

Japan Long-Term Ecological Research Network (JaLTER)

Hiroyuki Muraoka^{1*}

¹Gifu University, JaLTER

JaLTER was established in November 2006 to provide scientific knowledge which contributes to conservation, advancement and sustainability of environment, ecosystem services, productivity and biodiversity for a society by conducting long-term and interdisciplinary research in ecological science including human dimensions. JaLTER is a formal member network of the International Long-Term Ecological Research Network (ILTER Network). JaLTER contains 56 sites including forests, grasslands, cropland, freshwater and marine. The goal of JaLTER are (1) Creation of general knowledge based on multidisciplinary long-term and large-scale research, (2) Creation of well-designed database to exchange and share original data to support scientific communities, general public people and policy makers, and to find better solutions for critical ecological and environmental problems, (3) Promotion of education regarding long-term and large-scale changes of ecosystem and environment. (4) Facilitation of collaboration and coordination among scientists of long-term ecological researches. To achieve these goals, we are promoting research theme such as (a) Response and feedback of biodiversity and ecosystem functioning under the climate changes, (b) Hydro-biogeochemical processes and ecosystem interaction from terrestrial to marine ecosystem, (c) Development and establishment of ecosystem monitoring network and techniques with multiple scales and dimensions.

In addition to the site-network based research on ecological theme, JaLTER has been promoting to link ecosystem research networks and institutes, so called "J-community", by JaLTER, JapanFlux (CO₂ flux network), JAXA (Japan Aero-Space Agency) and JAMSTEC (Japan Agency for Marine-Earth Science and Technology). The J-community was established to meet multidisciplinary research on ecosystem structure, function and biodiversity under climate change. As part of this activity, a joint research project to develop earth observation algorithm by a new earth observation satellite "GCOM-C" has been conducted since 2009. In addition, recently, new projects were established to clarify the relationship between biodiversity and ecosystem functions, and to evaluate their vulnerability to environmental changes.

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