

**J-Startup**  
Impact

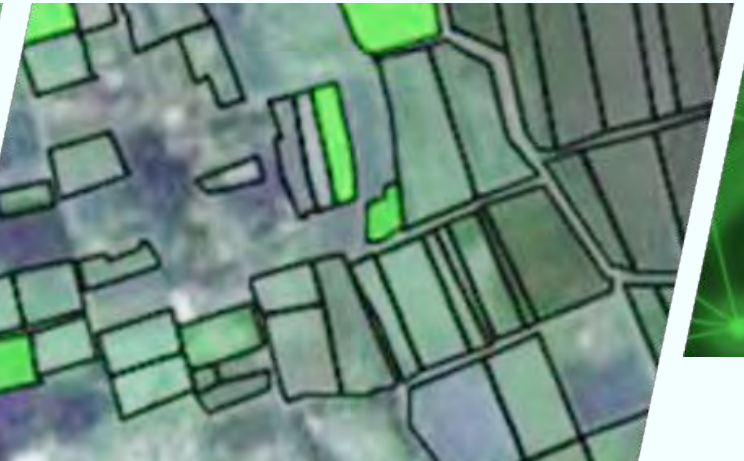


**Sagri**



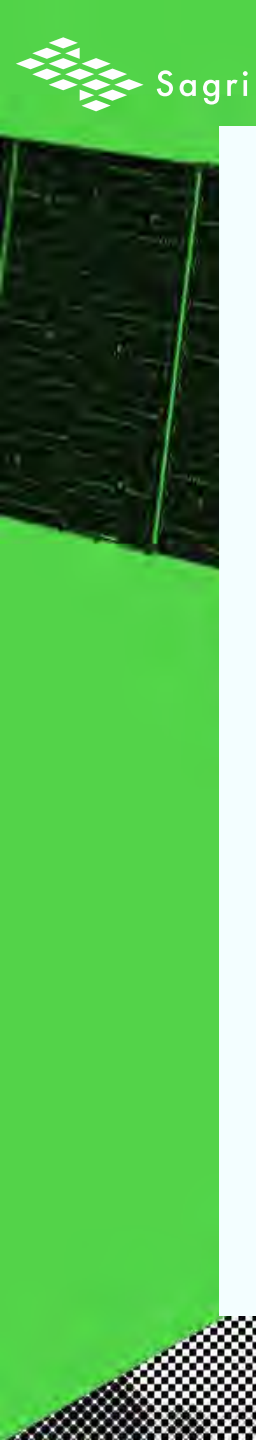
# Grid

# Satellite & AI support farmers



# Satellite

# AI



岐阜大学  
GIFU UNIVERSITY

# Impact startup from Gifu University





# Sagri Co.,Ltd Founder & CEO SHUNSUKE TSUBOI



Innovators  
Under 35  
Japan





Asia-Pacific  
Economic Cooperation

# 2023 APEC Bio-Circular-Green Award

## CERTIFICATE OF AWARD

IS PRESENTED TO:

**Mr. Shunsuke Tsuboi**

**President and CEO, Sagri Co., Ltd.**


Youth Category

**For exceptional leadership in implementing Bio-Circular-Green Economy  
approaches to advance sustainable and inclusive growth**

Given this 14th day of November, San Francisco, California, USA

**Executive Director**  
APEC Secretariat

**Chairperson**  
2024 APEC Senior Official

A farmer wearing a straw hat, a light-colored long-sleeved shirt, green overalls, and gloves is kneeling in a field of tall green grass. A red and yellow lawnmower is positioned next to the farmer. In the background, there are rolling green hills, a few houses, and a clear blue sky.

