



Center for Natural Resources and Environmental Management (NREM Center)

Mae Fah Luang University Chiang Rai, Thailand

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Objectives

- Contribute to expanded capacity to address GMS environmental and natural resources issues through short courses, training, graduate degree programs, workshops, and research initiatives.
- Conduct innovative, in-depth research on regional and trans-boundary issues affecting GMS countries, collaborating extensively with other universities and research institutes in the GMS and beyond.
- Contribute to sustainable self-reliant development in the GMS in cooperation with concerned international, regional, and national institutions, especially the Asian Development Bank (ADB) that has been facilitating regional integration through initiatives ranging from infrastructure and economic corridors to core environmental programs across the region.

Golden Triangle

MYANMAR

LAOS

Mekong River

THAILAND

Activities



Graduate Studies in Natural Resources and Environmental Management

MFU's NREM-Center is the designated hub within the Greater Mekong Sub-region (GMS) for education and human capacity building on natural resources and environmental management. Master and Doctoral degree programs are offered for graduate students from all six GMS countries: Cambodia, China, Laos, Thailand and Vietnam, plus others. Teaching and research emphasizes issues affecting GMS countries. Instruction is in English. Research conducted at NREM covers the whole range of ecological security and sustainable development challenges.

The following courses are offered, among others:

- Dynamics of Natural Resources and Environmental Systems
- Sustainable Economic Development and Conservation
- Ecosystem Form and Function, and Biodiversity Conservation
- Socio-economic and Environmental Impact Assessment and Risk Management
- Regulations, Policy and Planning for Natural Resources and Environment
- Research Methodology for Natural Resources and Environmental

Course work and related field research focus on interdisciplinary approaches to effective implementation of environmental management programs. Throughout, emphasis is placed on innovative, practical policy development, monitoring and management relevant to meeting the actual challenges facing the GMS countries today. Students are drawn from universities, government agencies, regional and international organizations and private corporations concerned with environmental and natural resources management in the GMS and beyond. Students start their coursework in either on these graduate programs, including application forms and procedures, is available from the MFU website <www.mfu.ac.th>

Research Projects

The following faculty and student research projects are currently underway or planned at the NREM Center:

- Environmental changes related to natural resources and sustainable development through analysis of biodiversity corridor, trans-boundary issues, land use, eco-health, and community-based eco-security;
- Using remote sensing to prevent monitor, prepare and mitigate environmental disaster risks related to climate change;
- Ecological security construction of Thai-Laos communities and adaptive capacity assessment to face climate change successfully.
- Producing biochar from waste biomass at large- hydropower projects in Laos as a way to reduce GHG emissions, sequester carbon improve soil conditions and increase agricultural yields.
- Assessment of causes impacts and adaptations to trans-boundary drought: case study of the Mekong River in Chiang Rai, Thailand.
- Restoration of water resources base and sustainable management by community participation in the Fang Water Basin, Thailand.
- Effective programs to develop community environmental leadership.
- Ecological security of the Greater Mekong Sub region under threats from emerging infectious diseases and potentials.
- Impacts of land use changes on soil and water resources and social-economics characteristics
- Developing effective solutions to GMS trans-boundary issues affecting water, biodiversity, air quality/smoke and other environmental challenges.
- Comprehensive design and effective implementation of environmental and natural resources policies

Professional Teaching and Research Staff

To successfully conduct its graduate programs and research projects, the NREM Center has assembled a unique international interdisciplinary staff of scientists knowledgeable and experienced in a wide range of environmental and natural resources specialties. Some of the following professionals are full time in the NREM program; others serve part-time as Adjunct Professor. Their expertise covers the full set of GMS policy challenges.

Dr. David Morell (USA, Ph.D., Princeton University – Environmental Policy)– Specialist in environmental and energy policy development and implementation

Dr. Gilbert Rochon (USA, PhD, MIT—Urban Planning)– Specialist in remote sensing and GIS

Dr. Hansa Sanguannoi (Thailand, Ph.D., University of California, Berkeley—Physiology) - Specialist in Solid/hazardous Waste Management, energy and environmental policy development and implementation [NREM Center Director]

Dr. Jiragorn Gajasen (Thailand., Ph.D., University of Georgia—Ecology) Specialist in ecosystems analysis

Dr. Nguyen Luong Bach (Vietnam, Ph.D., Asian Institute of Technology—Systems Modeling, Industrial Engineering and Management) – Specialist in systems modeling and policy evaluation and analysis

Dr. Philip Nicholls (AUS, Ph.D., University of Adelaide) -- Specialist in Environmental Studies, Laws, Humanity and Social Sciences

Dr. Richard Frankel – (USA, Ph.D., University of California, Berkeley—Engineering) Specialist in auditing and assessment of industrial and infrastructure projects and industrial cleaner production

Dr. Suree Bhumibhamon – (Thailand, Ph.D., University of Finland– Forestry) Specialist in tropical forestry and community forest management