

“Building Capacity for Young Researchers on Climate Change Adaptation and Mitigation on Road and Related Infrastructures under CAMI Project Funded by the CCCA3”

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The Master of Science in Climate Change Program (MCC) of the Royal University of Phnom Penh forming a consortium with the Asian Institute of Technology (AIT) in Thailand and the University of Freiburg (UF) in Germany in cooperation with Cambodia’s Ministry of Public Work and Transport (MPWT), and Ministry of Rural Development (MRD), have implemented the project on appropriate costing methods of climate change adaptation in infrastructure development: experimental studies for road and related infrastructure projects in Cambodia (CAMI), funded by the CCCA3 Grant – Research Partnership. The research project is executed over 32 months period, from May 2021 to December 2023.

“The project goal is to enhance the climate resilience capacity of roads and related development sectors in Cambodia”



Rural roads, water sluice and wetlands for storing water in Prey Veng Municipality of Prey Veng Province.

The key project outcome is the analyses of damages and losses and adaptation costing due to impacts of climate change incorporated into development planning of roads and related infrastructure projects in Cambodia.

The expected outputs include: 1) damages and losses due to climate change on roads and related infrastructures (national and rural roads, bridges, culverts, small scale irrigation system, and related infrastructures) analyzed; 2) cost and benefit analysis on roads and related infrastructures utilized (for two scenarios without and with climate change adaptation measures, including climate projections); and 3) practical tools and methods for the MPWT and MRD officers for analyzing adaptation related financial costs in roads, small scale irrigation, and related infrastructures developed.



Mr. Phat Chandara (Second from the right handright-hand side) along with the RUPP and AIT team conducted a meeting with representatives of Provincial Department of Rural Development in Prey Veng Province.

The project provides several direct and indirect benefits for both project implementors and relevant line ministries. Throughout this cooperation, Mr. Phat Chandara [Project Coordinator to CAMI] – has received partial scholarship from the AIT to pursue the PhD study in a field of “Climate Change and Sustainable Development (CCSD)”, and his dissertation will be supported by the CAMI project as part of the project outputs. Mr. Chandara has emphasized, “being involved in this project, the [project] has provided a lot of opportunities for both learning and practicing climate change and its related impacts on road infrastructure, and with a golden chance for a PhD awardee as an example.”



From this opportunity, he is very delighted to conduct practical research on the development of appropriate adaptation costing methods on roads, small scale irrigation canals and related infrastructures in Cambodia as “The research will provide for future the evidence-based practices to decision makers to understand the current and existing adaptation needs and options with appropriate adaptation costing for the development of roads and its related infrastructures – and methods/tools to analyze the costing. Additionally, this study will also contribute to the future design of road development, and encourage planners to consider climate change hazards assessment and its socio-economic analysis,” he added.

Finally, **Mr. Chandara** concluded that the outputs from this project are useful for both government [for better decision-making and strengthening quality road and related infrastructures] and building human resource capacity and outreach [in climate change and related fields].



Professor Vilas Nitivattananon, Dean of School of Environment, Resources and Development (SERD), AIT

Being a collaborator of the project, Professor **Vilas Nitivattananon**, a Dean of the AIT’s SERD expressed that the project contributes to developing methods and tools to assess damages and losses from climate change impacts for road and related infrastructures in Cambodia applied within the infrastructure development process.

This project also includes methods and tools for adaptation costing on roads and related

infrastructures. The project is expected to conclude with sector-specific training events and workshops on integrating adaptation costing into sector plans, and projects at national and subnational levels. “All project activities do not only transfer knowledge from the AIT but also are enhanced learning for practical applications of relevant methods and tools from the real cases involving planners and practitioners,” he emphasized.



Dr. Seak Sophat, a Project Director, Vice Dean and Coordinator of the MCC Program

Dr. Seak Sophat, the Project Director, Vice Dean and Coordinator of the MCC program, has indicated that the project has enhanced the research capacity not only for the MCC program faculty members and students, but also provided an unprecedented opportunity for the RUPP to expand the wider network of cooperation with government ministries, NGOs, and international academic institutions like the AIT and Freiburg University in Europe (Germany). Furthermore, the project will develop the practical guidelines on loss and damage assessment tools, and adaptation costing analysis methods which can be adopted by the relevant government ministries to improve their planning and implement climate proofing infrastructure projects within the country while maximizing the economic benefit.

