

Outline of Theme-IV: Integrated Analysis of Social and Ecological Systems

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The most serious environmental problem in Africa is high population pressure and aggravation of ecosystem caused by the excessive land use. Most of cultivation crops in (SAT) semi arid tropics live under the severe environmental condition. Therefore, many of them cannot be alive when desiccation and a high temperature advance. After 1960's, a drought disaster as a result of desiccation occurred in many of African countries chronically. The cultivation crops seriously had decreased by this disaster. It caused serious lack of food and starvation and also serious social problem in Africa. The frequent drought disasters after 1960's were the same time as the first oil crisis. Mentioned two historical events brought bad influences for African countries' economical and political societies. Since these years, the total precipitation decreased year by year. In many countries, the famine became a chronic serious problem. Many countries became an aid recipient of food at the same time. Furthermore, the protracted famine caused social uneasiness and government overturns had been occurred in some of these countries.

From the mentioned background, theme IV decided some of sub-themes in order to understand an environmental (environment in a wide meaning to include ecological system as well as a social system) change to surround drought. Actually we challenge to know the environmental change with different spatial and time scales and to integrate various kinds of environmental information with different viewpoints. In theme IV, we focus on the time from 1960's to the present and on 1) Drought mechanism and its influences as social problems, 2) Food security and social system for poverty and the starvation, 3) Ecological system change, 4) Integration of social and ecological system with regional scale as our proposes.

Following are the sub-theme's descriptions and result of pre-research and analysis.