dr. Nguyen concluded that climate finance is the most critical issue for any climate actions, including adaptive measures for GMS countries. He mentioned that financial needs and gaps may be identified by some assignments, but the estimated sources are not enough in the practice. He stressed that there are always limited sources from national budgets and granted support from development partners to the GMS countries. The climate co-benefit of any invested projects should be related together with primary benefits. It is rare to have a 100 percent investment for adaptation projects in developing countries, where there are more than 10 climate hazards annually. However, the feasible indicator of an adaptive project determines the essential criteria for selected priority. Consequently, the most priorities of inclusive adaptation measures must be identified in the long-term National Adaptation Plan (NAP) of GMS countries.

6.2.4 Dr. Kamal Ahmed, Institutional Lead, Disaster Risk Financing and Insurance, Asian Disaster Preparedness Center

107. Dr. Kamal Ahmed focused on three main problems, firstly there is a heavy reliance on public spending, specifically on debt instruments. Public investment is low in adaptation finance which is a key issue. The second issue is that due to heavy reliance on debt instruments and extreme weather events, especially policy-based loans from bilateral donor organization, financial planning is missing to a large extent. Ex-post financial planning, or ex-post budgetary reallocation is done past events, therefore, if countries do not focus on adaptation or budgetary allocation, the opportunity cost is extremely high which developing countries cannot afford, causing cuts in health, education, energy, etc. The third issue is conducive environments, due to the lack of enabling environment.

108. Three things are required to proceed. Firstly, there is not enough money and how can finance be generated? Even if we increase 100% of debt instruments which means countries need to innovate finance. Therefore, Green Bonds are the next champions. Catastrophe Bonds have immense potential to give us adaptation finance, and it is important to focus on one area, but it is important to diversify. Then there is Debt-for-nature swap. There are a trillion dollars swapped with nature performance and Asia and GMS does not have a bigger share as it should (less than 10 percent). The second opportunity for the region could be efficient financial flows. The debt and financial instruments are agreed between two parties, but then financial efficiency is exceptionally low, and the instruments sit idle for months, and if 2030 net zero target needs to be achieved 6 to 12 months means a lot of time. Therefore, if adaptation ambitions need to be achieved it must be addressed and clubbed with financial flows efficiency.
109. Thirdly, for adaptation needs and raising revenue, the financial flows must be result oriented and there must be more policy-based instruments. For example, if green bonds are an aspiring situation for adaptation, but then we let ministries decide etc., it needs to be specific—where do we want to have adaptation in place e.g., smart technology, agriculture etc. The private sector has been more advanced in green bond than the sovereign level. In the last 6 years the Asian counterparts and GMS member countries are not as advanced as Europe, especially France due to the Paris Agreement, but the share could be enhanced effectively and tremendously, still the start of sovereign market. Conclusively, any innovative financing instrument we want to introduce must complement what is happening and provide a level of additionality and sustainability—without which there can be no net zero emissions.
110. Dr. Ornsaran's highlighted that going forward, the GMS will benefit from an integrated strategy that: 1) mobilizes adaptation finance from both public and private resources; 2) applies a risk layering approach for risk financing; 3) makes more use of innovative financing instruments such as green and resilience bonds; and 4) builds a supportive ecosystem for scaling up adaptation finance, as well as sustainable finance more broadly.
111. Dr. Ornsaran concluded that the GMS needs to employ a variety of approaches and instruments to support investment in adaptation. There is more potential for the GMS to take advantage of international climate funds and multilateral development finance for scaling up investment in adaptation. Insurance and other risk financing instruments such as catastrophe (CAT) bonds will also play a key role in managing the financial consequences of climate extremes. Innovative instruments such as debt-for-nature swap could be considered. The use of these instruments should be supported by conducive policies and measures to improve efficiency in fund use. Ministries of Finance in the region should also see the strong business case for investing public finance in nature, as such investments will deliver strong economic, environmental, and social benefits. Regional developments such as green taxonomies will support the growth of dynamic thematic bonds markets in the region and could also serve as a basis to embed more adaptation objectives in green investment.

Day 2 – 27 October

Promoting Climate-Smart Landscapes

7. Theme 3 Session 1: National priorities and strategies for biodiversity conservation and post-2020 Global Biodiversity Framework in the GMS towards the upcoming COP15

112. Discussions were made on the progress and challenges for biodiversity conservation in individual countries in the GMS region. The common points raised by the countries were limitations in data and stakeholder cooperation. The session was facilitated by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB. Presentations were given by GMS WGE and country representatives, including Mr. Sam Oeurn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia, Ms. Jing Guan, Senior Program Officer, Department of Nature and Ecology Conservation, Ministry of Ecology and Environment, PRC, Mr. Theverack Phonekeo, Deputy Director General of Department of Environment, MONRE, Lao PDR, Ms. Benchamaporn Wattanatongchai, Environmentalist, Senior Professional Level, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand, and Ms. Ta Thi Kieu Anh, Official, Viet Nam Environment Administration, Viet Nam. Please refer to Appendix 4 Day 2 for presentations.

7.1 Cambodia

113. Mr. Sam Oeurn Sothy Roth, is the Chief of Ex-situ Conservation Office, at the Department of Biodiversity, Ministry of Environment, Cambodia shared the following. He is one of the key people for the South-East Asia Botanic Gardens Conservation International (SEBGCI). He has professional experience in research, environmental and social safeguard and compliance, environment management framework, environmental and social impact assessment, biodiversity assessment and conservation, community-based management, value chain and ecosystem services in protected areas. Mr. Sam presented the implementation of Cambodia's National Biodiversity Strategy and Action Plan (NBSAP) for Biodiversity Conservation and Global Biodiversity Goals after 2020.

114. The plan referred to the past performance of the Royal Government of Cambodia in developing a national action plan on biodiversity protection, sustainable use of biodiversity resources, and improving the implementation activities at the national and sub-national levels. The presentation focused on the management of natural protected areas, endangered species conservation, conservation of buffer zones, sustainable use of aquatic resources, benefit-sharing from genetic resource collection, management, and organization of terrestrial and marine landscapes, sharing of information on the CHM mechanism, and highlighting the challenges and action plans for further implementation.

7.2 People's Republic of China

115. Ms. Jing Guan is the Senior Program Officer at the Department of Nature and Ecology Conservation, Ministry of Ecology and Environment, PRC presented the national priorities and

consideration. Ms. Jing Guan has almost ten years of experience in environmental policy research and international cooperation related to biodiversity conservation. Ms. Jing mentioned that China has rich and unique biodiversity, which is attributed to its vast land area and complicated topographical conditions. It has attached significant importance to biodiversity conservation and the development of ecological civilization has fostered an enabling environment for China's biodiversity actions. Ms. Jing mentioned that in 2011, China's National Committee on Biodiversity Conservation (CNCBC) was established, headed by a Vice Premier responsible for environmental affairs which composed of 25 ministries or government departments. This Committee coordinates biodiversity conservation across the country.

116. Ms. Jing indicated that China has taken a series of measures to conserve its biodiversity and ecosystems, such as developing and implementing the Ecological Conservation Red Line Policy and establishing national parks. These measures effectively improved China's biodiversity status quo. From 2009 to 2019, China topped the world in forest resource increase with a total of 71.307 million hectares of land afforested. The populations of giant panda, crested ibis, Asian elephant, Tibetan antelope, Cycas, Tibetan juniper and other rare and endangered wild animals and plants have achieved restorative growth.

117. Conclusively, Ms. Jing mentioned that China has the presidency of the 15th Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP15). The COP15.1 of the Convention was held in Kunming, China, in October 2021, and COP15.2 will be held in Montreal, Canada, in December 2022.

7.3 Lao People's Democratic Republic

118. Mr. Theverack Phonekeo, is the Deputy Director General of Department of Environment, MONRE, Lao PDR. Mr. Thevarack Phonekeo is responsible for directly supervising and managing environmental policy and international cooperation for related CBD. He is responsible as the focal point for certain COPs like Montreal Protocol. Mr. Thevarack mentioned that to achieve the biodiversity convention, the government should focus on implementing the 9th NSED 2021-2025, which focuses on SDGs, green growth, natural resource conservation, and environment protection.

119. Mr. Theverack mentioned that to achieve sustainable development, low carbon, and climate resilience the second NDB is being implemented across all sectors from center to local levels. For example, green energy investment project. The key tools as a guide for implementing biodiversity conservation are included in the NBSAP (2016-2025) national strategy and action plan on environment education, awareness, and climate change. For example, environmental awareness is already integrated in the education curriculum.

120. Mr. Thevarack highlighted that there are some significant achievements on CBD such as institutional and legal frameworks implemented in various projects in protected areas, production forests, and biodiversity corridors. The 6th national report to the UN Convention on Biological Diversity (UN CBD) focuses on conservation of all national parks, protected areas, protection forest, and forest production. For example, Nam Ha is nominated as ASEAN heritage park, and Lao PDR as first ASEAN Biodiversity Hero and 2nd this year. He concluded that Lao PDR continues to work and coordinate with partners from international development, INGOs, and international organization for financing, implementing, monitoring, and reporting on biodiversity.

7.4 Thailand

121. Ms. Benchamaporn Wattanatongchai, is an Environmentalist, Senior Professional Level, at the Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand. Ms. Benchamaporn mentioned that Thailand has established ambitious but realistic targets and is preparing new National Biodiversity Strategies and Action Plans (NBSAP). The national priorities and sixth NBSAP will focus on conserving species and habitat, sustainable use and mainstreaming biodiversity into relevant sectors, financial mechanisms, biodiversity information/data. Communication, Education, and Public Awareness (CEPA) being important instruments for conservation and sustainable use of biodiversity. As Thailand's protected area is only 19 percent and marine is 5 to 6 percent, improvement is needed for the protected area to be at least 30 percent. She concluded that there is a need for balance between development and conservation.

7.5 Viet Nam

122. Ms. Ta Thi Kieu Anh is currently an officer of the Nature and Biodiversity Conservation Agency, at the Ministry of Natural Resources and Environment, Viet Nam. She has experience in developing policy and legislation in biodiversity such as National Strategy on Biodiversity, Access to Genetic Resources and Benefit Sharing (ABS), Genetically Modified Organism (GMO), Invasive Alien Species (IAS). Ms. Ta presented that the Deputy Prime Minister Mr. Le Van Thanh has signed a decision approving the national biodiversity strategy to 2030 with a vision towards 2050. Under the strategy, the government targets increasing the area of protected ecosystems to 9 percent of the country's land area and protected marine and coastal areas to 3-5 percent of the total sea area.

123. Ms. Ta mentioned that meanwhile, forest coverage is expected to sustain at 42-43 percent, at least 20 percent of the degraded ecosystem area will be restored. With a vision towards 2050, major natural ecosystems, endangered species, and precious and rare genetic resources will be restored and effectively preserved. To that end, the strategy sets out key tasks such as intensifying biodiversity conservation and restoration, conserving and restoring endangered wild species, stepping up the conservation of genetic resources, and controlling activities that would harm biodiversity.

124. After discussions on the progress and challenges for biodiversity conservation in individual countries in GMS region, it was concluded that limitations in data and stakeholder cooperation required the most improvement.

8. Theme 3 Session 2: Biodiversity conservation and post-2020 global biodiversity framework, challenges, and priority actions in the GMS

125. The session was facilitated by Mr. Jake Brunner Head of Indo-Burma Group, The International Union for Conservation of Nature. Mr. Jake is working in the Mekong Sub-region covering Viet Nam, Cambodia, Lao PDR, Thailand, and Myanmar, on transboundary river governance, water-food-energy tradeoffs, wetlands management, and nature-based solutions in agriculture

and aquaculture in cooperation with IUCN's regional and global specialists. Please refer to Appendix 4 Day 2 for presentations.

8.1 Keynote

126. The keynote presentation was given by Mr. Anouxay Phommalath, Land Use Planning and Spatial Analysis Specialist and Dr. Ellyn Kathalina Damayanti, TA-9915 Thematic Lead and Landscape Management and REDD+ Specialist. Mr. Anouxay is a consultant on climate change, environment and social safeguards, natural resource management, land management and project evaluation. Mr. Anouxay's presentation provided context on the Mekong biological ecosystem and included Biodiversity Conservation Corridors Initiative (BCI) and Biodiversity Conservation Corridors (BCC) projects. The presentation illustrated the 2020 Global Biodiversity Framework and Aichi Biodiversity Target, including the country's achievement as well. The presentation also included key challenges and solutions raised by each country to promote the climate smart landscape concept as follows:

- a. Biodiversity conservation must include holistic and integrated approaches with various ecosystems in the landscape and use people-centric sustainable conservation and livelihood development.
- b. Building capacity on climate smart landscape to overcome the challenges in institutional, human resource, technical, and inclusive governance. To engage multi-stakeholders and private sector in designing, implementing and knowledge sharing.
- c. Identifying and enhancing innovative financial mechanisms for sustainable biodiversity conservation and incorporating sustainable livelihoods development (PES, REDD+, carbon credit) in landscapes.
- d. Conclusively, all GMS members must commit to achieve the post 2020 GBF for moving forward and contributing to global biodiversity framework.

8.2 Panel Discussion

127. Panel discussions included Mr. Hexiao Chen, Deputy Director, Guangxi Environmental Protection International Cooperation and Exchange Center, PRC, Ms. Regan Pairojmahakij, Senior Programme Officer, RECOFTC, Thailand, and Dr. Beria Leimona, Senior Expert Landscape Governance and Investment Principal Investigator, World Agroforestry (ICRAF). Please refer to Appendix 4 Day 2 for presentations.

8.2.1 Mr. Hexiao Chen, Deputy Director, Guangxi Environmental Protection International Cooperation and Exchange Center, PRC

128. Mr. Hexiao Chen has undertaken over 30 national and provincial environmental protection projects, published over 10 papers, and obtained 8 patents. He is currently engaged in research in international exchanges and cooperation in ecology and environment. He presented the achievements of Guangxi in strengthening transboundary cooperation on biodiversity conservation. He mentioned that biodiversity conservation exchanges and cooperation with Viet Nam and other GMS countries were actively carried out during the first and second phases of the Core Environment Program (CEP), including building of transboundary biodiversity conservation corridors, and signing of the Memorandum of

Understanding on Biodiversity Conservation between Guangxi and Cao Bằng, Viet Nam in 2015, etc. Cao-vit gibbons that were once thought to have disappeared in China but were found living in five herds of 33 individuals.

129. Subsequently, Mr. Hexiao mentioned opinions on the challenges for implementing GMS projects. Firstly, to progress, trust and communication need to be enhanced between countries and regions. Secondly, sharing of biodiversity information needs to be strengthened and improved. And lastly, transboundary biodiversity conservation faced immense challenges in the post-epidemic era and required further attention.

8.2.2 Ms. Regan Pairojmahakij, Senior Programme Officer, RECOFTC, Thailand

130. Ms. Regan Pairojmahakij has vast experience in landscape and habitat connectivity, forest landscape restoration, biodiversity conservation, market-based approaches yielding ecological benefits and strengthening climate resilience. Ms. Regan commended the organizers for the integrated approach to landscape management. She mentioned that under Theme 3 there is a three-pronged set of priorities: climate, biodiversity, and livelihoods. While such an integrated approach is necessary it is challenging and not the norm in practice. This requires an approach that emphasizes optimizing multiple values within our landscapes versus a single value being privileged over others (i.e., economic or carbon).