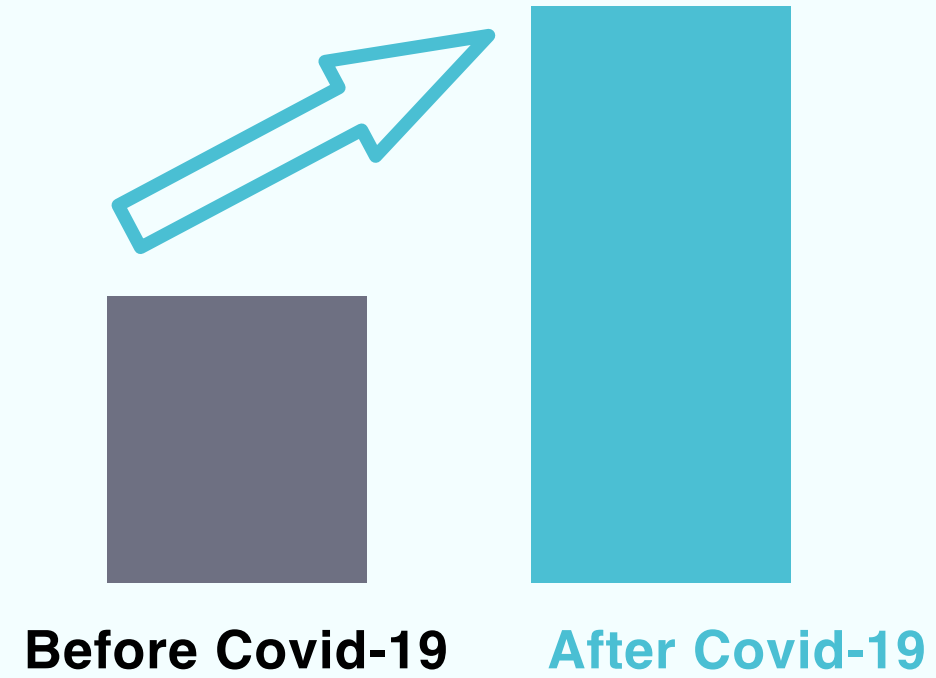
# Agriculture

A close-up photograph of a person's hand holding a small amount of grey, granular fertilizer over a patch of dark brown soil. The background is slightly blurred, showing more soil and a hint of green foliage. A horizontal cyan banner is overlaid across the middle of the image, containing the word 'Fertilizer' in large, bold, black text.

