Climate Change: Not a Future Issue, but a Present Challenge Requiring Action

OVERVIEW

Climate change is one of the most important challenges for human life, economic growth, society, natural resources, and the environment, including disasters and various epidemics. It is crucial for NIDA to adopt an integrated and participatory approach by linking climate change mitigation strategies with economic and social development strategies. Integrating these dimensions will lead to effective and efficient greenhouse gas reduction and create shared sustainable success.

RESEARCH

Faculty-led research promoting low-carbon practices

NIDA faculty apply their knowledge and experience to conduct significant and high-impact research, for example:

- A project studying consumer behavior in the restaurant business to contribute to a low-carbon, environmentally friendly society on Samui Island, Surat Thani Province, led by Assoc. Prof. Dr. Charoenchai Agmapisarn.
- A project driving restaurant businesses toward a low-carbon society based on the BCG concept, using restaurants on Samui Island, Surat Thani Province, as a case study, led by Prof. Dr. Wisakha Phoochinda.
- A project studying communication models to drive the concept of a low-carbon society in restaurant business operations in Surat Thani Province, led by Assoc. Prof. Dr. Kullatip Satararuji.

Climate action and disaster solutions

NIDA faculty have played key roles in disaster and climate adaptation, including:

- Prof. Dr. Chamlong Poboon, School of Environmental Development Administration, as Subcommittee Chair on Climate Change Adaptation, Thai Senate.

- Assoc. Prof. Dr. Pakpong Pochanart, Prof. Dr. Wisakha Phoochinda, and Assoc. Prof. Dr. Aweewan Panyakometh undertaking the project, The Circular Economy (CE) Capability Building in the Lancang-Mekong Region: Product Verification of Plastic Packaging in Supply Chains". This project also received the "Project with Outstanding Pragmatic and Result-Oriented Approach" award from the Mekong-Lancang Special Fund.

- Prof. Dr. Siwatt Pongpiachan also participated in NASA's Airborne and Satellite Investigation of Asian Air Quality (ASIA-AQ) project, supported by NARIT and GISTDA, using the world's largest airborne chemistry laboratory adapted from DC8 and G3 commercial aircraft at U-Tapao Airport. Participation in ASIA-AQ allowed access to multi-kilometer air pollution measurement technology, reducing limitations of traditional research and improving data accuracy for air quality monitoring. Professor Pongpiachan also represented Thailand at the UN Climate Change Conference COP29 in Azerbaijan, presenting research and innovative solutions for carbon management, air pollution, and natural resource sustainability, emphasizing balance between economic, social, and environmental development in line with sustainable development.

In addition, he was also an academic and public communication support for the Draft Thailand Clean Air Act, particularly addressing PM 2.5 pollution.

TEACHING & LEARNING

Academic programs preparing leaders for climate action

NIDA offers programs in Environmental Management and Sustainability Science and Management, which emphasize the development of leaders for sustainable development (WISDOM for Sustainable Development) who can apply strategies to prevent, reduce, and address the impacts of climate change. Courses include:

- Climate Change and Carbon Management
- Product Life Cycle Analysis
- Pollution Control Management
- Eco-Industrial Environmental Management
- Environmental Leadership
- Clean Technology and Energy Management

Students also have opportunities to study and research through independent study projects, theses, and dissertations on climate change and sustainability, such as:

- Long-term analysis of air pollution in Bangkok
- Long-term visibility studies in Thailand and correlations with meteorological factors
- Public attitudes toward PM2.5 mitigation strategies in Bangkok

COMMUNITY ENGAGEMENT

Engaging communities in climate awareness, adaptation & sustainable solutions

NIDA organizes forums and seminars to engage the general public in raising awareness about climate, adaptation, mitigation, and early warning, for example:

- NCC Forum: “PM2.5 Management Measures for the World, for Us, for the Future”, led by Assoc. Prof. Dr. Pakpong Pochanart, School of Environmental Development Administration.
- Participation by Prof. Dr. Siwatt Pongpiachan in “No-Burn Agriculture: Community Participation for Sustainable Solutions” with the Ministry of Agriculture and Cooperatives, addressing agricultural burning issues in Mae Rim District, Chiang Mai Province.
- “Storytelling to Create Value for Communities and Localities for Sustainable Development”, empowering young filmmakers and community leaders to tackle climate change challenges through science-based storytelling.

Provincial climate initiatives

Assoc. Prof. Dr. Pakpong Pochanart, School of Environmental Development Administration, leads the **Net Zero GHG Emission Provincial Development Project** under the Greenhouse Gas Management Organization. This project supports 12 provinces in setting **carbon neutrality or net-zero greenhouse gas emission goals**, establishing reduction measures, preparing net-zero action plans, and developing business models for greenhouse gas mitigation. This initiative encourages participation from all sectors at the local level to manage greenhouse gas reductions, implement climate adaptation plans, improve quality of life, and move toward a low-carbon society, reducing environmental impact and loss of natural resources caused by climate change.

OPERATION

Net zero & smart city initiatives

NIDA is committed to driving towards Net Zero Emissions by 2027 through environmental policies and energy conservation. The “NIDA Smart City” project, focusing on smart energy, serves as the primary mechanism for reducing greenhouse gas emissions across all dimensions. To advance this vision, NIDA signed a Memorandum of Understanding (MOU) with Sanken Setsubi Kogyo Co., Ltd., a leading Japanese engineering company. This collaboration focuses on the development of education, research, and the exchange of knowledge and technology to produce graduates with advanced skills and innovative capabilities that meet sustainable development needs. The partnership with Sanken is therefore a key step in strengthening technological and academic capacity and underscores NIDA’s role as a leading educational institution that creates a sustainable future.

NIDA has actively promoted the use of renewable energy through its Net Zero Emissions policy by encouraging the use of electric vehicles (EVs) among both students and staff, in line with the national 30@30 policy for promoting electric vehicles in the country.