131. In practice, this is a challenge. Within a given sector or industry, for example forestry, incentive structures and targets are linked to single values - i.e., area under forest, economic value, or carbon sequestration potential. This becomes clear when in efforts such as Forest Landscape Restoration (FLR), linked to NDC commitments, there may be narrow interests defining the FLR strategies. What is needed are strategies that consider carbon, economic returns, local livelihoods, and biodiversity. However, there are few tools and best practice pathways for decision makers to adopt. This would seem a critical gap to address. Climate change is urgent, but biodiversity and poverty reduction must accompany climate actions in parallel.

132. Moreover, the role of indigenous peoples and local communities (IPLCs) in climate smart biodiverse landscapes. She mentioned that over the period 2002-2019 an area of 610,000km² of forest was lost in Southeast Asia - an area equivalent to the size of Thailand. These rates are contributing to an ecological and climate crisis. At the same time there is a growing body of evidence that land managed by indigenous peoples have lower rates of deforestation in many cases than state forests. Given that indigenous groups manage approximately 25% of land area, with 80% of global biodiversity, there is a convincing argument for more integrally involving IPLCs in the region in designing, implementing, and benefiting from climate smart landscape management.

133. Conclusively, she pointed out that with respect to Target 4 of the Framework on EbA, engagement with IPLCs is a valuable pathway to achieving this. For example, RECOFTC developed a community forestry-based climate change adaptation model at the individual community forest level to mainstream adaptation while achieving mitigation goals through sustainable forest management. This approach has since evolved to becoming a forest landscape-based approach. RECOFTC will be happy to share further on this methodology.

8.2.3 Dr. Beria Leimona, Senior Expert Landscape Governance and Investment Principal Investigator, World Agroforestry (ICRAF)

134. Dr. Beria Leimona is coordinating and leading research programs specializing in landscape governance and policy, innovative financing, community-based natural resource management,

public-private-partnership, and sustainability standards and certifications for agricultural commodities across Asian countries. During the session she mentioned that the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report on Value Assessment under the Key Message C3 mentioned, "Despite the significant increase in valuation studies over the last 30 years, less than 5 percent report the uptake of valuation in decision-making (well established)." The report highlighted that "only a tiny share of peer-reviewed studies report uptake by decision-makers, including governments (well established)." Key barriers inhibiting the uptake of valuation in public policy decisions include limited reliability of studies for decision-making (well established), limited technical capacity, and institutional gaps that undermine the ability to monitor and assess the social, economic, and environmental benefits provided by nature, as well as overlooking values in decision-making (well established).¹

135. Consequently, Dr. Beria mentioned that a broad coalition between the public and private sectors and the people who live in the landscape is needed to make progress, especially when the interventions are inclusive and knowledge-fact-based. The involvement of scientists and knowledge brokers who can jointly support change may lead to avoiding stalled processes and facilitate timely actions.

136. Furthermore, Dr. Beria stated that a multifunctional landscape can support the achievement of a climate-smart landscape. Multifunctional landscapes incorporate diverse ecosystem services, including food, fiber, and timber production, energy generation (hydro, wind, and biofuels), potable waters and cultural value, and beneficial natural processes such as climate and water supply regulation, nutrient cycling, and ecological health, including biodiversity. In the Asian farming system, agroforestry is a common and cultural practice of multifunctional agriculture that requires that they be examined through a social-ecological lens. Politically, agroforestry falls into a crack between forestry and agriculture strategy – segregating between conservation and development.

137. Conclusively, she mentioned that biodiversity conservation has moved beyond protected areas toward promoting sustainable multifunctional landscapes. Biodiversity conservation becomes the focus of both conservation and production landscapes. Consequently, rural development needs to incentivize farmers as environmental stewards when they engage in climate-smart agriculture at the landscape scale. The financing scheme can be in the form of payment for ecosystem services and premium prices for green products. Sustainable financing still deserves strong commitment from different actors, including the impact investors.

138. Mr. Jake concluded the session with the following key takeaways:

- a. He mentioned that the GMS region was dominated by large rivers and wetlands. The best measure of climate resilience in these freshwater ecosystems was the degree of connectivity, both horizontal (across the floodplain) and vertical (upstream-downstream). Healthy rivers and floodplains buffer extreme weather and hydrological events.
- b. It was essential to maintain freshwater connectivity as it will support both climate change and biodiversity outcomes. He stressed that this is a region where these two goals needed to be explicitly aligned. Some organizations put Mekong "ecosystem

¹ <https://zenodo.org/record/7075892#.Y2ORFGIBw2w>

integrity” into a separate box in their strategic plan, though in fact, it should be the top-level outcome because it will make a major contribution to biodiversity, fisheries, food security, disaster risk reduction, climate change adaptation, equity, etc.

- c. Forests deliver climate change adaptation and mitigation benefits. Regionally there has been a focus on forest protection, much less on forest restoration. Forest quality, particularly in Viet Nam, is exceptionally low. He highlighted that it will not be possible to meet the new 30x30 target by expanding the national PA (Protected Area) system: innovative approaches are needed such as community-managed PAs, sub-national PAs, and OECMs.
- d. Analysis of PA management in GMS shows that technical and governance gaps, not financing, are the major barriers. Mr. Jake specified that this is welcome news in as much as it implies that governments are increasingly covering core PA management costs. Furthermore, he mentioned that GMS countries are increasingly unwilling to borrow for biodiversity, especially as they move from International Development Association (IDA) to International Bank for Reconstruction and Development (IBRD) terms. Solutions include mainstreaming biodiversity into existing loans or matching loans with grants.
- e. Conclusively, of the many transboundary landscapes that ADB has supported through BCCI, transboundary MOUs (Memorandums of Understanding) have only been signed for three and most are continuing to degrade. Transboundary conservation is inherently difficult. Moreover, long-term conservation may not be achievable through the classic 5-year project.

9. Theme 3 Session 3: Employing ecosystem-based approaches and natural-based solutions to contribute to mitigation and adaptation to climate change in the GMS

139. The session was facilitated by Dr. David Ganz, Executive Director, RECOFTC. David is a strong advocate for community forestry in the region and for path-breaking private sector models that respect local rights and deliver lasting and tangible benefits from millions of hectares of community forests in the Asia-Pacific region. He mentioned that there are large scale funds coming into climate change. Despite the \$31 billion from the World Bank Group in 2021 alone, IPLCs continue to struggle for funds to sustainably manage the natural resources upon which all our own lives are dependent. In Thailand for example, 1 rai (half acre) of forest continues to be cleared for a profit margin of \$30 per year. This means, for \$31 that half acre of forest could have been saved using this opportunity costs of one rai conversion. More money needs to get to the ground, which must be in the form of mitigation and adaptation funding, especially through nature-based solutions of proven mechanisms. Please refer to Appendix 4 Day 2 for presentations.

9.1 Keynote

140. The keynote presentation was given by Dr. Michael Victor Galante, who is a Director, Climate Forestry and Secretary-General, at The Alliance for Responsible Forest Management. Dr.

Michael Galante is a professional forester with over 20 years of experience in Asia-Pacific, in forest management planning, forest certification, timber legality, forest finance and climate change mitigation. Dr. Michael presented that change takes time but building capacity and having examples of success does not have to. In his keynote address he focused on employing ecosystem-based approaches and natural-based solutions to contribute to mitigation and adaptation to climate change in the GMS. He communicated his experience in implementing a practical pathway to develop a 'model' project, including the importance of documenting positive and negative issues, and using data to make decisions.

141. Dr. Michael mentioned that developing model projects for ecosystem-based approaches and natural-based solutions can help economies in multiple ways, such as, 1) the creation of new entities and project units within organizations and ministries, 2) the building of capacity at the directorship level, the management level, the operational level, as well as the community level, thus reducing time to transfer knowledge and 'not' having to wait a generation to see the impact of today's decisions, 3) fostering a 'learning-by-doing' attitude whereby organizations and entities learn from success and failures, 4) creating a culture of data collection and making data-based decisions, and 5) fostering a willingness to continuously learn over time based on transparency, trial and error and ultimately, collaboration at all levels of governance at the landscape level.

142. Conclusively, he mentioned that it was important that organizations and ministries should engage with regional training centers to foster continuous improvements over time at the policy, management, operational and community levels, which will lead to improved governance and, responsible, and sustainable management of our natural resources.

9.2 Panel Discussion

143. The panel discussion included Mr. Sam Ourn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia, Mr. Raphael Glemet, Senior Programme Officer, Water, Wetlands and Nature-Based Solutions, The International Union for Conservation of Nature, and Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital. Please refer to Appendix 4 Day 2 for presentations.

9.2.1 Mr. Sam Ourn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia

144. Mr. Sam Ourn Sothy Roth has professional experience in research, environmental and social safeguard and compliance, environment management framework, environmental and social impact assessment, biodiversity assessment and conservation, community-based management, value chain and ecosystem services in protected areas. Mr. Sam stated that it was essential to consider ecosystem-based approaches and nature-based solutions for climate mitigation and adaptation, which focus on the integration of Community Protected Areas (CPA) or the recovery of forest cover by CPA and local communities, as these will help enhance livelihoods and ensure food security. He mentioned that of Cambodian people, 18 percent are below the poverty line, and 31 percent are farmers, who must build knowledge and shorten the capacity gap in adapting to climate change impact at national and local levels.

145. Mr. Sam determined that several mechanisms of nature-based approaches and solutions were being developed and implemented by Cambodia which were indirectly contributing to climate change adaptation. These include: 1) the establishment of ecotourism communities; 2) payments for ecosystem services (PES) piloted in Preah Jayavarman-Norodom National Park

at Phnom Kulen, Siem Reap Province, and Kbal Chhay Multipurpose Area, Sihanoukville Province; 3) carbon forest conservation mechanism of REDD+ implemented in Keo Seima, Mondulkiri Province and "Prey Lang" Wildlife Sanctuary, Kampong Thom - Preah Vihear; and 4) access and benefit-sharing (ABS) from the collection and use of genetic resources, which is a mechanism by preparing legal documents and pilot studying for Cambodia.

146. Conclusively, he stated that countries within GMS required: 1) to identify an approach for the promotion and integration of biodiversity conservation and multi-ecosystems to contribute to climate change mitigation and resilience; 2) identify priority mechanisms for implementation in various landscapes; 3) to build institutions and capacity development of technical officers on assessment, monitoring, management, and attracting investors to participate in the use of natural-based approaches and solutions; and 4) to cooperate between relevant stakeholders in particular between states and states on the climate-smart landscape and global biodiversity conservation.

9.2.2 Mr. Raphael Glemet, Senior Programme Officer, Water, Wetlands and Nature-Based Solutions, The International Union for Conservation of Nature

147. Mr. Raphael Glemet has fourteen years of experience working on environmental conservation with governments, INGOs, and intergovernmental organizations, covering a range of topics including water and transboundary cooperation, wetlands management, coastal ecosystems, fisheries, and nature-based solutions for resilience. Mr. Raphael mentioned that it was essential for ecosystem-based adaptation and mitigation, or NbS for adaptation or mitigation process to restore, conserve or manage ecosystems, so they continue to provide adaptation and mitigation services.

148. Mr. Raphael stated that forests help mitigate or adapt to some of the climate issues through their capacity to limit landslides and regulate river flows and store carbons, and freshwater wetlands act as sponges managing floods and droughts; peatlands ensure carbon storage at a higher rate than tropical forests, coastal wetlands enable protection against erosion and saline intrusion triggered by sea-level rise. In addition, to providing direct adaptation and mitigation services, nature-based approaches provide co-benefits (e.g., support to livelihoods), strengthening, even more, the resilience of communities.

149. Mr. Raphael indicated that evidence showed that NbS could save 5-10 gigatons of carbon dioxide equivalent per year; this contribution, combined with emission reduction, was a significant contribution to reaching the net zero emission targeted for 2050. Furthermore, there is currently an increased acknowledgment of NbS within global policies discourses (G7, G20, UNFCCC, UN High political forum). Despite this global acknowledgment, there are still significant gaps in the translation of NbS on the ground and at scale in countries. Several countries have adopted NDCs that reference ecosystems to adapt/mitigate, but these mentions lack specificities and clear targets. Forests are overrepresented, and wetlands are underrepresented.

150. It was further added that to support the implementation of NbS at scale, International Union for Conservation of Nature (IUCN) has developed the IUCN Global Standard for Nature-based Solutions, a self-assessment consisting of eight criteria and associated indicators which address the pillars of sustainable development (biodiversity, economy, and society) and

resilient project management. It is designed to help with the design, implementation, and monitoring of Nbs and trigger its performance at scale.²

151. Additionally, several countries in the GMS have already implemented NbS approaches to adaptation and mitigation. Office of The National Water Resources (ONWR) in Thailand has been working with GIZ (Gesellschaft für Internationale Zusammenarbeit) and IUCN in developing national guidelines for the integration of EbA in river basin management. A regional IUCN-led project has supported the management of significant wetlands in the Mekong basin to provide adaptation benefits. Lao PDR and Viet Nam are currently identifying peatlands and assessing their value in term of carbon storage. Viet Nam is implementing flood-based agriculture in the Mekong Delta.

152. Conclusively, Mr. Raphael mentioned that several gaps still exist to scale up NbS fully. The cross-sectoral nature of NbS requires comprehensive and cross-sectorial policies, plans, and decision mechanisms. The private sector is a crucial factor, but its involvement is just starting. Large-scale finance is still missing in several cases, despite the support from several Global funds (e.g., GCF), and countries are still shy about taking loans for NbS as they are not confident of their results.

9.2.3 Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital

153. Mr. Michal Zrust brings over 20 years of expertise working in the conservation, biodiversity and corporate sustainability space across Asia, Africa, Europe, and Latin America, stretching from the field to corporate boardrooms. He leads Lestari Capital's strategy for the sustainable commodities sector, spearheading the conceptualization, development, and implementation of our innovative conservation finance mechanisms. Mr. Michal mentioned that it was essential to understand beforehand as to what was required to attract investors and what was an interesting project for investors that might want to come in to NbS especially as they do not see carbon outcomes of significant nature. They see value but do not see it as an investment potential.

154. He mentioned that money was not the issue as much as the type of financing was. He mentioned that Lestari Capital was identifying potential markets for environmental service outcomes, which are effectively units generated because of operation of projects such as biodiversity, livelihoods, and hectares of restoration etc. Corporates have diverse sources of demand in a market that is far less developed than seen in the carbon market. As it is still evolving it is difficult for investors to focus on where to invest in. It is important that each carbon should be a co-benefit of nature focused projects, rather than the other way around.

