

Parallel Sessions

Session V: Climate adaptation and mitigation in Agriculture-Forest-land use sector (AFOLU): Implication of Nature-based Solutions (NbS) (Room: MR 107)

Chairperson: Assoc. Prof. Dr. Sirintornthep Towprayoon and Assoc. Prof. Dr. Amnat Chidthaisong

Achieving the goal of carbon neutrality and net-zero greenhouse gas emissions will necessarily need significant contribution from AFOLU sector. Mitigation or land-based climate change mitigation are a variety of land management or demand management practices that reduce GHG emissions and/or enhance carbon sequestration within the land system (i.e., in forests, wetlands, grasslands, croplands and pasturelands). If implemented with benefits to human well-being and biodiversity, land-based mitigation measures are often referred to as nature-based solutions (NbS) and/or natural climate solutions (IPCC AR6 WG3, 2021). The International Union for the Conservation of Nature defines Nature-Based Solutions (NbS) as “actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits” (Hilmi, Sutherland et al., 2023). On the other hand, the European Commission (2020) defines NbS as “Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social, and economic benefits and help build resilience”.

AFOLU is key source of greenhouse gas emissions in most of ASEAN countries. Greenhouse gas mitigation in AFOLU sector, however, need serious consideration on the issues of benefits to well-beings of both human and ecosystem. Yet, there are still large knowledge gaps to the effective integration of NbS into mainstream of development. This is in part due to several factors including the fact that NbS is still evolving, and the issues of implementation boundary, success indicator, monitoring method, and evaluation of benefits to both climate mitigation & adaptation and sustainable development are yet to be developed and implemented.

This Session will provide a venue for sharing knowledge, examples, experiences and exchanges of views from AFOLU experts that leads to synchronizing mitigation with Nbs. The provisional topics and speaker are as follows.

- 13.30-13.55 **Greenhouse gas mitigation in rice sector of Thailand: Current policy, activity, the roles of NbS and future outlook**
by Dr. Chitnucha Buddhaboon, Rice Department, Thailand
- 13.55-14.20 **Roles of AFOLU in achieving Net-Zero**
by Prof. Dr. Poonpipope Kasemsap, Kasetsart University, Thailand
- 14.20 – 14.45 **Rice cultivation in ASEAN countries: Greenhouse gas emission reduction potentials for carbon credits**
by Dr. Rujirat Wongchandaeng, International Rice Research Institute (IRRI), Thailand
- 14.45 – 15.10 **The Thai Rice project: the first GCF project to focus solely on transforming rice production systems to sustainability with a focus on circular economy**
by Dr. Tobias Breunin, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
- 15.10-15.35 **Application of NbS in water management in local community in Thailand**
by Asst. Prof. Dr. Phaothai Sin-ampol, CMU, NRCT project grant holder, Thailand