# Fertilizer

# PROBLEM

The price of fertilizer is **Double**







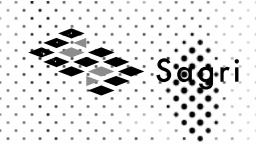
# Soil Condition





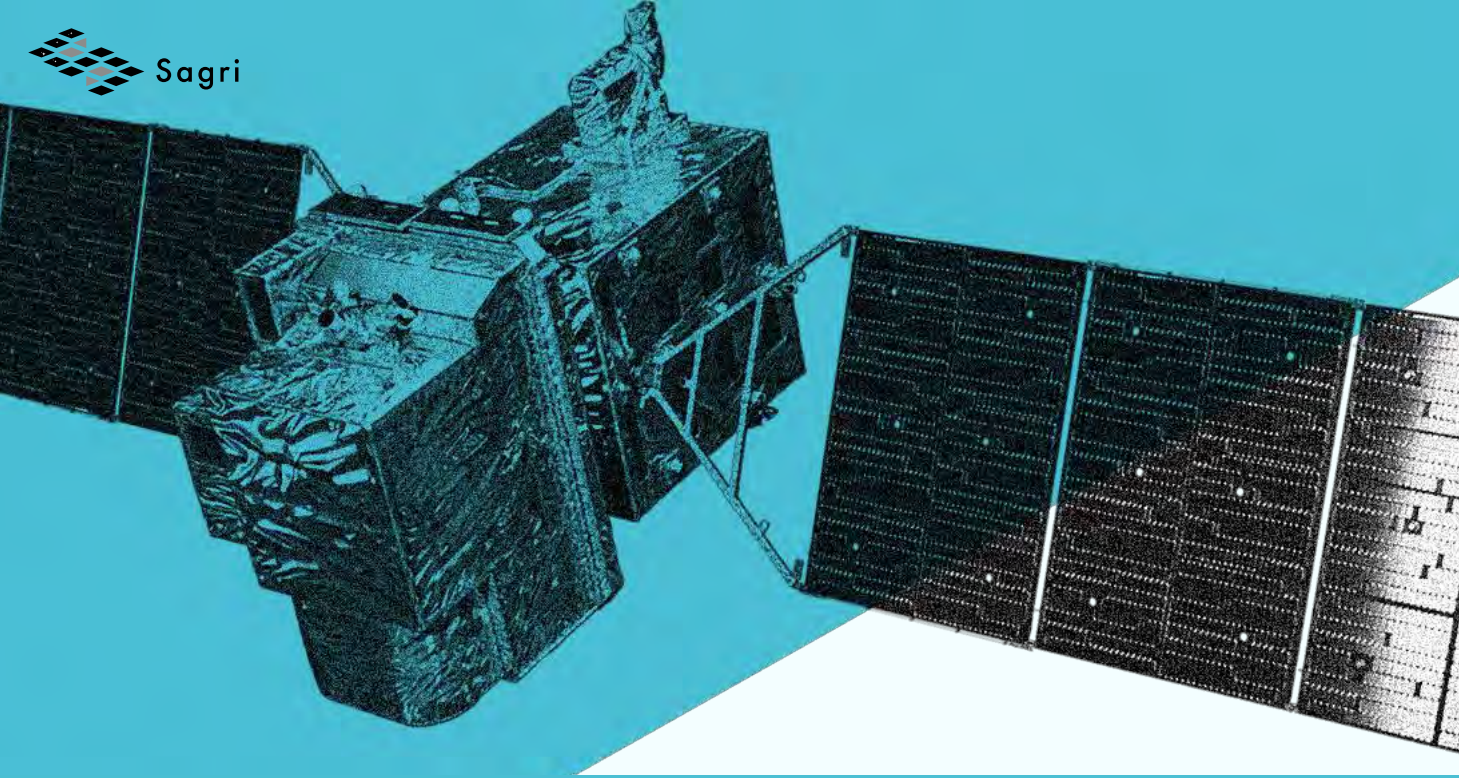
# Soil Checking





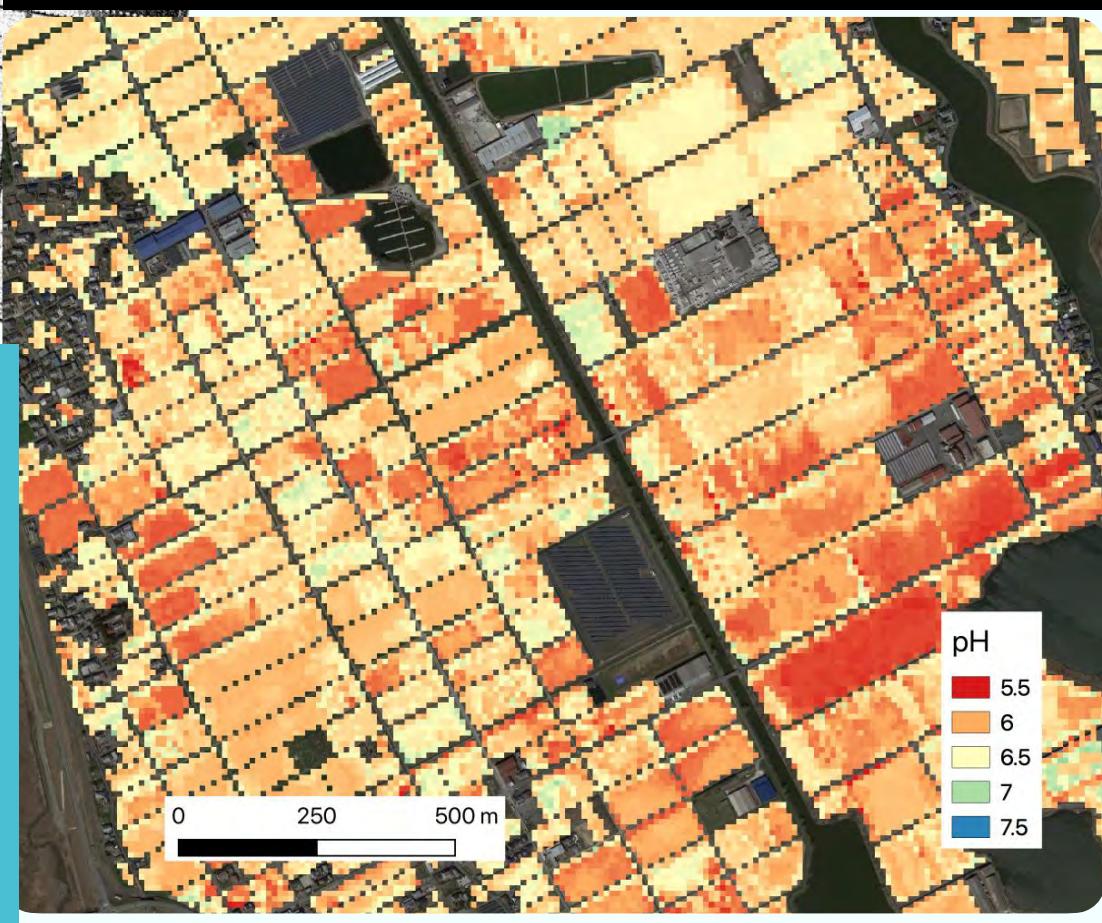
PROBLEM

**Timely & Costly**



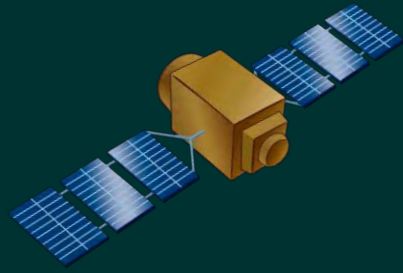
**Total Carbon, pH  
Total Nitrogen, CEC  
Accuracy 80%~85%**

**AI x Satellite  
Presume the soil  
chemical index**

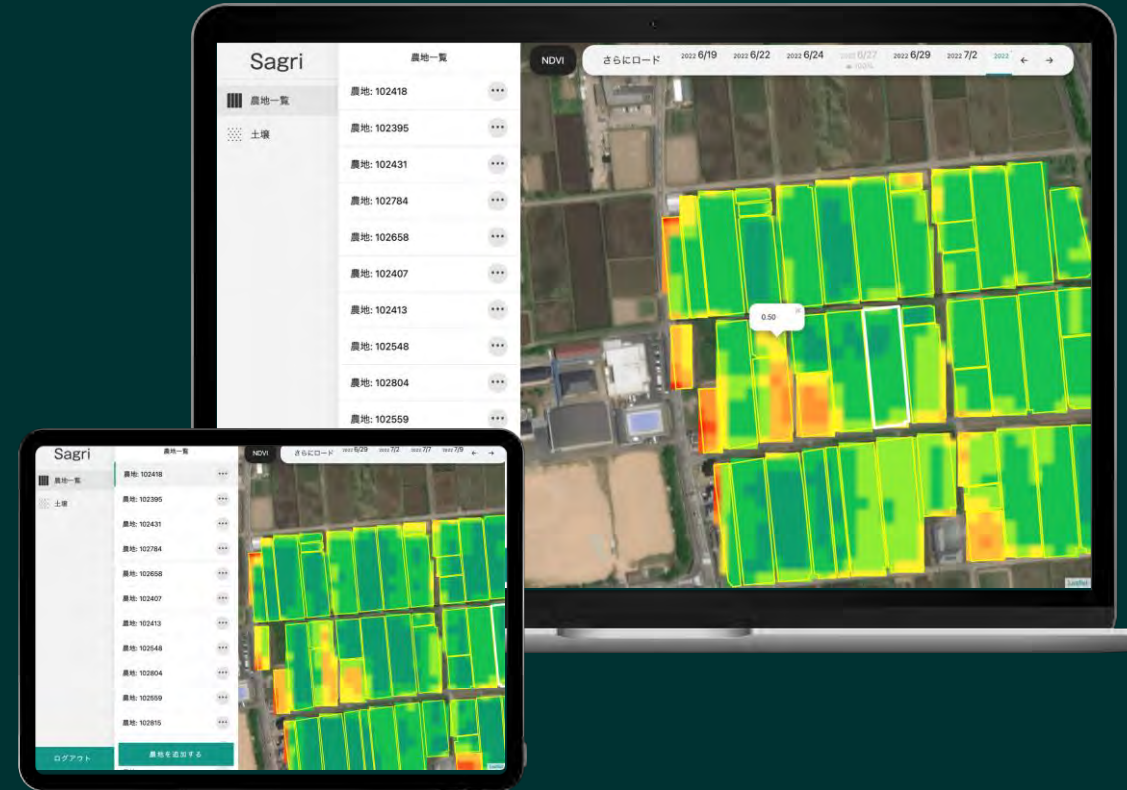




Sagri



**Product name : Sagri**  
Using satellite and AI  
to reduce fertilizer and  
GHG emission gas  
from farmland



# Sagri



## Point.1

**Understanding the growth situation at a glance**

NDVI of all farmland can be obtained retrospectively by date of acquisition of satellite data.

## Features of Sagri

- (1) The growth situation can be grasped on a map.
- (2) Soil analysis data can be utilized for appropriate fertilizer application.
- (3) Immediate viewing is possible by simply registering the field.

## Point.2

**Soil analysis of all farmland can be carried out every year**

pH, CEC, TC and other soil chemistries at a glance.