155. The standards that have been developed in the NbS, and investors want to make sure that these projects are credible and will be delivering verifiable, demonstrable, and long-lasting outcomes. If the projects are not built on good foundations, which means working with the community, and having a good vision in terms of how the livelihood program underneath the project is going to be developed and operationalized on unstable foundations. He emphasized the need for credibility and robustness of the project, and mentioned that there are bottlenecks for project pipelines, therefore some of the investment finance needs to be better directed,

² [https://www.iucn.org/news/europe/202007/iucn-global-standard-nbs#:~:text=The%20IUCN%20Global%20Standard%20for%20Nature%2Dbased%20Solutions%20is%20a,society\)%20and%20resilient%20project%20management.](https://www.iucn.org/news/europe/202007/iucn-global-standard-nbs#:~:text=The%20IUCN%20Global%20Standard%20for%20Nature%2Dbased%20Solutions%20is%20a,society)%20and%20resilient%20project%20management.)

which included building the capacity of project developers and communities. He concluded that private investors are concerned about risks and the design of projects should consider risk minimization.

156. Dr. David concluded the session with the following key takeaways:

- a. Countries have a historic opportunity through carbon markets and nature-based solutions to reverse this inequity and see IPLCs rewarded fairly and recognized for their critical role. There is a problem though. As one of the panelists said during the CCESP: “The good buyers and bad buyers wear the same clothes, and we can’t tell them apart.”
- b. In the end, stakeholders know that there are millions in capital floating around and looking for carbon projects. At the same time, IPLCs are understandably putting the brakes to carbon projects because they do not have the knowledge, information, and confidence to engage in these technical discussions. Dr. David’s suggestion for addressing this gap and leading to a win-win situation is for front end investment by the private sector in the capacity building and resources needed by IPLCs to meaningfully engage.
- c. They would like a blueprint on what the process and terms of a fair project should look like, of best practices and what exactly they can and should expect. Dr. David believed an initiative like CCESP can respond directly to this problem through biodiversity funding targeted at the right grassroots level. Through its established principles and criteria, IPLCs can be confident and assured that they are engaging with likeminded private sector of the highest integrity. In addition, CCESP can and should begin to develop these blueprints and best practice models as well as offering advocacy services to IPLCs. Carbon markets are founded on a need for integrity and trust and these front-end investments are needed to make that happen.
- d. TAs also need to develop capacity in this region for standards and criteria for evaluating projects. This means auditors need to be trained from Southeast Asia and the educators, extension services and others in academia need to be well informed on how these carbon markets and nature-based solutions are evolving.

10. Theme 3 Session 4: Mobilizing effective financial resources, and leveraging private finance, taking into account national biodiversity finance planning in the GMS

157. The session was facilitated by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB. The keynote presentation was by Ms. Jiayi Xu, Programmes Director, Greenovation Hub and Ms. Yunwen Bai, Director of Financing Nature Based Solutions Centre, Institute of Finance and Sustainability/Senior Researcher, Greenovation Hub, China. Ms. Jiayi has been active in domestic and international non-governmental organizations in the field of sustainable development, and is committed to promoting policy research, advocacy and capacity building projects related to climate, forest, biodiversity, and green finance issues. Ms. Yunwen Bai’s expertise focuses on international financial flows, climate, and energy governance, and has led several international joint research projects. Please refer to Appendix 4 Day 2 for presentations.

10.1 Keynote

158. Ms. Jiayi presented an overview of current biodiversity financing status and challenges in the GMS countries, with a deep dive to Viet Nam, where public sector contributes 77 percent of the nation's biodiversity funding, social (19 percent), private, and other financing instruments (4 percent) are not with similar active level. Among various financing modes, some coordinated efforts, especially when public finance can play a leverage role, were highlighted in the presentation including Debt-for-nature swap (DNS) and blended finance.
159. DNS is applied at public level and can be used for commercial purposes. Blended finance can happen at fund, company, project- levels, and outcome-based, where all of them aim to lower the financing costs for sustainability efforts. Two cases were introduced to demonstrate its operation, ASEAN Catalytic Green Finance Facility and Sustainable Soy lending Program. Countries must investigate mechanisms such as private finance domain, sustainability-linked loans and bonds, where both markets grew vast in recent years and showed substantial potential. While sharing some future opportunities and recommendations regarding increasing biodiversity finance in the region, it is also important to address investment risks to safeguard biodiversity.
160. Key takeaways included that considerable demands of biodiversity financing gap have been existed for the region, urgency of closing the gap cannot be ignored any more. A clear comprehensive mapping of financing methods of the region needs to be done as soon as possible, and breakdown to sectors and various administrative levels. Key practices in various financing methods need to be identified and summarized as cases and knowledge products to enhance sharing in the region. Since the region is still in vast economic growth, biodiversity risks need to be paid attention to in existing and future investment.

10.2 Panel Discussion

161. The panel discussion included Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR, Dr. Yang Bai, Researcher, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, PRC, Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital, and Ms. Niran Nirannoot, Project Manager, BIOFIN Thailand: The Biodiversity Finance Initiative, United Nations Development Programme. Please refer to Appendix 4 Day 2 for presentations.

10.2.1 Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR

162. Mr. Nakhalin mentioned that to financially support the community and for the better management of biodiversity conservation, the local livelihoods must be improved as a priority and integrated with biodiversity conservation. Lao PDR used the poverty reduction fund from the World Bank as a foundation and filled the planning gap by using a participatory approach to encourage local people to lead and take ownership of biodiversity conservation as related to their benefit and long-term development. Mr. Nakhalin mentioned that the environmental strategy assessment approach is another tool to support multi-stakeholders to work and solve the conflict in biodiversity conservation and financial mechanism for biodiversity.

10.2.2 Dr. Yang Bai, Researcher, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, PRC

163. Dr. Yang Bai's group is ground in tropical areas of China, facing Southeast Asian countries, focusing on major scientific and practical issues, including spatial pattern planning of biodiversity conservation, optimization of conservation area system, and sustainable development model of community. Dr. Yang presented that Yunnan, and its cross-border regions are rich in biodiversity and are also one of the global biodiversity hotspots. However, Yunnan has a fragile ecosystem with serious loss of biodiversity, frequent fires, and intensified human activities, which have seriously affected the biodiversity of Yunnan and its cross-border regions. The climatic conditions in Yunnan and the cross-border regions will undergo tremendous changes in the next 30 years. Climate change effects directly cause a spatial shift for the distribution of biodiversity. It is time to carry out relevant demonstration construction practice.

164. He stated that through the demonstration of climate-smart landscape construction projects, they can deal with the impact of climate change on biodiversity in real and in advance, and can get more practical experience, which will help accumulate and promote relevant experience in a wider range in the future. But the implementation of these practices and specific protection measures requires huge financial support. So, biodiversity financing is a prominent issue. To better realize and promote biodiversity financing, different stakeholders need to play different roles and need to work together. For example, from the perspective of banks, they need to provide more financial products or credit; From government, it is necessary to coordinate and supervise the interests of all parties, as well as provide active policy support. From enterprises, it is necessary to have a convincing mechanism to realize the value of ecological products and a good profit model. In short, all beneficiaries need to act now, study together, think together and cooperate.

10.2.3 Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital

165. Mr. Michal Zrust mentioned that it was essential to think of more market-based approaches to convince the private sector to invest. One of the outcomes expected from conservation projects at a broader level is not focusing on carbon but areas which are protected and can provide several outcomes. The private sector is seeking more tangible outcomes. No longer sustainability reports but quantified and certified impacts.

166. How are conservation projects financed by the private sector? Whether conservation can generate sustainable financial benefits is linked to our ability to leverage investment finance into scaling up. Private finance for conservation has been focused on philanthropy grant based CSR (Corporate Social Responsibility) initiatives, which is how conservation has been financed for a long time. Therefore, for scaling up the focus should be on market-based approaches that are going to be long-term. The problem with grant-based finance is that it tends to be short term and fickle, such as economy, donor interest etc.

167. Mr. Michal stated that it is essential to address outcomes expected from the conservation projects and how they deliver over long-term including financial needs to deliver them. The focus should be on the package rather than on a single outcome that can be generated. Even though the carbon market is maturing, the up-and-coming market with regards to other environmental outcomes is there, and just focusing on carbon would be a mistake as the needs for conservation are much greater. The demand of the private sector is also changing and the outcomes that they are seeking for their own sustainability commitments have evolved over

the last two years whether it has been biodiversity, restorations, and science-based-target outcomes.

168. As the private sector is expecting something in return, it forces the conservation sector to professionalize and think about how impact is demonstrated and verified. If the investors can see a market-based demand and the supply is professionalizing in delivering the outcomes effectively, then more investment finance will go into project development.

169. Lastly, Mr. Michal asked if conservation projects can generate sustainable financial benefits? Yes, they can. If project supply can be dealt with correctly, conservation projects can generate sustainable financial benefits. Early-stage financing, capacity building and training in providing technical assistance must be focused on professionalization and market demand.

10.2.4 Ms. Niran Nirannoot, Project Manager, BIOFIN Thailand: The Biodiversity Finance Initiative, United Nations Development Programme

170. Ms. Niran Nirannoot presented that through the Biodiversity Finance Initiative, the aim is to develop and implement finance solutions to reach the biodiversity goals in Thailand, as well as help to deliver on the post-2020 global biodiversity framework.

171. Thailand, a member state of the Greater Mekong Sub-region, has started the BIOFIN since 2014, and the vision is to unlock investments that let biodiversity flourish, create opportunities post-covid 19 which has revealed critical gaps in the way the world treats and finances its biodiversity, and to secure a sustainable future in alignment with UN's SDGs. BIOFIN focuses on achieving four results: generate revenue, realign expenditures, avoid future expenditures, and deliver better.

172. To reverse the decline in biodiversity by 2030, we need to spend USD \$824 billion each year over the next ten years. However currently the world invests USD \$143 billion each year. As large as the funding gap might be, there is some hopeful news: the gap can be closed for less than one percent of annual global GDP (Gross Domestic Product). To close the biodiversity finance gap, the technical steps are being implemented: (1) Policy and Institutional Biodiversity Review, (2) Biodiversity Expenditure Review (3) Financial Needs Assessment (4) National Biodiversity Finance Plan, and (5) Implementation of biodiversity finance solutions.

173. The Budget and Expenditure Review (BER) presents that the primary source of biodiversity funds in Thailand comes from government budget. Total biodiversity-related expenditures for 2016 – 2021 amount to THB 78 billion (USD \$13 billion) annually. Allocations for biodiversity from government budget as a proportion of total government expenditures is in decline, dropping from 0.53% in 2016 to 0.38% in 2020.

174. One of the prioritized biodiversity finance solutions for Thailand includes the 'Sustainable Tourism' titled "Increasing industry revenue sources for safeguarding biodiversity and environmental management." The pilot project is in Koh Tao– a coral reef island and diving hotspot situated in the Gulf of Thailand. Due to the lack of formal visitors' fees for sites such as Koh Tao which are situated outside protected area, it has led to the slow deterioration of Koh Tao's coral reefs and waste has fast become a widespread issue affecting the marine environment.

11. Discussion on priority actions for regional cooperation under the CCESP to improve climate and disaster resilience, and biodiversity conservation in the GMS towards COP15 and COP27

175. The discussion was facilitated by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB. **A draft summary of discussion points was presented by Dr. Srinivasan who also led the discussion on the statement's adoption.** Later onwards, the draft Summary of Discussion in Section 12 was shared with all WGE for feedback and finalization.
176. **Proposed Priority Actions on Building Climate and Disaster Resilience for Theme 1 are stated in Section 12 below.** Dr. Srinivasan mentioned that WGE representatives are not usually those representing their country at COPs, but input is needed on these two important topics for the upcoming COPs. The topics are primarily selected as they are key for the regional assistance under the GMS CCESP. The TA will assist in identifying and sharing the best practices for infrastructural, social, financial, institutional resilience to climate change. For example, roads get flooded, and people cannot move. Holistic resilience needs to be built on multistakeholder partnerships, and the private sector must be invited to participate and take action. Local communities are in the frontline of facing climate change and they are the most vulnerable. Especially people working in the tourism sector are affected. Resources are needed to strengthen the community-based resilience. Learning from community-based resilience and risk management can be implemented in future investments. Ecosystem-based adaptation is necessary to prevent disasters like Covid-19, or e.g., landslides due to lack of erosion prevention. Public sector alone cannot meet the financing needs and the TA will therefore need to provide examples of innovative financing instruments. A total of USD \$7.5 million is available for the present GMS CCESP phase 3.
177. Comments from WGE representatives: Officials from Cambodia believe that building resilience is in line with the National climate change plan. Out of the five actions, the main topic is how to take actions towards capacity building, as e.g., Cambodia and Laos, have different capacities than other GMS countries, and need the support. Officials from Thailand agreed with the topics and requested the TA to develop specific capacity building for financing options. Officials from Vietnam mentioned that they wanted to consider different initiatives under themes, but wanted to know how to create an action plan that befits these initiatives. They mentioned that there were several financing mechanisms, but how can the TA support the country to implement and identify the right ones. Regarding community-based adaptation, which specific steps should the country take. And lastly, the wanted to focus on how to get financing first.
178. Dr. Srinivasan mentioned that the TA support should not repeat what others are doing but have clear priorities, as the Mekong is the best region to implement transboundary adaptation projects. It is essential to build capacities and to build on what was done in other projects and previous phases on GMS CEP, including scaling up of good experiences. One participant mentioned that mainstreaming was driven by policy decisions, and a regional taskforce is needed. A platform is required to look at what is possible to do in the region to increase the NDC ambitions.
179. **Proposed Priority Actions on Promoting Climate Transboundary Biodiversity Landscapes for Theme 3 are stated in Section 12 below.** Dr. Srinivasan mentioned that



there are three transboundary landscapes between countries, and it is essential to look at the climate-smart angle. Moreover, there are several previous demonstrations available on biodiversity landscapes, and three landscapes to be identified under this program. He mentioned that the summary of discussion will be shared with WGE for review and feedback.

12. Summary of discussion

180. The members of the Working Group on Environment (WGE) from the Greater Mekong Subregion (GMS), namely, the Kingdom of Cambodia, the Lao People's Democratic Republic (Lao PDR), the Kingdom of Thailand, and the Socialist Republic of Viet Nam, met in person, and the People's Republic of China (PRC) and the Republic of the Union of Myanmar virtually on 26-28 October 2022 for the 26th Annual Meeting of the WGE (WGE AM-26). In support of the upcoming 27th Session of Conference of Parties to the United Nations Framework Convention on Climate Change (COP27) to be held in November 2022 in Sharm El-Sheikh, Egypt and Phase II of the 15th Meeting of Conference of Parties to the United Nations Convention on Biological Diversity (CBD COP15) to be held in December 2022 in Montreal, Canada, the GMS WGE meeting deliberated on challenges and opportunities to build climate and disaster resilience and strengthen biodiversity conservation through promoting climate smart landscape approaches in the GMS.
181. It was emphasized that the GMS countries remain highly vulnerable to impacts of climate change and such vulnerability is accelerating due to increasing urbanization and unsustainable resource management. The WGE noted that the GMS potential to address climate change and conserve biodiversity can be achieved by advancing subregional cooperation in mobilizing financial resources and building technical and institutional capacities in using digital and other advanced technologies. Each WGE representative summarized national strategies and actions to address climate change, and conserve biodiversity in a holistic manner. The WGE recognized common interest among the GMS countries to collaborate further in introducing innovative policy measures on adaptation and biodiversity conservation. The need for harnessing the collective wisdom and experience of the subregion in addressing transboundary issues of adaptation and biodiversity conservation was highlighted.
182. The WGE agreed on the need for establishing a subregion-wide multi-stakeholder partnership mechanism to enhance collaboration among stakeholders in mainstreaming climate change and disaster management considerations into development planning at national, subnational, and sectoral levels. As communities are on the front lines of the climate crisis with the least resources, WGE urged governments and the development partners to allocate more resources for community-based adaptation and disaster risk management. The WGE highlighted the need for recognizing and rewarding traditional knowledge of communities to cope with climate change and suggested that modern adaptation technologies should be effectively blended with traditional knowledge.
183. The WGE called for the adoption of holistic approaches to enhance climate and disaster resilience by integrating infrastructure- and nature-based solutions for adaptation. The WGE noted that climate crisis and nature crisis are closely interrelated, and the loss of natural capital exacerbates climate change vulnerability of both ecosystems and communities. The WGE stressed the need for protecting natural capital and integrating nature-based solutions to effectively address climate and disaster resilience in the GMS.
184. The WGE underscored that adaptation financing needs in the GMS are huge and called for deploying inclusive and innovative climate and disaster risk financing instruments to catalyze effective participation of the private sector. The WGE highlighted that loss and damage from climate change impacts disproportionately affects vulnerable populations and advocated that

COP27 should advance the discussions leading to establishment of a credible financial mechanism.

