

## A general model of Ecosystem Networks under Human Activity

\*石井 励一郎<sup>1</sup>

\*Reiichiro Ishii<sup>1</sup>

1. 総合地球環境学研究所

1. Research Institute for Humanity and Nature

Most ecosystems on the planet have become seriously degraded as a result of human activities. The concept of an “Ecosystem Network” to cope with the complexity of ecosystems, human societies and the interactions between them. From results of a project called “Collapse and Restoration of Ecosystem Networks under Human Activity.” (Ishii et al. 2014). Observation on The relationship between various ecosystems and their users (including local people and enterprises) tells that there is qualitative differences between the Ecosystem Networks among land ecosystems, e.g., between grasslands and tropical forests. I made a simple theoretical model to explain these difference from the ecological characteristics of the ecosystems. This gives insights in the sustainability of ecological resources and the associated environmental problems from perspective of the structure of the Ecosystem Network. The analysis also revealed clear differences in how the network should be restored for mitigation of the problems. Ecosystem degradation is ubiquitous today, and a solution is needed urgently. The concept of the Ecosystem Network employed in this project can be applied to other problems associated with managing ecological resources.

キーワード：生態系ネットワーク、生態資源の持続性

Keywords: Ecosystem network, Sustainability of ecological resources