

平成25年度共同研究の概要（成果報告書抜粋）

研究種目：一般研究

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研究題目（和文）：

乾燥地の河川流域における住民の幸福度と気象・水文・植物生態変動の関係：アフリカナイル川流域の事例

研究概要（英文）：

The Nile and Recent Changes in its Basin Environment: Evidences from Literature
Introduction: Characteristics of the Nile

This fiscal year, the Nile and recent changes in its Basin environment were analyzed from literature and census data survey, focusing environment and development.

The aim of this analysis was to provide a summary of the many problems that plague the Nile Delta today and the complex interrelationship they share. At this stage, we tentatively put forth the proposal of ‘resource sharing’ (following Wondwossen). However, this would not be possible without a comprehensive knowledge base of how the interlinkages in the system work, and what spatial and temporal effects appear on the system. However, the sound ecological, economical, political and equitable utilization of the fragile Nile basin resources is a difficult task. This is primarily because the asymmetries of the Nile basin are manifold (Allan, 2009). The environmental history of the Nile basin tells us that the first half of the Holocene was wetter than today and drier conditions came from about 500 BP. Sediment records from Lake Albert and Nile delta reveals severe droughts 4200 years BP and great deforestation in the Ethiopian highlands. This change in climatic shift has also changed (increased) land degradation in the more fragile Nile system, and the change is exacerbated by the ongoing spread of agriculture and industrialization. The Nile environment is closely related to the ENSO effects as well. Years of low flow prevails when SOI is strongly negative. As more than 300 million people will depend upon the Nile for their livelihoods by 2020, it is very important that we understand the land use and its changes with reference to with the overall environmental history of the Nile Basin (Williams, 2009) and plot future consequences by taking the broader spatial and temporal scales. It is in this sense that it is important to consider ecological demand of water in the Nile basin and with an integrative discourse that is not based solely on the budgetary provision of water. The need is to incorporate ecosystem flows in the basin into any future plan of development by taking into account the fullest possible range of political-economic and ecological connotations.

A part of research achievement has been submitted to a publication of 'Rivers and Human Societies' as

"Vegetation Change and Impact on Local Society due to Fluctuation in Rainfall in the Midstream of the Nile River."

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