185. As the concept of “climate-smart biodiversity landscapes” is still unclear for many stakeholders in the GMS, the WGE called for holding policy dialogues and training workshops to build institutional and technical capacity on transboundary climate-smart landscape management. The WGE recognized the continuing loss of biodiversity and insufficient progress in achieving Aichi targets due to governance related challenges and called for promoting holistic and people-centric approaches for biodiversity conservation in transboundary landscapes.

186. Several WGE members stressed the need for effective tools for monitoring biodiversity. The WGE noted that digital solutions can provide new opportunities for conserving and monitoring biodiversity status and sought support from ADB and other development partners for piloting innovative digital technologies related to biodiversity conservation and monitoring. The need for incorporating sustainable livelihoods in biodiversity conservation was stressed.

187. The WGE members agreed that GMS countries are yet to employ natural capital accounting methods and innovative financing instruments for biodiversity conservation. They underscored the need for mainstreaming biodiversity considerations in fiscal policy planning and sectoral investments in agriculture, energy, transport, and urban development. The WGE appreciated ADB’s efforts to create a biodiversity finance hub in Bangkok and a natural capital laboratory and financing facility in Manila to mobilize finance for biodiversity conservation through innovative financing instruments and effective participation of the private sector.

188. The WGE confirmed five priorities for action under each theme to be pursued and sustained beyond the implementation period of technical assistance on GMS Climate Change and Environmental Sustainability Program.

A. Climate and Disaster Resilience

- i. Establish a GMS-wide multi-stakeholder partnership mechanism to accelerate mainstreaming of climate change adaptation and disaster resilience into development plans, programs, and projects
- ii. Accelerate efforts to promote community-based adaptation and disaster management by building on traditional knowledge of communities and blending modern technologies
- iii. Harness nature-based solutions and ecosystem-based adaptation to enhance resilience of both ecosystems and communities
- iv. Mobilize additional finance for adaptation through deploying innovative but locally appropriate financing instruments (e.g., adaptation credits, catastrophe bonds) with effective involvement of the private sector
- v. Advocate the establishment of an international financing mechanism on loss and damage from climate change impacts

B. Climate-Smart Transboundary Biodiversity Landscapes

- i. Promote holistic and people-centric approaches for biodiversity conservation, especially in transboundary regions

- ii. Strengthen institutional and technical capacities on transboundary climate-smart landscape management building on achievements of the previous phase in three transboundary landscapes
- iii. Mainstream biodiversity considerations in fiscal policy planning and sectoral investments
- iv. Deploy innovative digital technology solutions for effective monitoring and conservation of biodiversity
- v. Address financing gaps for biodiversity conservation by mobilizing additional finance through innovative financing instruments, including debt-for-nature swaps, biodiversity bonds, payment for ecosystem services, etc.

189. The WGE extended sincere appreciation to the financing partners of the GMS Climate Change and Environmental Sustainability Program: The Climate Investment Funds, and the Asian Development Bank. The WGE encouraged ADB and other development partners to continue to coordinate and support the program and strengthen shared commitment and partnership for a more integrated, prosperous, inclusive, resilient, and sustainable GMS.

190. The WGE expressed its appreciation to the Government of Thailand and its Ministry of Natural Resources and Environment for co-hosting the meeting.

191. The WGE also thanked the Government of Viet Nam and its Ministry of Natural Resources and Environment for agreeing to host the 27th Annual Meeting of the WGE.

13. Closing remarks

192. The concluding remarks were given by Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB where he thanked the WGE focal points and coordinators, panel members and speakers, Ramboll, and support staff on behalf of ADB for their valuable insights and support. Guidance and support for successful implementation will be useful. A series of capacity building events and policy dialogues are planned for the upcoming months where there will be more opportunities to meet in person. The GMS CCESP will investigate how to mobilize more resources e.g., for regional coordination programs via the Global Environmental Facility, though all six countries must endorse the financing.

193. Dr. Srinivasan mentioned the importance of promoting inter-subregional programming not only between GMS but also GMS and ASEAN, GMS and South Asia and Central Asia once resources are mobilized. In this phase, it is essential to work with the private sector and create adequate mechanisms in terms of reducing the conflict between the private sector and stakeholders.

Day 3 – 28 October

Working Group on Environment (WGE) Session

Field Visit

14. CCESP recap and way forward (for WGE)

14.1 Feedback and expectations by GMS WGE representatives

194. The TA team presented the overall scope of the GMS CCESP third phase, the deliverables, and the workplan for the coming two years (up to the end of 2024). The following feedback was received from the WGE:
195. Cambodia: WGE Cambodia have yet not participated in theme 2's activity on green freight and requested more information and involvement in discussions to stay on the same page. It was requested to revisit the ToRs (Terms of Reference) of TA team national consultants, to better understand how they can assist the WGE better.
196. PRC: WGE PRC expressed their gratitude towards ADB and Ramboll's support and suggested that it was essential to strengthen communication among GMS countries, strengthen the project mechanism and increase efficiency, and focus on capacity building as a prime activity.
197. Lao PDR: WGE Lao PDR requested ADB to consider increasing the program budget to support more demonstration projects and capacity development.
198. Viet Nam: WGE Viet Nam had numerous suggestions and requested the TA team to build the current TA on the successes from previous TA. One of the suggestions stressed the importance of better communication and information exchanges between WGE, TA team and ADB, and the role of ADB and TA team on facilitating discussions and exchanges within the WGE and GMS. It was requested to support WGE Viet Nam to develop a NAP on circular economy, while mentioning that it is willing to work with other GMS countries on circular economy. The WGE mentioned its current role in working with the UNDP to conduct plastic waste monitoring, e.g., on the use of Closed-Circuit Television Video (CCTV) cameras for monitoring and mentioned the importance of technology within the program. The coordinator suggested that there must be one person in each country to coordinate with other GMS countries, ADB, and Ramboll.
199. With respect to the Regional Investment Framework 2023-2025, Dr. Srinu mentioned that ADB can support GMS countries in various areas, and the WGE can propose projects which are not limited to CCESP under that framework. It was imperative to highlight that several emails were sent to WGE members, but limited replies or proposals were submitted before the deadline. The GMS countries were requested to go through the CCESP ToR so that ADB could support work within the scope of TOR. It was mentioned that other large projects could be supported through Regional Investment Framework 2023-2025.
200. It was highlighted that resources are currently limited. W.r.t to the request for administrative (capacity development) support from Cambodia and Viet Nam, Dr. Srinu mentioned that the total funds in the third phase of CCESP are one third less than previous phases; and it is

difficult to justify grant resources for capacity development (financial management, and procurement, etc.). If more ADB funds become available, specific requests for demonstrations or capacity building may be considered. The demonstrations can have regional implications, where one country can take the lead and check whether other countries are interested in replicating the same model. If GMS countries have any request/proposals, they can send a request to ADB. Lastly, he mentioned that Ramboll has national consultants to coordinate requests from each country.

201. Dr. Srini stated that there should be strong commitment among the WGE on this TA, otherwise, this TA can be closed. Despite reminders and follow up emails, there were no significant responses on behalf of the WGE on the RIF. There is a need to produce outputs to present to ministers and boards for further endorsement until 2030, therefore what can be highlighted to attract the support and attention of ministers? The WGE were asked to consider the following: (i) identify priorities and proposals for the next phase after 2024 and (ii) identify specific support required on behalf of ADB and Ramboll under the present ToR.

15. Field Visit

202. Participants were taken for a **field visit to a rooftop farm Wastegetable**. The Wastegetable Farm is a prototype circular urban farming business model, which has been managed by Bangkok Rooftop Farming Social Enterprise. The main purpose of the organization is to upcycle food waste generated in Bangkok, to create more green areas, and to bring about more efficiency in plastic waste collection. Their mission leads to a circular economy where the maximum use is extracted from resources and minimum waste is generated. Overall, their activities would pave the zero-food waste journey which will improve the effectiveness of waste collection systems.

203. The presentation shown during the field visit can be found in Appendix 4.



GREATER MEKONG SUBREGION
CLIMATE CHANGE
AND ENVIRONMENTAL
SUSTAINABILITY PROGRAM



Greater Mekong Subregion Climate Change
and Environmental Sustainability Program

26th Annual Meeting of the Greater Mekong Subregion (GMS) Working Group on Environment (WGE)

Meeting Report Appendix
26-28 October 2022



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Appendix 1 – Meeting agenda

26th Annual Meeting of the Greater Mekong Subregion Working Group on Environment (GMS WGE AM26)

26-28 October 2022 (in-person and online)
Holiday Inn Bangkok Sukhumvit
Bangkok, Thailand

To join the workshop virtually, register in advance: [Zoom Link](#)

A confirmation email will be sent once registered.

Meeting ID: 930 7698 5514
Passcode: 171629

AGENDA

Background

To support the implementation of the Strategic Framework and Action Plan, the Asian Development Bank (ADB) approved a technical assistance (TA) entitled the GMS Climate Change and Environmental Sustainability Program (CCESP). This is the third and current phase of the Greater Mekong Subregion (GMS) Core Environment Program (CEP), covering 2020–2025. CCESP consists of six priority themes, which were identified during the 24th Annual Meeting of the GMS Working Group on Environment (WGE AM-24), held in April 2019 in Kunming, People's Republic of China (PRC). The TA will help GMS countries implement nationally determined contributions under the Paris Agreement on Climate Change and the United Nations Sustainable Development Goals (SDGs), especially SDG 2, SDG 5, and SDG 13. Through enhancing capacities and enabling policies, demonstrating innovative activities, and catalyzing private sector opportunities, the TA will help develop climate-friendly projects in the GMS regional investment framework (RIF) and help the GMS realize its overarching vision of an integrated, prosperous, and equitable subregion.

The CCESP Program targets three outputs, each covering two themes:

- (i) Climate and disaster resilience enhanced (Theme 1), and low carbon transitions facilitated (Theme 2)
- (ii) Climate-smart landscapes promoted (Theme 3), and environmental quality enhanced (Theme 4)
- (iii) Green technologies (Theme 5) and financing instruments demonstrated (Theme 6)

The TA is aligned with the following impact: climate compatibility and environmental sustainability of economic growth in the GMS improved, and the following outcome: climate resilience, green growth, and environmental quality in the GMS enhanced. Three key groups of activities are planned uniformly across each of the six themes: (i) policy dialogues, (ii) capacity building, and (iii) pilot demonstrations.

In support of realizing the intentions and outcomes of the UN Biodiversity Conference (COP15), held in 2021 in Kunming PRC, and the UN Climate Change Conference (COP26) held in 2021 in Glasgow, the 26th Annual Meeting of the GMS Working Group on Environment (WGE AM 26) will specifically focus on CCESP Theme 1: Building climate and disaster resilience and Theme 3: Promoting climate-smart landscapes.

The 26th GMS WGE Annual Meeting will discuss key challenges and possible solutions for the region in the light of the UN Biodiversity Conference (COP15) and the UN Climate Change Conference (COP26) and in preparation on their pathway to the upcoming COP27 and COP15 in 2022. Day 1 will focus on Theme 1 building climate and disaster resilience by focusing on climate risks, challenges and possible solutions in the light of the themes identified at COP26 to tackle the root causes of climate vulnerability. Day 2 will focus on Theme 3 promoting Climate-smart Landscapes (CSL), how climate change and biodiversity loss can be addressed, and how local livelihoods can improve as a result of these measures. There will be a short field visit on Day 3.

WGE AM26 Objectives

1. To share national priorities and strategies of the GMS countries to build climate resilience and strengthen biodiversity conservation
2. To examine challenges and opportunities in the light of the UN Biodiversity Conference (COP15) and the UN Climate Change Conference (COP26) for the GMS
3. To explore solutions to build climate and disaster resilience and strengthen biodiversity conservation in the GMS on their pathway to the upcoming COP27 and COP15 in 2022
4. To discuss national and subregional climate resilience and post-2020 biodiversity conservation frameworks and actions in the GMS in the context of COPs, COVID-19 and the GMS RIF
5. To agree upon priority actions for regional cooperation under the CCESP to improve climate and disaster resilience, and biodiversity conservation in the GMS

WGE AM – 26 Expected Output

1. Better GMS regional understanding of the national and subregional climate resilience and biodiversity conservation frameworks and national priorities and strategies of the GMS countries to build climate resilience and strengthen biodiversity conservation
2. Challenges, opportunities and solutions identified to build climate and disaster resilience and strengthen biodiversity conservation in the GMS on their pathway to the upcoming COP27 and COP15 in 2022
3. GMS WGE Annual Meeting Summary Statement with priority actions for regional collaboration

Target Participants

- GMS WGE representatives
- Representatives from GMS agencies for climate change adaptation and biodiversity conservation
- Academic institutions
- Relevant private sector
- Development partners
- ADB staff
- TA9915 Consultant team

