

【Grant-in-Aid for Scientific Research(S)】

Integrated Science and Innovative Science (New multidisciplinary fields)



Title of Project : Multi-disciplinary Study of Southeast Asian Planted Forests and Local Societies

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Research Area : Area Studies

Keyword : Biomass Society, Plantation, Multi-disciplinary Field Science

【Purpose and Background of the Research】

The equatorial zone has accumulated the highest concentration of biomass due to greater solar radiation energy and heavier rainfall. The region under study has also been a most fertile ground for resource commodification. Such a tropical zone has gone through fast-paced metamorphoses in the past several decades with the changing status of biomass from jungle produce, cultivated rubber, timber, to oil palm and acacia mangium as potential energy sources in the post-petroleum era.

The fundamental transformation of biomass is a common feature of societies of insular Southeast Asia. The landscape of rainforest-cum-plantation fields offers an analytical locale to examine a biomass shift under the organizational power of the state and structural power of capitalism, with new projects of time-space compression, where deforestation, plantation, and reforestation are simultaneously at work, with green agendas for the global energy crisis and climate change. The formula for co-existence of *planted forest* (acacia mangium and oil palm plantation) with the sound socio-economic base for the survival of local communities can only be figured out by cross-disciplinary studies composed of social and natural sciences.

【Research Methods】

The proposed project is a multi-sited, multi-disciplinary empirical study, a strategic combination of field sciences. To understand the transformation of biomass society in the tropics, the research seeks to examine the articulation points between social systems and natural systems. Both social and natural sciences have long engaged in the study of connections. From community, region, nation-state, to empire --- or from patch to landscape, scaling and rescaling the units of analysis in time and space to comprehend how constituent parts of a system are related, and distant places linked. Such engagements in the study and theorization of interconnections, however, have usually been pursued without connecting their thoughts to other attempts, and a common ground for the confluence between geosphere, biosphere and human habitat has not been fully investigated. While the science of nature and technology deals with material flows such as water, gases, and minerals through physical and biological processes, social science looks into commodity chains and levels of socio-cultural, economic, and political integrations and disintegrations.

The development of Bornean plantation field is morally endorsed and financially backed up by the international community in search of a sustainable development path for human

society. Planted forests of oil palm and acacia mangium as a potential energy source are regarded as good for carbon emissions, and people on Wall Street produce products for the securitization of tropical biomass under the newly proposed REDD (*Reducing Emissions from Deforestation and Degradation*) initiative. The threshold between nature and non-nature is now being arbitrarily manipulated by capitalists, the states, and international organizations.

Articulating the field study of local peoples, cultures, and landscapes, namely anthropology, geography, history, political economy, environmental economics, plant and animal ecology, hydrology, soil science, area informatics, and forest ecology, a research team is organized for examining the multi-dimensional driving forces of change in human/non-human interactions in a heterogeneous landscape consisting of oil/acacia plantations, primary and secondary forests, and swidden fields.

【Expected Research Achievements and Scientific Significance】

To examine whether or not societies located along the equator can find an alternative path toward their own sustainability needs further investigation. The transformation of Southeast Asian biomass society may be a common feature among the equatorial zones of the world. Insular Southeast Asia will serve as an important locale where it may be possible to combine historical research and fieldwork with other sciences in order to examine whether or not the resilience of local communities of mankind, fauna, and flora is yet to find another strategy in response to the emergent geo-political conditions that bring qualitative and quantitative transformations.

【Publications Relevant to the Project】

Ishikawa, Noboru. 2010. *Between Frontiers: Nation and Identity in a Southeast Asian Borderland*. Athens/Singapore/Copenhagen: Ohio University Press /National University of Singapore Press/NIAS Press.

Ishikawa, Noboru (ed.) 2010. *Flows and Movements in Southeast Asia: New Approaches to Transnationalism*. Kyoto University Press (2nd ed.).

Ishikawa, Noboru Denyse Snelder, and Wil de Jong (eds.) 2010 *Transborder Governance of Forests, Rivers and Seas*, London: Earthscan.

【Term of Project】 FY2010-2014

【Budget Allocation】 149, 800 Thousand Yen

【Homepage Address and Other Contact Information】

A website linked to the following URL will be set up: <http://www.cseas.kyoto-u.ac.jp/>