About TREPSEA 2021

In the last half century, Asia has experienced the fastest economic growth and rapid increase of human prosperity, compared to other continents. However, ecological risks due to significant land use changes, global environmental change and climate change-related disasters have also occurred rapidly in Asia. The global deterioration of soils and landscape poses a significant threat to poverty reduction, sustainable food production, and climate change adaptation and mitigation. A recent study by the International Food Policy Research Institute (IFPRI) has estimated that the annual cost of land degradation due to “land use and cover change” (LUCC) and the use of land-degrading management practices on static crop and grazing land is about $300 billion. This does not include the costs related to deterioration of ecosystem services, which may increase the estimates significantly. However, global hunger also increases, reaching 815 million people in 2017, where about 2 billion people suffer from micronutrient-deficiencies.

In Indonesia, agriculture grows at 3.87 percent per year, which is not very low, although it does not contribute much to poverty reduction and job creation in the country. The poverty level in September 2019 was 24.79 (9.22 percent of total population), where the majority (14.93 million or 12.60 percent) of them are living in rural area, and the rest 9.86 million (6.56 percent) are living in urban area. Income inequality in Indonesia is considered high, where the Gini coefficient generally has increased in the past decade or so, from 0.32 in 1998 to 0.38 in 2007, increasing to 0.41 in 2012 and started to decrease in recent years to 0.382 in September of 2019 (BPS, 15 January 2020). The hunger level in Indonesia has also decreased significantly from 44.1 million in 2004-2006 to 22.0 million in 2016-2018. Interestingly, the hunger level in urban area is 8.2 percent of total population, whereas that in rural area is 7.57 percent. The level of stunting among children has also decreased from 32.9 percent in 2013 to 29.9 percent in 2018, whereas the level of anemia among pregnant women has increased from 37.1 percent in 2013 to 48.9 percent in 2018.

Higher ecological risks and more severe climate change-related disasters have more serious consequences on food and nutritional security in Indonesia and other parts of Asia. Hunger and malnutrition have multiple causes, and in facts many of these challenges transcend national borders. Thus, sustainable, integrated and trans-disciplinary innovative solutions to such problems require a more holistic approach in formulating the development strategies to diversify agricultural and food production, increase productivity, hence generating income and employment. Tran-disciplinary approach in mitigating and adapting the climate change related disaster are also required for more sustainable development strategies, coupled with better strategies for disaster risk reduction and management, workable and effective programs to sustainable development and environmental conservation, and better access to food and improved nutritional security.

Every other year, the International Conference of Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA) is conducted in several cities in Indonesia. The first TREPSEA was conducted in Makassar in 2014, the second was in Bandung in 2016, and the third was in Gorontalo in 2018. The fourth TREPSEA Conference will be conducted as an online conference on September 16-18, 2021. The purpose of International Conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA) is to conduct integrative research of interactions between natural environment and human-social systems in Southeast Asia to solve the environmental problems in Southeast Asia. Its scope thus includes topics of sustainable development, agricultural and resource economics, economics, social science, environmental science, engineering, medicine, sociology, education, etc. Transdisciplinary Research (TDR) is defined as research efforts conducted by investigators from different disciplines and non-academic participants working jointly to create new conceptual, theoretical, methodological, and transnational innovations. Related stakeholders include academics, governments, development organizations, business and industries, sponsoring institutions, civil society organizations, the media, etc.

The theme of 4th International Conference of TREPSEA will address important themes of “Managing Ecological Risks and Natural Disasters in Southeast Asia: Challenges for Food Security, Public Health, and Economic Welfare”. The conference will serve as an arena for stimulating academic exercise and policy dialogues on trans-disciplinary dimensions of environmental problems in Southeast Asia, primarily on the themes of managing ecological risk, disaster mitigation, environmental conservation, food and nutritional security, social and economic welfare, and other related issues in sustainable development in general. The 4th International Conference of TREPSEA will be held as an online conference on September 16-18 of 2021.
Objectives

The objectives of the 4th International Conference of TREPSEA will address important themes of “Managing Ecological Risks and Natural Disasters in Southeast Asia: Challenges for Food Security, Public Health, and Economic Welfare” are as follows:

1. to stimulate academic exercise and policy dialogues on trans-disciplinary dimensions of environmental problems in Southeast Asia;

2. to encourage research dimensions on environmental problems, primarily on the themes of managing ecological risk, disaster mitigation, environmental conservation, food and nutritional security, and

3. to update some research progress and new knowledge on managing ecological risk, disaster mitigation, environmental conservation, food and nutritional security, and other related issues in sustainable development in general.

Topics of TREPSEA 2021

“Managing Ecological Risks and Natural Disasters in Southeast Asia: Challenges for Food Security, Public Health, and Economic Welfare” as the main theme of the conference and sub-themes are as follows:

1. Environmental Issues and Public Health
2. Ecological Risks and Food Security
3. Disaster Risks Reduction (DRR) and Disaster Management (DM)
4. Sustainable Agriculture and Equitable Development
5. Resources Management and Global Value Chain
6. Legal Issues and Business Ethics in Resource Management
7. Heavy Metal Problems and Renewable Energy
8. Urban Management and Community Development
9. Sustainable Development Goals (SDGs)

TREPSEA 2021 Organizers

TREPSEA 2021 International Conference is organized by
- University of Lampung (UNILA) as the host organization,

and co-organized by
- Research Institute for Humanity and Nature (RIHN),
- Bandung Institute of Technology (ITB),
- Gorontalo State University (UNG) and
- SRIREP Project (RIHN).

Supporting Organization / Institution

The conference is supported by
- IAGI (Ikatan Ahli Geologi Indonesia) and
- Future Earth.


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