Tentative Agenda

Day 1 – Wednesday 26 October 2022

07:30 – 08:30	Registration
08:30 – 09:00	<p>Opening remarks</p> <ul style="list-style-type: none"> Mr. Thalearngsak Petchsuwan, Deputy Permanent Secretary Ministry of Natural Resources and Environment, Thailand Dr. Jiangfeng Zhang, Director, Environment, Natural Resources and Agriculture Division (SEER), Southeast Asia Department (SERD), ADB <p>Welcome and introduction to agenda of the WGE annual meeting</p> <ul style="list-style-type: none"> Mr. Jens Christian Riise, TA-9915 Co-Team Leader, Capacity Building Specialist, Monitoring Evaluation and Learning Specialist, and Facilitator
09:00 – 10:30	<p>Theme 1 Session 1: National priorities and strategies to build climate and disaster resilience in the GMS towards the upcoming COP27</p> <p>Facilitator: Dr. Jiangfeng Zhang, Director, SEER, ADB</p> <p>Presentations by GMS WGE and country representatives</p> <ul style="list-style-type: none"> Mr. Leang Sophal, Chief of Office, Ministry of Environment (MoE), Cambodia Mr. Zeyu Zhou, Senior Program Officer, Department of Climate Change, Ministry of Ecology and Environment (MEE), PRC Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, Ministry of Natural Resources and Environment (MONRE), Lao PDR Ms. Rosalind Amornpitakpun, Director of Climate Measure and Mechanism Development Section, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand Ms. Dao Minh Khue, Official, Department of Climate Change, Ministry of Natural Resources and Environment, Viet Nam
10:30 – 10:45	Tea and Coffee Break and Photo
10:45 - 12:00	<p>Theme 1 Session 2: Climate and disaster resilience, challenges, and priority actions in the GMS</p> <p>Facilitator: Dr. Albert Salamanca, Senior Research Fellow, Stockholm Environment Institute, Bangkok</p> <p>Keynote</p> <ul style="list-style-type: none"> Dr. Xi Jiao, TA-9915 Thematic Lead Building Climate and Disaster Resilience and Co-Team Leader Dr. Albert Salamanca, Senior Research Fellow, Stockholm Environment Institute on Loss and Damage <p>Panel discussion</p> <ul style="list-style-type: none"> Mr. Zhaohui Qian, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC Mr. Manish Tewani, Global Response Lead for the American Red Cross/ International Federation of Red Cross and Red Crescent Societies Ms. Katuscia Fara, Senior Regional Climate and Disaster Risk Reduction Advisor, World Food Programme
12:00 – 13:00	Lunch Break
13:00 – 14:15	Theme 1 Session 3: Mainstreaming climate and disaster resilience development, and establishing multi-stakeholder partnership mechanism in the GMS

	<p>Facilitator: Mr. Dao Xuan Lai, Head of Climate Change and Environment Unit, UNDP, Viet Nam</p> <p>Keynote</p> <ul style="list-style-type: none"> • Dr. Sok Ty, TA-9915 National Adaptation Planning Specialist <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Leang Sophal, Chief of Office, Ministry of Environment, Cambodia • Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, MONRE, Lao PDR • Mr. Akhteruzzaman Sano, Team Leader, Save the Earth • Dr. Laurent Umans, Climate Change Expert, Former First Secretary Water Management and Climate Change, Embassy of the Kingdom of the Netherlands, Vietnam
14:15 – 15:30	<p>Theme 1 Session 4: Enhancing community-based adaptation (CBA) and disaster risk management, and harnessing ecosystem-based adaptation (EBA) and natural-based solutions in the GMS</p> <p>Facilitator: Mr. Kevin Jeanes, Chief Technical Advisor, FAO, Lao PDR</p> <p>Keynote</p> <ul style="list-style-type: none"> • Mr. Noel Puno, TA-9915 Community-based CCA and DRM Specialist on CBA • Mr. Kevin Jeanes, Chief Technical Advisor, FAO, Lao PDR on EBA <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Ouk Navann, Deputy Director General, General Directorate of Local Community, Ministry of Environment, Cambodia • Ms. Mayfourth Luneta, Deputy Executive Director, Center for Disaster Preparedness Foundation Inc. • Dr. Niladri Gupta, Senior Water Resources Management Specialist, Asian Disaster Preparedness Center • Dr. Duong Nong, Lecturer, Vietnam National University of Agriculture
15:30 – 15:45	Tea and Coffee Break
15:45 – 17:00	<p>Theme 1 Session 5: Identifying adaptation finance needs and gaps, and employing innovative financing instruments in the GMS</p> <p>Facilitator: Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB</p> <p>Keynote</p> <ul style="list-style-type: none"> • Dr. Ornsaran Pomme Manuamorn, Climate and Sustainable Finance Expert, World Bank, Climate Bonds Initiative, and Fiscal Policy Research Institute <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR. • Ms. Ying Zhou, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC • Dr. Nguyen Phuong Nam, Founder Climate Innovation Consulting and Services, Klinova JSC. • Dr. Kamal Ahmed, Institutional Lead, Disaster Risk Financing and Insurance, Asian Disaster Preparedness Center
17:00 – 17:15	Day 1 conclusion
18:00	Dinner co-hosted by WGE Thailand (MONRE)

Day 2 – Thursday 27 October 2022

08:30 – 09:00	Registration
09:00 – 10:30	<p>Theme 3 Session 1: National priorities and strategies for biodiversity conservation and post-2020 Global Biodiversity Framework in the GMS towards the upcoming COP15</p> <p>Facilitator: Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB</p> <p>Presentations by GMS WGE and country representatives</p> <ul style="list-style-type: none"> • Mr. Sam Oeurn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia • Ms. Jing Guan, Senior Program Officer, Department of Nature and Ecology Conservation, Ministry of Ecology and Environment, PRC • Mr. Theverack Phonekeo, Deputy Director General of Department of Environment, MONRE, Lao PDR • Ms. Benchamaporn Wattanatongchai, Environmentalist, Senior Professional Level, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand • Ms. Ta Thi Kieu Anh, Official, Viet Nam Environment Administration, Viet Nam
10:30 – 10:45	Tea and Coffee Break and Photo
10:45 – 12:00	<p>Theme 3 Session 2: Biodiversity conservation and post-2020 global biodiversity framework, challenges and priority actions in the GMS</p> <p>Facilitator: Mr. Jake Brunner, Head of Indo-Burma Group, The International Union for Conservation of Nature</p> <p>Keynote</p> <ul style="list-style-type: none"> • Mr. Anouxay Phommalath, Land Use Planning and Spatial Analysis Specialist, and Dr. Eilyn Kathalina Damayanti, TA-9915 Thematic Lead and Landscape Management and REDD+ Specialist <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Hexiao Chen, Deputy Director, Guangxi Environmental Protection International Cooperation and Exchange Center, PRC • Ms. Regan Pairojmahakij, Senior Programme Officer, RECOFTC, Thailand • Dr. Beria Leimona, Senior Expert Landscape Governance and Investment Principal Investigator, World Agroforestry (ICRAF)
12:00-13:00	Lunch Break
13:00 – 14:15	<p>Theme 3 Session 3: Employing ecosystem-based approaches and natural-based solutions to contribute to mitigation and adaptation to climate change in the GMS</p> <p>Facilitator: Dr. David Ganz, Executive Director, RECOFTC</p> <p>Keynote</p> <ul style="list-style-type: none"> • Dr. Michael Victor Galante, Director, Climate Forestry and Secretary-General, The Alliance for Responsible Forest Management <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Sam Oeurn Sothyroth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia • Mr. Raphael Glemet, Senior Programme Officer, Water, Wetlands and Nature-Based Solutions, The International Union for Conservation of Nature • Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital

14:15 – 15:30	<p>Theme 3 Session 4: Mobilizing effective financial resources, and leveraging private finance, taking into account national biodiversity finance planning in the GMS</p> <p>Facilitator: Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB</p> <p>Keynote</p> <ul style="list-style-type: none"> • Ms. Jiayi Xu, Programmes Director, Greenovation Hub, and Ms. Yunwen Bai, Director of Financing Nature Based Solutions Centre, Institute of Finance and Sustainability/Senior Researcher, Greenovation Hub, China <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR • Dr. Yang Bai, Researcher, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, PRC • Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital • Ms. Niran Nirannoot, Project Manager, BIOFIN Thailand: The Biodiversity Finance Initiative, United Nations Development Programme
15:30 – 15:45	<p>Tea and Coffee Break</p>
15:45 – 17:00	<p>Discussion priority actions for regional cooperation under the CCESP to improve climate and disaster resilience, and biodiversity conservation in the GMS towards COP15 and COP27</p> <p>Facilitator: Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB</p>
17:00 – 17:15	<p>Closing remarks</p> <ul style="list-style-type: none"> • Dr. Srinivasan Ancha, Principal Climate Change Specialist, ADB
18:00	<p>Dinner co-hosted by ADB</p>

Day 3 – Friday 28 October 2022

08:30 – 09:00	Registration
9:00 – 11:30	<p>CCESP recap and way forward (for WGE)</p> <ul style="list-style-type: none"> • Mr. Jens Christian Riise, TA-9915 Co-Team Leader, Capacity Building Specialist, Monitoring Evaluation and Learning Specialist, and Facilitator • TA-9915 Thematic Leads <p>Feedback and expectations by GMS WGE representatives</p> <ul style="list-style-type: none"> • Dr. Loeung Kesaro, Deputy Director General, General Directorate of Protected Areas, Ministry of Environment, Cambodia • Mr. Jun Zhou, Director, Department of International Cooperation, Ministry of Ecology and Environment, PRC • Mr. Theverack Phonekeo, Deputy Director General of Department of Environment, Ministry of Natural Resources and Environment, Lao PDR • Ms. Narumol Oris, Environmentalist, Senior Professional Level, Foreign Affairs Division, Office of the Permanent Secretary, Ministry of Natural Resources and Environment, Thailand • Dr. Kim Thi Thuy Ngoc, Director of Science Technology and International Cooperation Department, Institute of Strategy, Policy on Natural Resources and Environment, ISPONRE, Viet Nam
8:00 – 12:00	Field Visit to Wastevegetable rooftop farm including presentation, Q&A, and discussions

Appendix 2 – Profiles of Facilitators, Keynote Speakers and Panelists

Mr. Leang Sophal, Chief of Office, Ministry of Environment, Cambodia

Mr. Leang Sophal is the head of GHG Inventory and Mitigation Office, Department of Climate Change, General Directorate of Policy and Strategy, Ministry of Environment. He has participated in the GHG Inventory Office and has been involved with GHG Inventory since 2011. He has also been responsible for national communication, first biennial update report, intended Nationally Determined Contribution (NDC), NDC roadmap, updated NDC and long-term strategy for carbon neutrality to respond to climate change at global, regional, national, and sub-national level. Mr. Leang leads the implementation of the national sub-working group of GHG Inventory and other necessary tasks within the department.

Mr. Zeyu Zhou, Senior Program Officer, Department of Climate Change, Ministry of Ecology and Environment (MEE), PRC

Mr. Zhou Zeyu, is an Associate Senior Researcher of the China's National Center for Strategic Research and International Cooperation on Climate Change. He is engaged in research on international cooperation in climate change adaptation and has participated in the preparation of the National Climate Change Adaptation Strategy 2035. He has published more than 20 papers in domestic and foreign academic journals and jointly published one academic monograph. Since 2017, he has assisted the Chinese government in organizing and participating in major international conferences such as the conference of the UNFCCC. Members of the Chinese government delegation have participated in the UN climate change negotiations several times and -are mainly responsible for issues related to adaptation to climate change.

Ms. Rosalind Amornpitakpun, Director of Climate Measure and Mechanism Development Section, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand

Ms. Dao Minh Khue, Official, Department of Climate Change, Ministry of Natural Resources and Environment, Viet Nam

Ms. Dao Minh Khue is currently an officer of the Climate change Adaptation Division, Department of Climate Change, at Ministry of Natural Resources and Environment in Viet Nam. She graduated with the Doctor of Philosophy in Sustainable Environmental Sciences, from the Graduate School of Life and Environment Sciences, University of Tsukuba, Japan. She has experience in climate change adaptation, environmental economics, solid waste management, water management, energy, carbon market, and the application of geographic information systems. She published an article on Unlocking the Energy Recovery Potential from Sustainable Management of Bio-Resources Based on GIS Analysis: Case Study in Hanoi, Viet Nam.

Dr. Albert Salamanca, Senior Research Fellow, Stockholm Environment Institute, Bangkok

Albert is a Senior Research Fellow at the Stockholm Environment Institute's Asia Centre where he leads its climate change, disasters, and development cluster. Albert has over 20 years of experience working on climate change adaptation, natural resources management, conservation, development, and sustainable livelihoods issues in several countries in Southeast Asia. His current research interests are on the themes of resilience, risk and vulnerabilities, traditional ecological knowledge, mobility and spatial linkages, disaster displacement, and sustainable livelihoods. He

is a member of the UK GCRF Living Deltas Hub and the WIM Loss and Damage Expert Group on slow onset events. He also contributes to weADAPT, an adaptation portal. His co-edited volumes entitled "Climate Change, Disasters, and Internal Displacement in Asia and the Pacific" and "The Routledge Handbook of Global Development" were published recently. Mr. Albert previously led SEI's global initiative on transforming development and disaster risk, the Regional Climate Change Adaptation Knowledge Platform (AKP) and the Partnership in Governance Transition: the Bali Cultural Landscape. He has a PhD in Geography from Durham University (UK).

Mr. Zhaohui Qian, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC

Mr. Qian Zhaohui, is an Associate Researcher on ecological remote sensing with the Foreign Environmental Cooperation Center Ministry of Ecology and Environment of China and Lancang-Mekong Environmental Cooperation Center, mainly responsible for the project's development, implementation and management of the regional sustainable infrastructure, Knowledge hub for south-south cooperation on climate change and Lancang-Mekong knowledge hub for low-carbon, green, sustainable infrastructure. He has extensive experience in policy research, project development and international cooperation in the Lancang-Mekong region.

Mr. Manish Tewani, Global Response Lead for the American Red Cross/International Federation of Red Cross and Red Crescent Societies

Mr. Manish Tewani is the response lead, for the Asia Pacific region for the American Red Cross. He leads American Red Cross partnerships in the region with the International Red Cross Red Crescent network and other partners to support communities affected by disasters or likely to be affected by hazards. He has over 19 years' experience of leading disaster risk reduction, climate action, community resilience, institutional response readiness, disaster response, and programming in 12 countries of the Asia Pacific and Caribbean regions.

Most recently, Manish served as Country Representative for Myanmar, American Red Cross for six years. In Myanmar, he supported local organizations to strengthen community resilience as well as their institutional response readiness. He assisted the Myanmar Red Cross Society (MRCS) in risk reduction and climate action programs in schools and communities and in responding to several emergencies including floods, population movement, COVID-19, among others.

An architect and environmental planner by training, Manish is passionate about strengthening local systems and capacities to ensure reduced or no impact from hazards and climate change affecting vulnerable communities.

Ms. Katuscia Fara, Senior Regional Climate and Disaster Risk Reduction Advisor, World Food Programme

Ms. Katuscia Fara is a Senior Climate and Disaster Risk Reduction Advisor with the World Food Programme Asia Pacific regional bureau, where she leads a small team focusing on climate, disaster risk reduction and resilience. A geographer by training, Katuscia has over 20 years of experience in climate and disaster risk management, sustainable development, and community-based adaptation. Key area of focus in her work are supporting countries to access climate finance, participatory approaches to develop tailored, context specific adaptation strategies, and translating scientific knowledge into action to empower vulnerable communities to adapt to climate variability and change.

Mr. Dao Xuan Lai, Head of Climate Change and Environment Unit, UNDP, Viet Nam

Mr. Dao Xuan Lai is the Assistant Resident Representative and Head of Climate Change and Environment, with UNDP in Viet Nam. Mr. Dao has been working in UNDP country offices in Bhutan, Indonesia, Myanmar, and Viet Nam, and has more than 25 years of experience in policy advocacy and policy formulation in the areas of climate change, disaster risk reduction, climate resilience, green growth, energy, circular economy, and environmental protection. He has engaged in mainstreaming climate, disaster, risks, and environment in development planning processes.