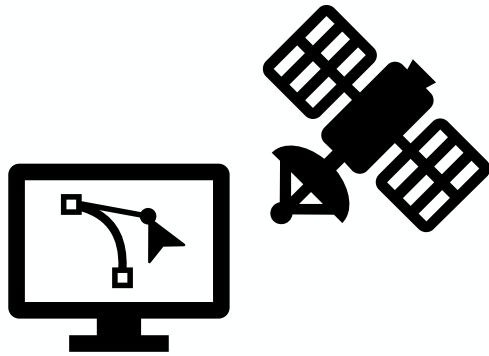
# Competitive Advantage (1/2)

Formation of current plots of agricultural land from high-resolution satellite images

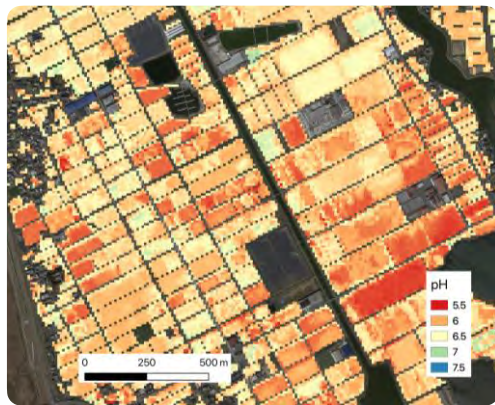
Patented  
(Patent No. 7053083)



# Competitive Advantage (2/2)



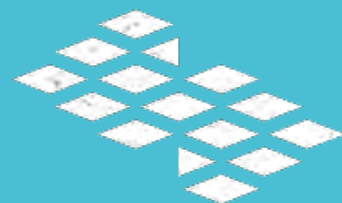
**1** Soil analysis, utilizing AI-based satellite analysis



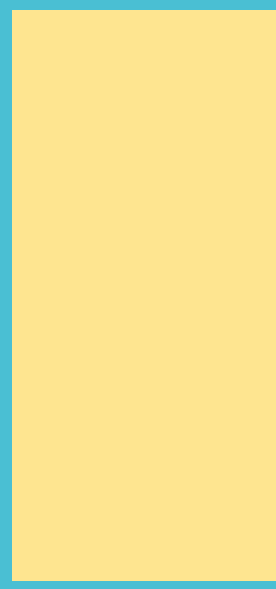
**2** Highly accurate estimation of pH, nitrogen, etc.  
(80-85% accuracy for pH, carbon, nitrogen, etc.)



