

Subproject 3 Vegetation, climate, fire dynamics and human impacts in Java and southern Kalimantan inferred from pollen, spore and charcoal deposits in the Java Sea during the Late Holocene The main objective of this subproject is to study environmental dynamics (vegetation, climate, fire) and human activities (slash and burn, deforestation, land use) inferred from deposits in the Java Sea from river catchments along the transect Java (very strong human impacts) – Kalimantan (low human impacts) during the late Holocene. As a result we want to understand natural and anthropogenic induced environmental change and the ecological response in a little disturbed environment (Kalimantan) and stronger disturbed environment (Java). Further in studying a set of surface samples we want to know how strong and how far signals from the islands of environmental changes are transported into the Java Sea. The results of this project, which can be seen as a case study, will help us understand the nature of past, modern and possible future environmental changes. Innovative multi-proxy studies (pollen, spores, charcoal and other proxies of the subprojects 5.1 and 5.2) will be applied on the same sediments samples of the Java Sea to reconstruct past environmental changes as an important contribution to the understanding of modern and future global changes in respect to the role of the human impact and ecological responses.

Participants Prof. Dr. Hermann Behling, Department of Palynology and Climate Dynamics, University of Göttingen Dr. Haryadi Permana, Earth Dynamics and Geological Disaster Division Research Center for Geotechnology (LIPI), Bandung