Dr. Sok Ty, TA-9915 National Adaptation Planning Specialist

Dr. Sok Ty is the National Adaptation Planning (NAP) Specialist under ADB TA 9915: Greater Mekong Subregion Climate Change and Environmental Sustainability Program. Dr. Sok has been involved and (co-) leading a wide range of development and research projects for national and international agencies. He has expertise in disaster management, climate change policy and water resources in the Mekong region. Currently, he has been involved in climate change policy projects as a specialist and project coordinator. Dr. Sok has experience working with the World Bank, ActionAid, SEI, ADB, Ministry of Water Resources in Cambodia related to Climate change issues, the Asian Infrastructure Investment Bank, SUMERNET/SEI, Integrated Water Resources Management Institute, People in Need, and AIMF/Phnom Penh Capital Administrative Cambodia.

Mr. Malabou Baylatry, Deputy Director, Department of Climate Change, MONRE, Lao PDR

Mr. Malabou Baylatry is currently Deputy Director Disaster Risk Reduction of the Department of Climate Change, Ministry of Natural Resource and Environment, in Lao PDR. He is also a member of the ASEAN Disaster Management community. He used to work for the GMS Division and Lao National Mekong Committee Secretariat. He has co-authored the studies “A Cost-Benefit Analysis of Ecotourism: A Case Study of Xe Pian National Protected Area, Champasak Province, Lao PDR” and “Valuing Environmental Services Using Contingent Valuation Method.”

Mr. Akhteruzzaman Sano, Team Leader, Save the Earth

Mr. Akhteruzzaman Sano is the Chair of the GEF CSO Network, working with GEF partners in 184 countries and 18 GEF agencies focusing on GEF policy architectures, programs, projects, and monitoring and evaluation. He has experience with the World Bank and ADB funded projects, and worked as a team leader, project manager, and gender mainstreaming, capacity building and climate change specialist for several projects. He has experience in conducting age and sex disaggregated comprehensive needs assessment focusing on climate, disaster and manmade caused risks; instrumentalizing multi-stakeholder dialogue platforms at country, regional and global levels; and facilitating dialogues at community, national, regional, and global levels with governments, MDBs, UN Agencies, CSOs, business chambers, and universities etc.,

Dr. Laurent Umans, Climate Change Expert, Former First Secretary Water Management and Climate Change, Embassy of the Kingdom of the Netherlands, Vietnam

Dr. Laurent Umans (1961) is an International Senior Advisor, expert and diplomat specialized in rural development and institutional development. During almost 30 years of experience, he built up a multi-disciplinary orientation covering biology, anthropology, forestry, and sociology. Dr. Laurent worked in The Netherlands, Asia, Latin America, and Africa. He developed great sensitivity to diversity and pluralism in the fields of gender and multi-cultural relations. His focus is on the facilitation of societal transformation with an emphasis on learning and sustainability. He effectively links academic work with policy and practice.

Mr. Kevin Jeanes, Chief Technical Advisor, FAO, Lao PDR

Mr. Kevin has a disciplinary background in landscape ecology, hydrology, and project implementation. His 41-year career focuses on natural resource and environmental management, food production systems, biodiversity conservation and institutional support under programs of development aid (FAO, UNOPS, GEF, World Bank and ADB; Japanese, Australian, Dutch, French, British and US Bilateral), research (CGIAR ICRAF), government direct (Australia, Zambia, Pakistan) and NGOs (Wetland International & FFI). Mr. Kevin's sectoral focus has been across water, land, forest, agriculture, livestock, and fisheries. His experience spans 19 countries with regional focus in South and Southeast Asia, Middle East, Africa, Europe, Australia, and Western Pacific. He graduated with a bachelor's degree in Natural Resource Management, a master's degree in Tropical Agriculture Development and PhD in Tropical Hydrology and Environmental Management.

Mr. Noel Puno, TA-9915 Community-based CCA and DRM Specialist on CBA

Mr. Noel has more than 20 years of experience in development work, disaster risk reduction and management, specifically specializing in community-based disaster risk reduction, recovery, and climate change adaptation. He has experience in various disaster contexts such as cyclones, volcanic eruptions, earthquake, tsunami, landslides, armed conflict/IDPs and urban disasters. Mr. Noel has worked and provided services to various organizations and governments including CARE, OXFAM, Red Cross, UNDP, World Bank, ADB, Government of Vietnam and the Philippines. His country experiences include the SEA Region including Philippines, Cambodia, Lao PDR, Myanmar, and Vietnam. Other country experience includes Solomon Islands, Tonga, Bangladesh, Pakistan and DPR (North Korea). He has a BS Civil Engineering and Master's in Public Administration (on-going).

Mr. Ouk Navann, Deputy Director General, General Directorate of Local Community, Ministry of Environment, Cambodia

Mr. Ouk Navann is responsible for administrative work at the MoE and supporting the livelihood of people who live in or around Protected Areas. He worked for the UNEP-Adaptation Funds project as a National Project Coordinator, entitled Enhance Climate Change Resilience of Rural Community Living in Protected Areas to Adapt to the Impact of Climate Change. The project has utilized an Ecosystem-based Adaptation approach to build the resilience of rural Cambodian communities. In addition, he worked as a team leader for the mitigation sector for the First National Communication under the UNFCCC and was the team leader for the adaptation sector under the NAPA project supported by UNDP. He has a master's degree in Climate Change Science from the University of East Anglia, the United Kingdom.

Ms. Mayfourth D. Luneta, Deputy Executive Director, Center for Disaster Preparedness Foundation Inc.

Ms. Mayfourth has more than 20 years of experience in community-based disaster risk reduction. She is currently the Deputy Director of the Center for Disaster Preparedness Foundation. Her passion is working with communities with the aim of helping them improve their current situation through capacity development on CBDRRM and CCA. She has been involved in different DRR and humanitarian work at the local and regional levels. She is also the current head of the Adventist Community Services in Pasig, where she blended her DRR work and faith. She graduated from the University of the Philippines with a course in community development. She did her Master's in Public Health at the Adventist University of the Philippines.

Dr. Niladri Gupta, Senior Water Resources Management Specialist, Asian Disaster Preparedness Center

Dr. Niladri Gupta is a Water Resources Management professional, presently working as a Senior Water Resources Management Specialist at Asian Disaster Preparedness Center, Thailand focusing on climate change adaptation to build resilience of the water sector. He has more than 18 years of technical and research experience in the areas of geoinformatics, system dynamics and analysis, fluvial geomorphology, and integrated water resources management. His professional career started in India on several flagship programs of the Indian Space Research Organization and Department of Science and Technology, Government of India, and on land and water resources management as well as disaster risk reduction.

Dr. Nildari has experience in UK, South and Southeast Asia. He completed his PhD in Geoinformatics and Fluvial Geomorphology from University of Southampton, UK in 2012. He holds dual master's degree in Applied Geological Sciences from Jadavpur University, India and in Geoinformation and Earth Observation for Environmental Modelling and Management (GEM) as an EU Erasmus. He has several publications in international peer reviewed journals and has led international projects as part of the UKERI Research Grant as well as various multi-lateral donors.

Dr. Duong Nong, Lecturer, Viet Nam National University of Agriculture

Dr. Nong Huu Duong, is a lecturer at the Faculty of Natural Resources and Environment, Viet Nam National University of Agriculture (VNUA), where he focuses on forest resources management, GIS and remote sensing for resource manager, agroforestry, and natural resources management. In the past years, his research and projects have focused on land-use and land-cover change, forest resources management, sustainable agroforestry, and climate smart agriculture technologies and practices (CSA T&Ps). Currently, he is a key member of a joint project between VNUA and University of Ireland at Galway, funded by Irish Research Council (IRC) on “Resilience at the margins: Climate risk mapping and spatial decision support systems for strengthening the climate change resilience of the furthest behind in rural communities in Viet Nam”. Before joining VNUA, he worked as a GIS specialist at the East-West Center, Hawai'i, USA. He obtained his BSc in Social Forestry from Viet Nam Forestry University in 2004, an MSc in Natural Resources Management from the Asian Institute of Technology, Thailand in 2008, and a PhD in Natural Resources and Environmental Management from the University of Hawai'i at Manoa, USA in 2015.

Dr. Ornsaran Pomme Manuamorn, Climate and Sustainable Finance Expert, World Bank, Climate Bonds Initiative, and Fiscal Policy Research Institute

Dr. Ornsaran Pomme Manuamorn is a climate change and sustainable finance expert based in Bangkok. She is currently a senior consultant to the World Bank, working on climate finance in South Asia, and to the Climate Bonds Initiative (CBI), promoting sustainable finance and Paris-aligned climate transition in ASEAN. Concurrently, she is also an advisor for Thailand's Fiscal Policy Research Institute (FPRI), working on a UNDP-financed project on an integrated financing framework for sustainable development goals (SDGs). She has more than 18 years of international experience on a range of issues, including climate change, climate and sustainable finance, environment and natural resource governance, landscape management (agriculture-forest landscapes), weather insurance and agricultural risk financing, with country experiences from Southeast and South Asia.

Between 2012-2015, Dr. Ornsaran served as the Climate Change Adaptation Coordinator for the ADB's Greater Mekong Subregion (GMS) Core Environment Program (CEP). She holds a Ph.D.

in Governance and Policy Analysis (Climate Change Adaptation Finance) from Maastricht University, an MPA (international development) from Princeton University, an M.Phil. (International Relations) from Cambridge University, and a BA (Political Science) from Chulalongkorn University.

Mr. Nakhalin Vorasarn, Deputy Director, Department of Planning and Finance, MONRE, Lao PDR

Mr. Nakhalin Vorasarn, is the Deputy Director of Planning and Cooperation Division under Department of Planning and Finance of Lao PDR's MONRE. He is the Assistant for One Planet Network NFP of Lao PDR, and the Coordinator of SWITCH Asia II Program Implementation for Lao MONRE. He specializes in circular economy, sustainable consumption and production, strategic environmental assessment, comprehensive waste management, IT, IEC materials and information dissemination. He has been a trainer including 25 years of interpretation and translation. He has worked on projects such poverty reduction, environment and pollution control including with the ASEAN and regional cooperation division since 2018. He is responsible for the overall cooperation of MoNRE policies, including the operation and monitoring the sustainable consumption and production roadmap of Lao PDR 2022-2025. Mr. Nakhalin is also the alternate focal point for Lao ASEAN Coordinator Secretary and alternate focal point for GMS WGE, and environmental cooperation mission. He has a Master 's in Political Science from National University of Laos and a BA in English Linguistics.

Ms. Ying Zhou, Senior Program Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment, PRC

Ms. Ying Zhou is an Associate Researcher of the China-ASEAN Environmental Protection Cooperation Center/Lancang-Mekong Environmental Cooperation Center. In recent years, she has mainly engaged in research on China-EU environmental cooperation, China-EU circular economy cooperation, marine debris control, green value chain establishment, and has been deeply involved in several regional environmental cooperation projects.

Dr. Nguyen Phuong Nam, Founder Climate Innovation Consulting and Services, Klinova JSC

Dr. Nguyen Phuong Nam is a senior specialist in environmental-related issues with over 17 years of experience working closely with development partners and Vietnamese governmental agencies. For climate finance experiences, Dr. Nguyen has more than 10 years of experience being the national consultant for ADB, UNDP, GIZ and WB since 2012. From 2021 onwards, Dr. Nguyen found his new role as the Founder and CEO of Climate Innovation KLINOVA, and has delivered substantial contributions in research, policy advising and consulting. He has engaged in enhancing institutional and policy systems on environment with focus on financial instruments, analysis, developing and testing no-regret measures and market-based instruments including databases, MRV/M&E systems, and institutional and regulatory frameworks. Dr. Nguyen was the Division Head of Center for Climate Change Responding (CliTech) under Vietnam MONRE from 2012 to 2019. He supported the global NGO - C40 Cities Climate Leadership Group as the climate advisor until 2021 and earned his PhD in waste-to-energy at Bonn University, Germany in 2012.

Dr. Kamal Ahmed, Institutional Lead, Disaster Risk Financing and Insurance, Asian Disaster Preparedness Center

Dr. Kamal Ahmed is the Institutional Lead on Disaster Risk Financing and Insurance at the Asian Disaster Preparedness Center (ADPC), Bangkok. Under the World Bank supported Climate

Adaptation and Resilience (CARE for South Asia) project, he is leading the country teams of Bangladesh, Nepal, and Pakistan and advising the national governments in these countries on risk financing and transfer. Prior to this, he headed the Disaster Risk Financing (DRF) Unit of the National Disaster Risk Management Fund (NDRMF) and led the development of Pakistan's first national DRF strategy. With a master's degree in economics, Dr. Kamal also holds a doctorate in Understanding and Managing Extremes from the Scuola Universitaria Superiore (IUSS Pavia), Italy.

Day 2

Mr. Sam Oeurn Sothy Roth, Chief of Ex-situ Conservation Office, Department of Biodiversity, Ministry of Environment, Cambodia

Mr. Sam Oeurn Sothy Roth is chief of ex-situ at the Department of Biodiversity, General Directory of Policy and Strategy, Ministry of Environment and one of the key people for Southeast Asia Botanic Gardens Conservation International (SEBGCI). He has experience in research, environmental and social safeguard and compliance, environment management framework, environmental and social impact assessment, biodiversity assessment and conservation, community-based management, and value chain and ecosystem services in protected areas. He has degrees with research on the estimate of methane emission from landfills by IPCC and current available models in solid waste at Sanitary Landfill in Phnom Penh, Cambodia and Saen Suk Landfill, Thailand.

His research is focused on the impact of greenhouse gases emission and reduction. Recently, he committed to establish Sok-An Phnom Kulen Orchid Research and Conservation Center as part of the ex-situ conservation facilities and botanic garden in order to bring research, conservation, education, and entertainment in north region of Cambodia.

Ms. Jing Guan, Senior Program Officer, Department of Nature and Ecology Conservation, Ministry of Ecology and Environment, PRC

Ms. Jing Guan is the Senior Program Officer and Associate Researcher at the Foreign Environmental Cooperation Center (FECO), Ministry of Ecology and Environment (MEE). With a master's degree in biodiversity conservation, Ms. Guan has almost ten years of experience in environmental policy research and international cooperation related to biodiversity conservation.

Mr. Theverack Phonekeo, Deputy Director General of Department of Environment, MONRE, Lao PDR

Mr. Thevarack Phonekeo is a Deputy Director General at the Department of Environment at the Ministry of Natural Resource and Environment, Lao PDR. He is also the national focal point to CBD for Lao PDR, and responsible for supervising and managing the environment policy and international cooperation related to CBD. He is also the focal point for certain COPs like Montreal Protocol and has worked with GMS countries for over two decades.

Ms. Benchamaporn Wattanatongchai, Environmentalist, Senior Professional Level, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand

Ms. Ta Thi Kieu Anh, Official, Viet Nam Environment Administration, Viet Nam

Ms. Ta Thi Kieu Anh is currently an officer of the Nature and Biodiversity Conservation Agency, at Viet Nam Ministry of Natural Resources and Environment. She has experience in developing policy and legislation in the field of biodiversity such as national strategy on biodiversity, access to genetic resources and benefit sharing (ABS), genetically modified organism (GMO), and invasive alien

species (IAS). She has also published various international and national articles in the above fields, and graduated with the Master of Ecology, Vietnam National University.