Before



Sagri



Fertilizer

cut 20%



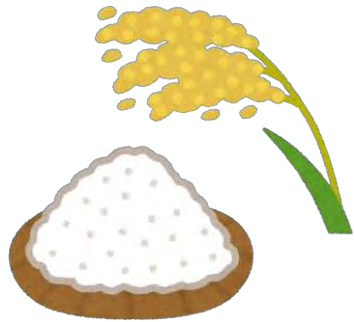
# Market size

Market size



# Crop type : Sagri can analyze Grains and open-air vegetables

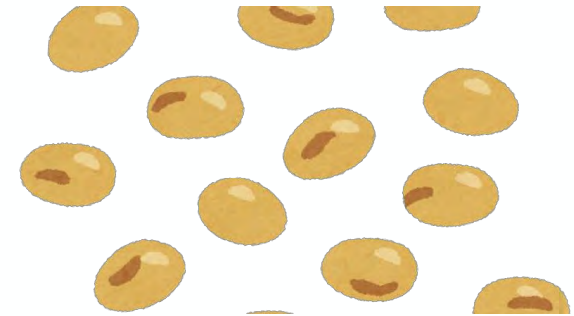
Rice



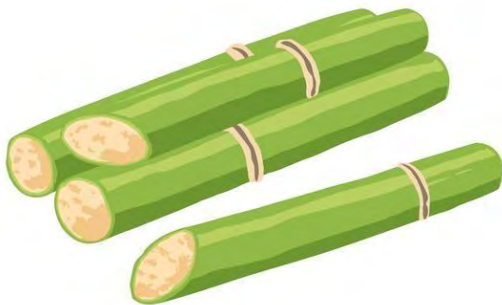
Cassava



SoyBeans



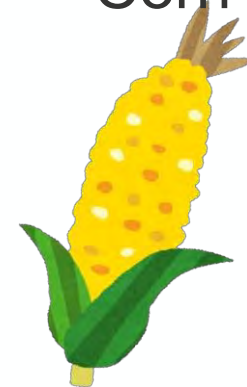
Sugarcane



Potato



Corn





# Carbon Neutral

**Soil Analysis via Satellite data**

**Farmers **reduce** fertilizer usage**

**Reduce **N2O** and Create Carbon Credit**

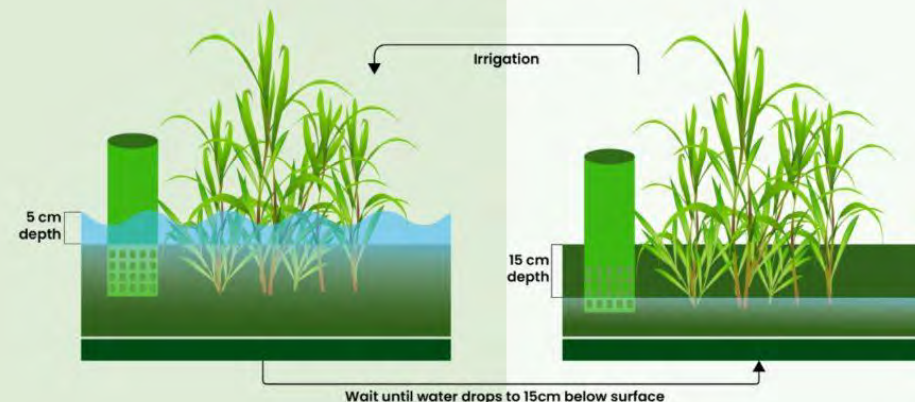
**Contributing to  
Cost reduction and Income improvement**

