

## Opening Address

**Nobuyoshi Maeno**  
Director General, JIRCAS

Distinguished Guests, Participants, Ladies and Gentlemen,

On behalf of the Symposium Organizing Committee, I have the honor and privilege to open the International Symposium on "GIS Applications for Agro-Environmental Issues in Developing Regions", which is organized by the Japan International Research Center for Agricultural Sciences (JIRCAS), Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan, with the cooperation of the International Center for Tropical Agriculture (CIAT) and national institutes affiliated to MAFF. Above all, I would like to extend my cordial welcome to all the guests and participants, in particular to those who came to Japan from abroad. JIRCAS was established in October 1993 as a result of the reorganization of the former Tropical Agriculture Research Center (TARC) to further promote research for the development of agricultural technology to cope with the changes in the world situation.

The research activities of JIRCAS encompass all the fields of agriculture, forestry and fisheries. Needless to say, this expansion of the research fields could not have been achieved without the strong support of the institutes affiliated with the Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan. The research activities of JIRCAS are not limited to collaboration with developing countries in the tropics and subtropics but cover wider geographic regions such as cool areas and temperate zones. One of the major activities of JIRCAS is to dispatch research scientists to overseas research institutions located in developing countries to conduct collaborative research work on various subjects relating to agriculture, forestry and fisheries. In addition, to support these activities, JIRCAS consolidated the structure of research at the Center in Tsukuba and at the Okinawa Subtropical Station of the Center by promoting advanced studies relating to biological fields, computer simulation of selected economic and environmental processes relevant to the developing countries, postharvest technology, etc.

Another important activity of JIRCAS is to hold international symposia for exchanging information and ideas among different countries and scientists. These symposia have been held each year, covering various subjects of agricultural research. The present symposium is the sixth symposium organized by JIRCAS and it will provide the opportunity to discuss various aspects relating to the applications of GIS technology for agro-environmental issues in developing regions. Indeed, GIS technology which involves complex computer-based processing of geo-referenced and attribute data obtained from various sources, including remote sensing, provides integrated and updated spatial and temporal information for the inventory and monitoring of environmental resources which are closely related to agriculture, forestry and fisheries activities. For example, GIS technology leads to the production of maps or images describing land suitability for the cultivation of particular crops based on soil classification, spatial clustering of certain phenomena or changes in the vegetation cover, groundwater level as well as the processes of soil erosion, salinity, crop conditions in agricultural fields, grasslands and forests while in

the case of fisheries, spatial processes of fish populations including migrations could be better understood and assessment of geo-referenced fisheries resources could be better improved. These inventory and monitoring activities combined with more conventional techniques are important for rational management and judicious utilization of environmental resources for the promotion of sustainable agriculture, forestry and fisheries, in particular in the developing regions where population pressure is frequently associated with intensive activities in these fields which become incompatible with the preservation of the environment. To achieve these objectives, international collaboration is essential. In this regard, JIRCAS is currently implementing a program for the application of remote sensing and GIS technology within the framework of the comprehensive research projects carried out in collaboration with researchers from institutes and organizations located in China, Indonesia and Thailand. I am convinced that this symposium offers a unique opportunity to review the studies carried out in this field by JIRCAS and other institutes, evaluate the current status of research and plan for the future.

Thank you.