Mr. Jake Brunner, Head of Indo-Burma Group, The International Union for Conservation of Nature

Jake Brunner is Head of the International Union for Conservation of Nature's Lower Mekong Sub-region covering Viet Nam, Cambodia, Lao PDR, Thailand, and Myanmar. Based in Hanoi and supervising a staff of 45, he leads IUCN's work on transboundary river governance, water-food-energy tradeoffs, wetlands management, and nature-based solutions in agriculture and aquaculture in cooperation with IUCN's regional and global specialists. Before joining IUCN in 2008, he spent eight years running Conservation International's Indo-Burma Program from Washington, DC, Hanoi, and Phnom Penh with a focus on protected areas and species conservation. Previously, he spent eight years at World Resources Institute, an environmental think tank in Washington, DC working on water and forest policy. He holds a BA in Geography from Oxford University and a MS in Remote Sensing/GIS from London University.

Mr. Anouxay Phommalath, Land Use Planning and Spatial Analysis Specialist, TA-9915

Mr. Anouxay Phommalath is a consultant on climate change, environment and social safeguards, natural resource management, land management and project evaluation. He has worked in the field of natural resource management, climate change and environment for over 15 years with INGOs, UNDP, WB and ADB funded projects. He conducted an assessment on the lower Mekong on biodiversity and civil society in biodiversity conservation (specific in Laos) for Biodiversity Consultancy Co. Ltd in 2018. He conducted another assessment on climate change impact assessment, specific on biodiversity habitus in Laos PDR for Adam Smith International. Mr. Anouxay has worked in land use and spatial planning by applying the biodiversity concepts at the community and district levels for district development. He also worked with NGOs like SNV for reducing emissions deforestation and forest degradation and conservation, sustainable forest management and forest restoration (REDD+) as innovation for climate change mitigation. He received a master's degree in Natural Resource Management from University for Peace in Costa Rica.

Mr. Hexiao Chen, Deputy Director, Guangxi Environmental Protection International Cooperation and Exchange Center, PRC

Mr. CHEN Hexiao is a senior engineer and the deputy director of Guangxi Environmental Protection International Cooperation and Exchange Center. Since 2012, he has undertaken more than 30 national and provincial projects in environmental protection, published more than 10 papers and obtained 8 patents. He is currently engaged in research in the field of international exchanges and cooperation in ecology and environment. He has a master's degree in Environmental and Energy Engineering in the University of Sheffield, UK

Ms. Regan Pairojmahakij, Senior Programme Officer, RECOFTC, Thailand

Ms. Regan Pairojmahakij is a Senior Program Officer at RECOFTC for landscapes collaboration in changing climate. Her work focuses on developing a portfolio of landscape programs in RECOFTC's seven focal countries which employ a forest landscape approach to achieve social and ecological outcomes at scale. Previously, Regan has worked with WWF Greater Mekong program championing conservation in the Dawna Tenasserim transboundary landscape, with RECOFTC in various roles including as lead of a civil society network on REDD+ and with FAO as long-term consultant on regional forest policy. Current interests include landscape and habitat

connectivity, forest landscape restoration, biodiversity conservation, market-based approaches yielding ecological benefits and strengthening climate resilience.

Dr. Beria Leimona, Senior Expert, Landscape Governance and Investment Principal Investigator, World Agroforestry (ICRAF)

Dr. Leimona is a Senior Expert from Landscape Governance and Investment of World Agroforestry (ICRAF) based in Indonesia. As a Principal Investigator, Dr. Leimona is coordinating and leading research programs specializing in landscape governance and policy, innovative financing, community-based natural resource management, public-private-partnership, and sustainability standards and certifications for agricultural commodities across Asian countries. She is one of the resource persons for the Indonesian Ministry of Environment and Forestry for developing national guidelines and policy reviews, and senior associate of Economics Environmental Programme of Southeast Asia (EEPSEA). Dr. Leimona is a member of the Executive Steering Committee of the Ecosystem Services Partnership Network, an Associate Editor – Ecosystem Services Journal of Elsevier, and a lead author for the Intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES). Dr. Leimona has a PhD from Wageningen Agricultural University, Netherlands.

Dr. David Ganz, Executive Director, RECOFTC

Dr. David Ganz is the Executive Director of RECOFTC and joined the institution at a key moment in its history when there is growing recognition that forest land rights of local communities are central to peace, economic development, and climate change mitigation and adaptation. Dr. David is a strong advocate for community forestry in the region and for path-breaking private sector models that respect local rights and deliver lasting and tangible benefits from millions of hectares of community forests in the Asia-Pacific region.

Dr. David joins RECOFTC from SERVIR-Mekong, a joint USAID NASA Initiative, where he has been its Chief of Party since 2014. Prior to this he was Chief of Party for Winrock International's Lowering Emissions in Asia's Forests (USAID LEAF) Program, where he worked to strengthen the capacity of developing countries in Asia to achieve sustained reductions in greenhouse gas emissions from the agriculture forestry-land use sector. Dr. David also held global roles as Director with The Nature Conservancy (TNC) and as Technical Officer with the United Nation' Food and Agriculture Organization (FAO). He is a graduate of the University of California at Berkeley and Yale University.

Dr. Michael Victor Galante, Director, Climate Forestry and Secretary-General, The Alliance for Responsible Forest Management

Dr. Michael Galante is a professional forester with over 20 years of experience in Asia-Pacific, in the fields of forest management planning, forest certification, timber legality, forest finance and climate change mitigation. Dr. Michael is the Director of Climate Forestry, a private company supporting responsible forest management in Asia-Pacific, and he is the Founder of the Alliance for Responsible Forest Management (ARFM), an independent not-for-profit NGO with the goal to accelerate the implementation of responsible forest management across the tropical world by creating a global knowledge management system with regionally appropriate training material and training centers in Africa, Asia-Pacific and Latin America.

Mr. Raphael Glemet, Senior Programme Officer, Water, Wetlands and Nature-Based Solutions, The International Union for Conservation of Nature

Mr. Raphael Glemet is the Programme Coordinator for Water and Wetlands at the IUCN Asia Regional Office in Bangkok, as well as regional focal point for Nature Based Solutions, the

UNFCCC, and the Ramsar Convention. He has fourteen years of experience working on environmental conservation with governments, INGOs, and intergovernmental organisations, covering a range of topics including water and transboundary cooperation, wetlands management, coastal ecosystems, fisheries, and nature-based solutions for resilience. He holds a MS in Wetlands Management and Engineering (University of Angers, France).

Mr. Michal Zrust, Co-Founder and CEO, Lestari Capital

Mr. Michal Zrust brings over 20 years of expertise working in the conservation, biodiversity and corporate sustainability space across Asia, Africa, Europe, and Latin America, stretching from the field to corporate boardrooms. He leads Lestari Capital's strategy for the sustainable commodities sector, spearheading the conceptualization, development, and implementation of our innovative conservation finance mechanisms. Mr. Michal is an invited expert and representative on numerous technical and governance bodies for certification systems, including the Roundtable on Sustainable Palm Oil and the Forestry Stewardship Council. He lives in Indonesia where he has worked extensively for the last ten years. Lestari Capital is a conservation finance company, based in Southeast Asia, that develops innovative, nature-based products that enable companies to deliver on their sustainability objectives.

Ms. Jiayi Xu, Programmes Director, Greenovation Hub

Ms. Jiayi Xu is leading the biodiversity program and organizational strategy and development in Greenovation Hub. For more than ten years, she has been active in domestic and international non-governmental organizations in the field of sustainable development, and is committed to promoting policy research, advocacy and capacity building projects related to climate, forest, biodiversity, and green finance issues. She has extensively promoted multilateral and bilateral non-governmental policy dialogues, such as China-US, China-India, China-Europe and China-Brazil and Central Asian countries. Ms. Jiayi has provided professional consulting services for several international organizations and served as a researcher of the World Resources Institute's climate change economics project, a Special Assistant to China Country Director, and an Officer of the climate change project of Institute of Environment and Development. She holds a BSc in Economics from the University of Bristol and a Master of Regional Development from the University of Queensland.

Ms. Yunwen Bai, Director of Financing Nature Based Solutions Centre, Institute of Finance and Sustainability/Senior Researcher, Greenovation Hub, China

Ms. Yunwen Bai is the co-Founder and Executive Director of Greenovation Hub. Her expertise focuses on international financial flows, climate, and energy governance, and several international joint research projects. She works closely with Chinese financial regulators and institutions to open the evidence-based policy discussion on green finance and environment/climate risk management. Prior to GHub, she has worked with international environmental organizations and foundations for over a decade. Ms. Yunwen was a visiting research fellow at the Smith School of Enterprise and the Environment of Oxford University from 2013 to 2014. She has served on the board of the China Climate Action Network. She holds a master's degree in environmental science from the University of Manchester, as well as a master's degree in Environmental Policy and Management from International Institute for Industrial Environmental Economics at Lund University.

Dr. Yang Bai, Researcher, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, PRC

Dr. Yang Bai's group is ground in tropical areas of China, facing Southeast Asian countries, focusing on major scientific and practical issues, including spatial pattern planning of biodiversity conservation, optimization of conservation area system, and sustainable development model of community. As a think tank, they provide scientific evidence and support for improving regional biodiversity protection, ecological security barrier construction, and rural revitalization.

The priority researches are following: (1) To explore the spatial and temporal distribution patterns of rare and endangered species or other flagship species in the Yunnan and Indochina Peninsula Area and reveal their ecological causes and maintenance mechanisms; (2) To study the change and response of ecosystem structure-pattern-process-function-service under human activity stress and climate change; (3) To study the multi-objective coupling and synergistic mechanism of Biodiversity and Ecosystem Services and to develop planning schemes for regional tropical rainforest landscape restoration and habitat restoration; (4) Put forward the sustainable development model of protected areas and communities, and promote the effective conservation of biodiversity and the sustainable and coordinated development of surrounding communities.

Ms. Niran Nirannoot, Project Manager and Head of The Biodiversity Finance Initiative (BIOFIN) Thailand, United Nations Development Programme

Ms. Niran Nirannoot worked for the Federation of Thai Industries where she supported private sector in advocating for policy changes through trade and investment dialogues in various free trade agreements. She joined the United Nations Office for Project Service (UNOPS) on a Tsunami recovery program in the Maldives in the capacity of Monitoring, Reporting and Knowledge Management Officer. With the Food and Agriculture Organization of the United Nations (FAO), she served as the Regional Coordinator and the Chief Technical Advisor of the Technical Cooperation among developing countries program to support smallholder farmers and agribusiness in the GMS region on integrated cross-border value chains development and organic agriculture certification. Her educational background gives her deep perspectives in finance and political economy. Niran believes that finance is the key to conserving Thailand's biodiversity, so she is now involving herself in 'finance for nature'.

She led the development of Thailand's Biodiversity Finance Plan—roadmaps towards a more sustainable finance. Niran leads the design of innovative finance solutions by pioneering the crowdfunding 'Koh Tao, Better Together' for COVID-19 green recovery to preserve ecosystem and sustain livelihoods of impacted communities in Thailand. By thriving on the Sustainable Development Goals¹⁴ and 15, she pilots the biodiversity conservation financing at sub-national level in Thailand with the first-of-its-kind legal framework enacted by Municipality Office. The tourist users charge' collection can now bridge the finance gap on coral reefs conservation efforts. Thus, improving approaches to resources allocation in fiscal budgeting for nature-based tourism.

Appendix 3 – Participant list

Table 1: List of WGE AM-26 participants

CAMBODIA								
Day 1	Day 2	Name	Designation	Organization	Participant/Panelist	Type	Attendance	
1	Yes	Yes	Mr. Ouk Navann	Deputy Director General	General Directorate of Local Community, Ministry of Environment (MoE)	Theme 1 Session 4	Government	in-person
2	Yes	Yes	Mr. Sam Oeurn Sothyroth	Chief of Ex-situ Conservation Office	Department of Biodiversity, Ministry of Environment	Theme 3 Session 1 and Session 3	Government	in-person
3	Yes	Yes	Mr. Kamal Uy	Deputy Director General, Vice Chair Secretariat of Working Group Cooperation on and Planning and planning	General Directorate of Environmental Knowledge and Information, Ministry of Environment (MoE)	Participant	Government	in-person
4	Yes	Yes	Mr. Chanborey Yun	Chief of Office	Department of Inspection and Law Enforcement, Ministry of Environment (MoE)	Participant	Government	in-person
5	Yes	Yes	Mr. Leang Sophal	Chief of Office	Ministry of Environment (MoE)	Theme 1 Session 1 and Session 3	Government	in-person
6	Yes	Yes	Dr. Loeung Kesaro	Head of Delegation, Deputy Director General	General Directorate of National Protected Area, Ministry of Environment	Panelist - Day 3	Government	in-person
CHINA								
Day 1	Day 2	Name	Designation	Organization	Participant/Panelist	Type	Attendance	
7	Yes	Yes	Mr. Jun Zhou	Director	Department of International Cooperation, MEE	Panelist - Day 3	Government	online
8	Yes	Yes	Mr. Peng Ning	Program Officer	Department of International Cooperation, MEE	Participant	Government	online
9	Yes	Yes	Mr. Hou Fang	Director	Department of Climate Change, MEE	Participant	Government	online
10	Yes	Yes	Mr. Zhou Zeyu	Senior Program Officer	Department of Climate Change, MEE	Theme 1 Session 1	Government	online
11	Yes	Yes	Mr. Jing Guan	Senior Program Officer	Department of Nature and Ecology Conservation, MEE	Theme 3 Session 1	Government	online
12	Yes	Yes	Mr. Wang Lei	Assistant Researcher	Department of Nature and Ecology Conservation, MEE	Participant	Government	online

13	Yes	Yes	Mr. Ding Shineng	Deputy Director	Foreign Environmental Cooperation Center (FECO), MEE	Participant	Government	online
14	Yes	Yes	Mr. Zhaohui Qian	Senior Program Officer	Foreign Environmental Cooperation Center (FECO), MEE	Theme 1 Session 2	Government	online
15	Yes	Yes	Ms. Ying Zhou	Senior Program Officer	Foreign Environmental Cooperation Center (FECO), MEE	Theme 1 Session 5	Government	online
16	Yes	Yes	Ms. Li Xiang	Program Officer	Foreign Environmental Cooperation Center (FECO), MEE	Participant	Government	online
17	Yes	Yes	Mr. Wu Yi	Director	Department of Ecology and Environment, Guangxi, China	Participant	Government	online
18	Yes	Yes	Mr. Hexiao Chen	Deputy Director	Guangxi Environmental Protection International Cooperation and Exchange Center	Theme 3 Session 2	Government	online
19	Yes	Yes	Mr. Xi Hongbin	Director	Department of Ecology and Environment, Yunnan, China	Participant	Government	online
20	Yes	Yes	Mr. Wang Yunzhai	Director	Yunnan Ecological and Environmental Cooperation Office	Participant	Government	online
21	Yes	Yes	Mr. He Yan	Director	Yunnan Research Academy of Eco-environmental Sciences	Participant	Government	online
22	Yes	Yes	Mr. Zhang Yan	Division Chief	Bureau of Ecology and Environment, Xishuangbanna, Yunnan, China	Participant	Government	online
23	Yes	Yes	Mr. Yang Bai	Researcher	Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences	Theme 3 Session 4	Government	online
LAO PDR								
	Day 1	Day 2	Name	Designation	Organization	Participant/Panelist	Type	Attendance
24	Yes	Yes	Mr. Chanthaly Chansompheng	Director of Regional and International Integration Division	Department of International Cooperation, Ministry of Planning and Investment	Participant	Government	in-person
25	Yes	Yes	Mr. Malabou Baylatry	Deputy Director	Department of Climate Change, Ministry of Natural Resources and Environment (MONRE)	Theme 1 Session 1 and Session 3	Government	in-person