# Water detection from satellite

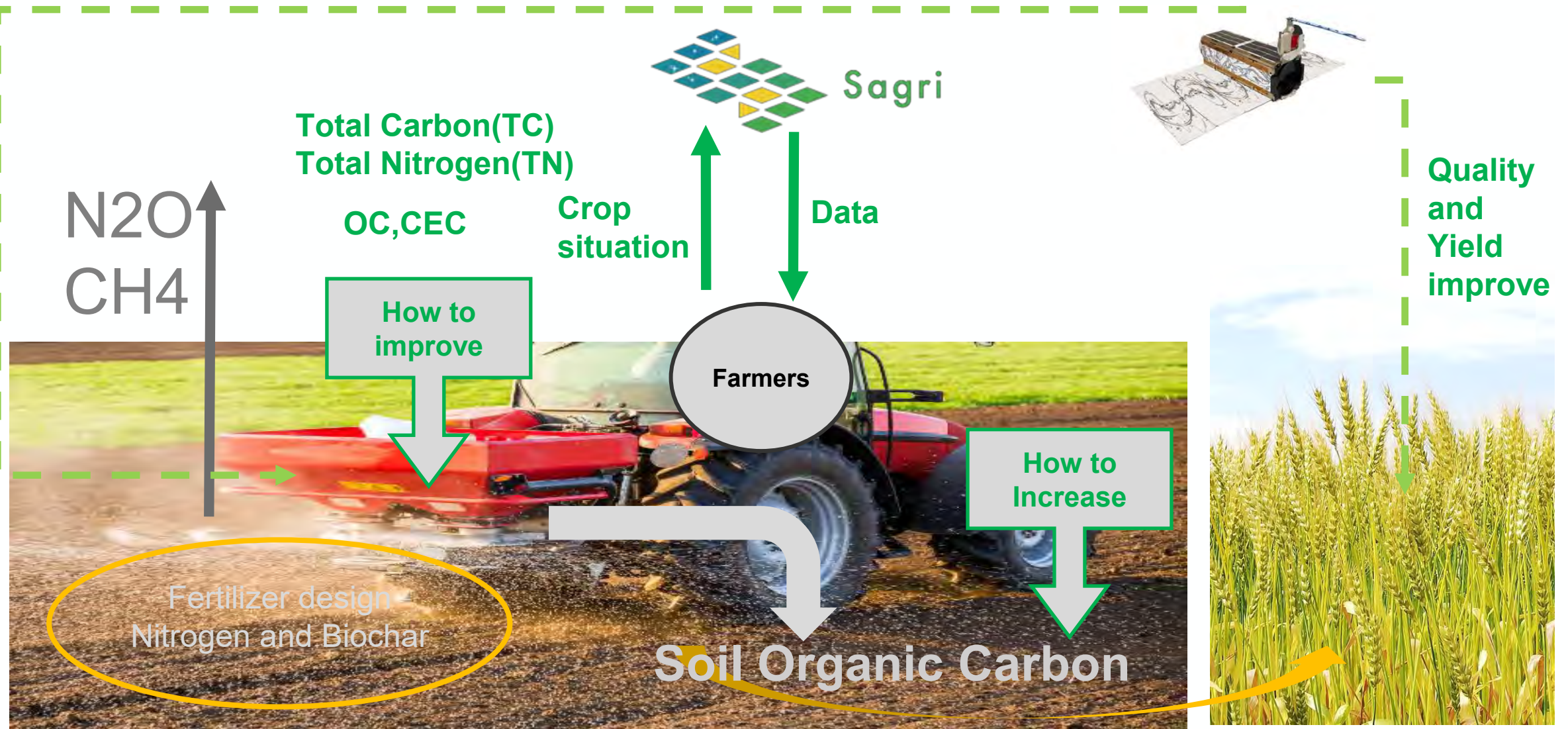


Completed the 1<sup>st</sup> project with JAXA (Japan Aerospace Exploration Agency) to be used for water monitoring (\*use less water to reduce CH<sub>4</sub> reduction)

## How does AWD work?



# Fertilizer/Water optimization can reduce GHG emission



A photograph of a vibrant green field, likely a crop field, with several trees in the background under a clear sky. The text 'Business' is overlaid on a green rectangular background in the upper middle part of the image.

**Business**

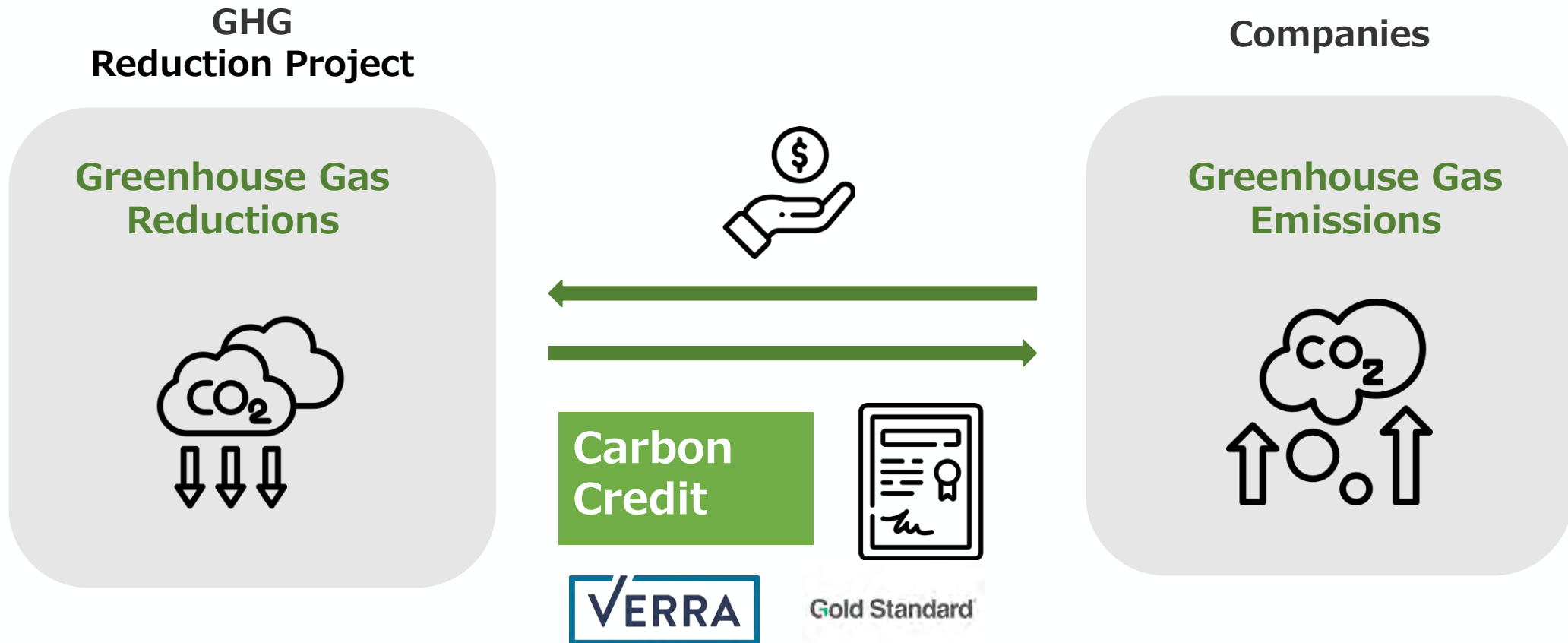
A photograph of a vibrant green field, likely a crop field, with several trees in the background under a clear sky. The text 'Model' is overlaid on a green rectangular background in the lower middle part of the image.

