





# MEMORANDUM OF UNDERSTANDING ON GEO - INFORMATICS TECHNOLOGY APPLICATION FOR SMART AGRICULTURE MANAGEMENT COOPERATION BETWEEN

## THE MINISTRY OF AGRICULTURE AND COOPERATIVES AND

## THE GEO-INFORMATICS AND SPACE TECHNOLOGY DEVELOPMENT AGENCY (PUBLIC ORGANIZATION)

# ATTACHED TO THE MINISTRY OF SCIENCE AND TECHNOLOGY OF THE KINGDOM OF THAILAND

### AND

### HOKKAIDO UNIVERSITY

The Ministry of Agriculture and Cooperatives (MOAC) and the Geo-Informatics and Space Technology Development Agency (Public Organization) (GISTDA) attached to the Ministry of Science and Technology of the Kingdom of Thailand and Hokkaido University (HU) of Japan (hereinafter jointly referred to as the "Three Institutions" and individually as an "Institution") hereby agree to cooperate in the Geo-Informatics Technology Application for Smart Agriculture Management with this Memorandum of Understanding (MOU).

The Three Institutions will endeavor to cooperate on research and other activities in the areas of mutual interest under the following principles:

- 1. To promote cooperation in the areas of common interest that are agreed upon as follows:
  - 1.1. Geo-Informatics Technology Application, namely,
    - a) Development of crop status information using satellite, and
    - b) Development of weather information and support system for farm work;
- 1.2 Smart Agriculture Management by utilizing Geo-Informatics Technology and the development of agriculture big data platform and its application towards value creation;
  - 1.3 Development of Agricultural Mechanization for Smart Agriculture;

- 1.4 Development of Smart Agriculture Technology in the areas of production, plant protection, postharvest and processing, such as smart suite, power assist suite, weeding robot, sprayer robot, multi-robot tractor, robot system by Global Navigation Satellite System (GNSS), technology for keeping of long-time fruit and vegetable freshness, and food processing technology for value-added products;
- 1.5 Demonstration of Robot, namely a robot tractor using GNSS/QZSS (Quasi Zenith Satellite System);
- 1.6 Seminar and Workshop on Geo-Informatics Technology Application for Smart Agriculture Management;
  - 1.7 Other related areas of interest that are mutually agreed upon by the Three Institutions.
- 2. To promote capacity building, the following activities may be carried out by the Three Institutions, depending on the availability of funds that will be provided for the purposes.
  - 2.1 Exchange of experts and researchers, including visiting researchers;
  - 2.2 Joint research and development including exchange of scientific and technical information;
  - 2.3 Short course training;
  - 2.4 On-the-job training;
  - 2.5 Technology demonstration;
- 2.6 Joint organization of conferences, seminar, symposia, exhibitions and other events related to this MOU; and
  - 2.7 Graduate Studies.
- 3. The Three Institutions will discuss the financial obligations of each Institution with regard to each joint programme and may prepare joint programmes that may be submitted to international organizations or any other financial institutions for financial assistance of such programmes. In implementing this MOU, the Three Institutions agree that any international travel expenses, local transportation and other logistical arrangements will be based on mutual discussion of the Three Institutions.
- 4. Each Institution will ensure the protection of intellectual property rights resulting from any activity in pursuance of this MOU. Such intellectual property rights will be protected by the Three Institutions in conformity with their respective national laws and regulations. Intellectual property rights which result from any joint activities pursuant to this MOU will be allocated and governed in accordance with separate agreements to be made on a case by case basis and will be jointly owned by the Three Institutions in accordance with the terms and

conditions to be mutually agreed upon by the Three Institutions. No Institutions will transmit any commercially valuable confidential information obtained in accordance with this MOU which information has been clearly marked as being "confidential" to any third party without prior written consent of the Institution(s) from which such information was received, in accordance with their respective national laws and regulations.

5. The Three Institutions will establish a Joint Committee (JC) in order to jointly develop an action plan and monitor the implementation of the activities under this MOU.

6. The implementation of this MOU will not discriminate on the basis of race, color, national origin, sex, physical disability, age or creed.

7. This MOU will be in effect for three (3) years, starting on the date of signing by the Three Institutions, and may be reviewed, amended or modified in writing by mutual agreement.

8. This MOU may be terminated at any time by mutual consent by giving six (6) months prior written notice to the other two Institutions, in which case termination will take effect upon the expiration of the said period.

9. This MOU does not intend to create any legally binding rights and obligations between the Three Institutions under international law.

Signed in duplicate at Bangkok on the 31<sup>st</sup> July 2018 in the English language. Each Institution will retain one authentic copy.

Ministry of Agriculture and Cooperatives, Thailand

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Permanent Secretary

Hokkaido University, Japan

Toyoham grawa

Toyoharu Nawa

President

Geo-Informatics and Space Technology Development Agency (Public Organization),

Ministry of Science and Technology, Thailand

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**Anond Snidvongs** 

**Executive Director**