



# Protect, Restore and Promote the Sustainable Use of Terrestrial Ecosystems

**15** LIFE  
ON LAND





## OVERVIEW

NIDA emphasizes sustainable management of terrestrial ecosystems through diverse research initiatives. The institute also offers a master's degree program with courses related to the protection, restoration, and sustainable use of terrestrial ecosystems. Additionally, the institute focuses on developing green spaces by planting trees and raising awareness among local youth on the importance of protecting, restoring, and supporting sustainable use of terrestrial ecosystems.

## RESEARCH / FUNDING

### Protection, restoration & sustainable use of terrestrial ecosystems

NIDA values research related to the sustainable use of terrestrial ecosystems, with faculty members actively engaging in projects supported by various funding bodies. Examples include studies such as "Applying Synchrotron Radiation-Based Attenuated Total Reflection-Fourier Transform Infrared to Chemically Characterize Organic Functional Groups in Terrestrial Soils of King George Island, Antarctica" and "Development of Land and Soil Resource Indicators for Sustainable Development".

## POLICY

### Developing land and soil resource indicators for sustainable development

This project, funded by the National Land Policy Committee, with a budget of 4,850,000 THB, aims to create comprehensive indicators on land and soil resource utilization. It marks the first initiative of its kind in Thailand, providing a benchmark for all sectors to work towards sustainable development goals. These indicators help the National Land Policy Committee and other relevant agencies to assess policies on land and soil resource utilization. This project directly addresses land allocation for the landless, reduces inequalities in land use, developing sustainable urban and rural land, and managing forest and biodiversity, and linking to terrestrial ecosystem restoration. The indicators comprise two dimensions: sustainability of land use and sustainability of soil resources, categorized into 7 pillars and 20 indicators.

## COMMUNITY OUTREACH

### Green space development

NIDA's School of Environmental Development Administration initiated the "Green Space Expansion and Landscape Improvement" project on Thai Environment Day, a collaborative effort involving faculty, students, staff, and local communities around NIDA's Sikhio campus in Nakhon Ratchasima Province. Activities included planting cassia fistula trees to expand green areas, landscape improvement, and a special seminar on "Sustainable Environmental Management." Besides enhancing green spaces, this initiative promoted cooperation and strengthened relationships between faculty, staff, students, and the surrounding community, driving activities in line with the national environmental policy.



Moreover, the Foundation for Sustainable Cities and Communities, NIDA Alumni Association under Royal Patronage, along with civil society and residents in Ubon Ratchathani Province, worked together to address flood and drought issues through sustainable tree planting and forest expansion. They exchanged knowledge on turning arid land to fertility, shared effective forest planting techniques, and provided insights into the benefits, challenges, and applications of underground water banks to solve flooding and drought problems.



## COMMUNITY OUTREACH

### Raising awareness for sustainable terrestrial ecosystem management

NIDA aims to instill a sense of responsibility in protecting, restoring, and supporting sustainable use of terrestrial ecosystems among youth and local communities through workshops and seminars. For instance, they raised awareness on the Bio-Circular-Green (BCG) economy concept among students of Pramandanijjanukroah School in Bangkapi District, engaging elementary students in activities like making bio-extracts and multipurpose cleaning products.

## TEACHING & LEARNING

### Courses on protecting, restoring, and supporting sustainable terrestrial ecosystems

NIDA's Master of Science in Environmental Management program offers courses related to the sustainable management of terrestrial ecosystems, including:

1. Natural Resource and Biodiversity Management: This course explores the importance of biodiversity resources to national and global economies and security, causes and issues of biodiversity loss, future trends in biodiversity resource management, and sustainable conservation and utilization.
2. Soil, Water, Marine, and Coastal Resource Management: This course covers basic knowledge of soil and water resources, their interactions, management for agriculture, degradation, conservation, restoration, and sustainable practices. It also addresses policies, measures, and laws related to efficient and sustainable management of soil and water resources.

