

**6** CLEAN WATER  
AND SANITATION



# Implement Sustainable Water & Wastewater Management



## OVERVIEW

NIDA deeply understands the significance of managing water resource sustainably and establishing networks with communities and organizations to promote environmental awareness for a sustainable society. The institute therefore endeavored to achieve this aim via environmental management research and education as well as hands-on learning experiences to enhance our understanding of practical environmental management.

## RESEARCH

### Building sustainable communities through the “Cycle of Faith” approach

NIDA's notable research, “Guidelines for Sustainable Development of Thai Communities under the Sufficiency Economy Philosophy” by Assoc. Prof. Dr. Nareenoot Damrongchai, employed qualitative methods—including in-depth interviews and both participatory and non-participatory observations—with three successful communities: Dong Khee Lek Community in Prachinburi Province, Phu Tham Phu Kratae Community in Khon Kaen Province, and Ban Lim Thong Community in Buriram Province.

The findings revealed that a “Cycle of Faith” serves as the foundation for processes leading to sustainable development. Four key elements drive successful community development: (1) strong and capable leadership, (2) appropriate problem-solving and development approaches, (3) effective communication for development, and (4) commitment to sustainable resource management. The study highlights the need for community awareness of local issues, transforming “knowledge” gained through learning into practice based on community values—fostering the “faith” that continuously sustains community-driven development.



## Circular economy research & collaboration in the Lancang-Mekong Region

Additionally, NIDA faculty members—Assoc. Prof. Dr. Pakpong Pochanart, Prof. Dr. Wisakha Poochinda, and Assoc. Prof. Dr. Aweewan Panyagometh—collaborated on the “Circular Economy (CE) Capability Building in the Lancang-Mekong Region: Product Verification of Plastic Packaging in Supply Chains” research project, implemented by the Management System Certification Institute (MASCI). The project received the “Project with Outstanding Pragmatic and Result-Oriented Approach” award from the Mekong-Lancang Cooperation Special Fund.

<https://nida.ac.th/nida-circular-economy-award-mlc/>

## TEACHING & LEARNING

### Bridging theory & practice in environmental & sustainable education

As part of its core academic mission, NIDA—through the School of Environmental Development Administration prepares graduates equipped with both theoretical and practical skills to address social and environmental issues in an integrated manner. The program produces sustainability-oriented administrators, entrepreneurs, and professionals who seek to advance knowledge and management skills in sustainability.

Hence, on November 15, 2024, students from the Environmental Management Program visited the EGAT Learning Center to study Thailand's energy management systems and explored community environmental management at Rewadee Zone 2, Nonthaburi Province. These visits provided students with concrete, real-world experiences beneficial for their future professional practice.

<https://nida.ac.th/nida-environmental-management-study-visit>

## COMMUNITY ENGAGEMENT

### Seminar on raising awareness of water value

Doctoral students (Cohort 20) from the School of Environmental Development Administration organized a seminar titled “Apologizing to Mother Ganges through PES,” discussing how water—a vital resource for life and livelihoods—should be valued and compensated through payment for ecosystem services (PES). seek to advance knowledge and management skills in sustainability.

## OPERATION

### Promoting on-campus water quality & use management

NIDA promotes water conservation among faculty, staff, and students while cultivating eco-friendly habits. The campus provides free, safe drinking water on every floor and in all buildings, ensuring access to hygienic water for students, staff, and visitors alike.

NIDA also improves water quality and treats wastewater before releasing it into the Phatthanathara Water Park Pond. Each building has a closed-aeration wastewater treatment system and a centralized biological rotating-disc treatment unit. The treated water is released into the pond, which is aerated using solar-powered paddle wheels (Solar PV) to increase oxygen levels, supporting a balanced ecosystem of fish, frogs, and turtles. The pond has an overflow pipe connected to a pumping station that discharges water into Khlong Saen Saeb.