26	Yes	Yes	Mr. Nakhalin Vorasam	Deputy Director	Department of Planning and Finance, Ministry of Natural Resources and Environment (MONRE)	Theme 1 Session 5, Theme 3 Session 4	Government	in-person
27	Yes	Yes	Mr. Sounadeth Soukchaleun	Deputy Director General	Department of Planning and Finance, Ministry of Natural Resources and Environment (MONRE), Alternate National Focal Point	Participant	Government	in-person
28	Yes	Yes	Mr. Thevarack Phonekeo	Deputy Director General	Department of Environment, Ministry of Natural Resources and Environment (MONRE)	Theme 3 Session 1, Panelist - Day 3	Government	in-person
MYANMAR								
	Day 1	Day 2	Name	Designation	Organization	Participant/ Panelist	Type	Attendance
29	Yes	Yes	Dr. San Oo	Deputy Director General	Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation	Participant	Government	Online
30	Yes	Yes	Dr. San Win	Director	Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation	Participant	Government	Online
31	Yes	Yes	Ms. Thaw Thaw Han	Director	Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation	Participant	Government	Online
32	Yes	Yes	Ms. Khaing Yi Mon Lin	Assistant Director	Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation	Participant	Government	Online
33	Yes	Yes	Ms. Yin Min Thant Thant	Staff Officer	Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation	Participant	Government	Online
VIET NAM								
	Day 1	Day 2	Name	Designation	Organization	Participant/ Panelist	Type	Attendance
34	Yes	Yes	Ms. Kim Thị Thuy Ngoc	Head	Division of Science and International Cooperation, Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE)/MONRE	Panelist - Day 3	Government	in-person

35	Yes	Yes	Ms. Le Thi Le Quyen	Official	Division of Science and International Cooperation, Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE)/MONRE	Participant	Government	in-person
36	Yes	Yes	Mr. Le Nam	Research Assistant	Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE)/MONRE	Participant	Government	in-person
37	Yes	Yes	Ms. Ta Thi Kieu Anh	Government Officer	Nature and Biodiversity Conservation Agency, MONRE	Theme 3 Session 1 and Session 3	Government	online
38	Yes	Yes	Mrs. Dao Minh Khue	Official	Department of Climate Change, MONRE	Theme 1 Session 1 and Session 4	Government	in-person
THAILAND								
	Day 1	Day 2	Name	Designation	Organization	Participant/Panelist	Type	Attendance
39	Yes		Mr. Thalearnsak Petchsuwan	Deputy Permanent Secretary	Office of the Permanent Secretary, Ministry of Natural Resources and Environment	Opening Remarks	Government	Online
40			Mr. Pavich Kesavawong	Director of Foreign Affairs Division	Office of the Permanent Secretary, Ministry of Natural Resources and Environment	Panelist - Day 3 (TBD)	Government	in-person
41	Yes		Mr. Teerapong Laopongpith	Director of Policy and Strategy Section	Climate Change Management and Coordination Division, Office of Natural Resources and Environment Policy and Planning (ONEP)	Theme 1 Session 1	Government	in-person
42	Yes	Yes	Ms. Narumol Oris	Environmental list, Senior Professional Level	Foreign Affairs Division, Office of the Permanent Secretary, Ministry of Natural Resources and Environment	Participant	Government	in-person
43	Yes	Yes	Mr. Phuriputr Huvanandana	Environmental list, Professional level	Foreign Affairs Division, Office of the Permanent Secretary, Ministry of Natural Resources and Environment	Participant	Government	in-person

44	Yes		Mrs. Rosalind Amornpitakpun	Director of Climate Measure and Mechanism Development Section	Office of Natural Resources and Environment Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Theme 1 Session 3	Government	in-person
45	Yes	Yes	Ms. Nitchanon Tadkaew	Environmenta list, Senior Professional Level	Office of Natural Resources and Environment Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Participant, Day 1 onsite + Day 2- 3 Online	Government	Online
46	Yes	Yes	Ms.Chanakan Tangchit	Environmenta list, Professional Level	Office of Natural Resources and Environment Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Participant, Day 1 onsite + Day 2- 3 Online	Government	Online
47		Yes	Ms. Benchamaporn Wattanatongchai	Environmenta list, Senior Professional Level,	Office of Natural Resources and Environment Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Theme 3 Session 1	Government	in-person
48		Yes	Ms.Sawitree Boonyalug	Environmenta list, Practitioner Level	Office of Natural Resources and Environment Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Participant	Government	in-person
49		Yes	Ms.Jinjutha Jitanuntarat	Plan and Policy Analyst	Office of Natural Resources and Environment Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Participant: Day 2 onsite + Day 3 online	Government	online
Keynote Speakers, Facilitators, and Panelists								
	Day 1	Day 2	Name	Designation	Organization	Participant/ Panelist	Type	Attendance
50	Yes		Dr. Jiangfeng Zhang	Director Environment	Natural Resources and Agriculture Division (SEER), Southeast Asia Department (SERD), ADB	Opening Remarks	ADB	online
51	Yes	Yes	Dr. Albert Salamanca	Senior Research Fellow	Stockholm Environment Institute, Bangkok	Facilitator - Theme 1 Session 2	Research Institute	in-person
52	Yes	Yes	Mr. Manish Tewani	Global Response Lead	American Red Cross/ International Federation of Red Cross and Red Crescent Societies	Theme 1 Session 2	INGO	in-person
53	Yes		Ms. Katuscia Fara	Senior Regional Climate and Disaster Risk Reduction Advisor	World Food Programme	Theme 1 Session 2	UN	in-person

54	Yes		Mr. Dao Xuan Lai	Head of Climate Change and Environment Unit	UNDP, Viet Nam	Facilitator - Theme 1 Session 3	UN	online
55	Yes		Mr. Akhteruzzaman Sano	Team Leader	Save The Earth	Theme 1 Session 3	INGO	online
56	Yes		Dr. Laurent Umans	Climate Change Expert, Former First Secretary Water Management and Climate Change	Embassy of the Kingdom of the Netherlands, Vietnam	Theme 1 Session 3	Embassy	online
57	Yes	Yes	Mr. Kevin Jeanes	Chief Technical Advisor	FAO, Lao PDR	Keynote and Facilitator - Theme 1 Session 4	UN	in-person
58	Yes		Ms. Mayfourth Luneta	Deputy Executive Director	Center for Disaster Preparedness Foundation Inc.	Theme 1 Session 4	Resource Centre	online
59	Yes		Dr. Niladri Gupta	Senior Water Resources Management Specialist	Asian Disaster Preparedness Center	Theme 1 Session 4	Autonomous International Organization	in-person
60	Yes		Dr. Duong Nong	Lecturer	Vietnam National University of Agriculture	Theme 1 Session 4	Education	in-person
61	Yes	Yes	Dr. Srinivasan Ancha	Principal Climate Change Specialist	ADB	Facilitator - Theme 1 Session 5, Theme 3 Session 1, Theme 3 Session 4	Regional Development Bank	in-person
62	Yes		Dr. Ornsaran Pomme Manuamorn	Climate and Sustainable Finance Expert	World Bank, Climate Bonds Initiative, and Fiscal Policy Research Institute	Keynote - Theme 1 Session 5	Global Development Bank	in-person
63	Yes	Yes	Dr. Phuong-Nam Nguyen	Founder Climate Innovation Consulting and Services	Klinova JSC.	Theme 1 Session 5	Private Sector	in-person
64	Yes		Dr. Kamal Ahmed	Institutional Lead, Disaster Risk Financing and Insurance	Asian Disaster Preparedness Center	Theme 1 Session 5	Autonomous International Organization	in-person
65		Yes	Mr. Jake Brunner	Head of Indo-Burma Group	The International Union for Conservation of Nature	Facilitator - Theme 3 Session 2	Membership Union	online
66		Yes	Ms. Regan Pairojmahakij	Senior Programme Officer	RECOFTC, Thailand	Theme 3 Session 2	Non for profit	online
67		Yes	Dr. Beria Leimona	Senior Expert Landscape Governance and Investment Principal Investigator	World Agroforestry (ICRAF)	Theme 3 Session 2	Research Institute	in-person

68		Yes	Dr. David Ganz	Executive Director	RECOFTC	Facilitator - Theme 3 Session 3	Non for profit	in-person
69		Yes	Dr. Michael Victor Galante	Director, Climate Forestry and Secretary-General	The Alliance for Responsible Forest Management	Keynote - Theme 3 Session 3	NGO	in-person
70	Yes	Yes	Mr. Raphael Glemet	Senior programme officer, Water, Wetlands and Nature-Based Solutions	The International Union for Conservation of Nature	Theme 3 Session 3	Membership Union	online
71		Yes	Mr. Michal Zrust	Co-Founder and CEO	Lestari Capital	Theme 3 Session 3 and Theme 3 Session 4	Private Sector	online
72		Yes	Ms. Jiayi Xu	Programmes Director	Greenovation Hub, China	Theme 3 Session 4	Environmenta I Think Tank	online
73		Yes	Ms. Yunwen Bai	Director of Financing Nature Based Solutions Centre Institute of Finance and Sustainability/ Senior Researcher,	Greenovation Hub, China	Theme 3 Session 4	Environmenta I Think Tank	online
74		Yes	Ms. Niran Nirannoot	Project Manager	BIOFIN Thailand: The Biodiversity Finance Initiative, United Nations Development Programme	Theme 3 Session 4	UN	online
75	Yes	Yes	Mr. Chanthaphone Thammavong	Capacity Development Expert	FAO CAWA Project, Lao PDR	Participant		online
76	Yes	Yes	Mr. Peeranan Towashiraporn	Director, Geospatial Information Department	Asian Disaster Preparedness Center (ADPC)	Participant		in-person
TA TEAM								
	Day 1	Day 2	Name	Designation	Organization	Participant/ Panelist	Type	Attendance
77	Yes	Yes	Mr. Jens Christian Riise	Capacity Building Specialist, Monitoring Evaluation and Learning Specialist, and Co-Team Leader	Ramboll	All	Facilitator	in-person
78	Yes	Yes	Dr. Xi Jiao	CCA and DRM Specialist and Thematic Lead and CoTeam Leader	Ramboll	Theme 1	Keynote - Theme 1 Session 2	online
79	Yes	Yes	Mr. Søren Hansen	Climate Change Mitigation Specialist and Technical Lead	Ramboll	Theme 2	Participant	in-person

80	Yes	Yes	Dr. Ellyn Kathalina Damayanti	Landscape Management and REDD+ Specialist and Technical Lead	Ramboll	Theme 3	Participant	in-person
81	Yes	Yes	Ms. Maria Chiara Metallo	Environmental Quality Specialist and Technical Lead	Ramboll	Theme 4	Participant	in-person
82	Yes	Yes	Mr. Andy Brahney	Digital Technology Specialist and Technical Lead	Ramboll	Theme 5	Participant	online
83	Yes	Yes	Mr. Kim Madsbjerg	Disaster Risk Financing Specialist and Technical Lead	Ramboll	Theme 6	Participant	online
84	Yes	Yes	Mr. Anouxay Phommalath	Land Use Planning and Spatial Analysis Specialist	Ramboll	Theme 3	Keynote - Theme 3 Session 2	in-person
85	Yes	Yes	Ms. Qudisia Sadiq	Assisting Team Leader/Expediter	Ramboll	All	Coordinator	online
86	Yes	Yes	Mr. Gonzalo Fuentes Dellepiane	Knowledge Management Specialist	Ramboll	All	Event Producer	in-person
87	Yes	Yes	Ms. Agata Sliwa	Assistant Communication Specialist	Ramboll	All	Communications	online
88	Yes	Yes	Ms. Ratchadaporn (Anne) Pattanasirimongkol	National Consultant - Thailand	Ramboll	All	Participant	in-person
89	Yes	Yes	Mr. Nguyen Quoc Dinh	National Consultant - Viet Nam	Ramboll	All	Participant	online
90	Yes	Yes	Dr. Ratha Sor	National Consultant - Cambodia	Ramboll	All	Participant	online
91	Yes	Yes	Dr. Sok Ty	National Adaptation Planning Specialist	Ramboll	Theme 1	Keynote - Theme 1 Session 3	online
92	Yes	Yes	Mr. Noel Puno	Community-based CCA and DRM Specialist on CBA	Ramboll	Theme 1	Keynote - Theme 1 Session 4	in-person
93	Yes	Yes	Ms. Yujie Zhang	Assistant to PRC National Consultant	Ramboll	Theme 1	Participant	online
94	Yes	Yes	Cynthia Nitsch	Intern	SEI	All	Support	in-person
95	Yes	Yes	Mathieu Mal	Intern	SEI	All	Support	in-person
96	Yes	Yes	Pranita Rimal	Intern	SEI	All	Support	in-person
97	Yes	Yes	Criselda G. Rufino	Environment, Natural Resources, and Agriculture Division (SEER) Southeast	ADB	All	Participant/Support	in-person

			Asia Department				
98	Yes	Yes	Dilokchon Chakriyarat (Khun Tong)		ADB	All	Support in-person

Table 2: Additional online registrations

Note: Names for registration in Zoom were entered by participants.

	First Name	Last Name
1	Oanh	Nguyen
2	Khaingyimon	Lin
3	Ebere	Ihetu
4	Michael	Ruggeri
5	Peter	King
6	DARARATH	YEM
7	Tin Mar	Thein
8	Anh	Tuan
9	Brigitte	Balthasar
10	Moniratana	Mao
11	Van Doang	Nguyen
12	Liqiong	YANG
13	Ying	Zhou
14	Jinzhou	Wang
15	Wenhui	LIU
16	Suzanne	Robertson
17	Vinh	Bùi
18	Supatra	Sripumphet
19	Dr. THEIN SAUNG	SAUNG
20	Vichelle	Arunsuwannakorn
21	Rafaelita	Jamon
22	Jam	Vinluan
23	Keiju	Mitsuhashi
24	Alex	Smajgl
25	Nguyen Thi	Sam
26	Wish	Techa
27	Jitsupa	Nititanapisal
28	Hsu Sandar	Aung
29	Chinh	Luu
30	ณัฐนันท์	หัตถแก้ว
31	Nghia Duc	HOANG
32	Sukan	Pungkul
33	Andrea	Bassi
34	Triệu	Lựa

35	Jessel	Crispino
36	Trinh	Thuy

Appendix 4 – Presentations

- [26th WGE Annual Meeting – Day 1 slide deck](#)
- [26th WGE Annual Meeting – Day 2 slide deck](#)
- [26th WGE Annual Meeting - Day 3 field visit slide deck - Wastegetable Circular Urban Farming Business](#)