**Model**



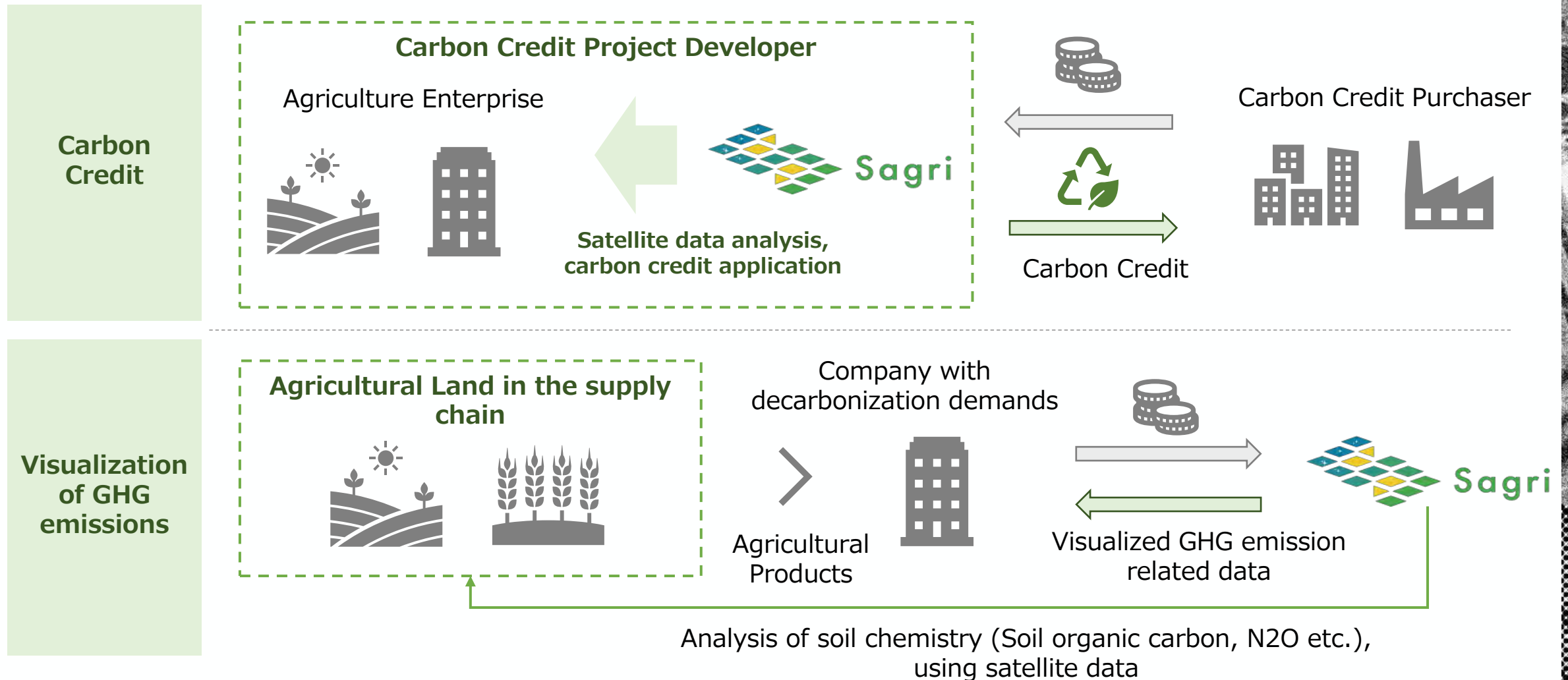
# Leverage Carbon Credit to convert GHG reduction into cash

Carbon credits are certified and tradable amount of GHG emission reductions achieved by a project. Companies can offset their emissions by purchasing carbon credits.



# Sagri: Decarbonization Business

we are launching a service related to carbon credit generation and visualization of GHG emissions from agricultural land in the supply chain



# Team formation – Experts on Agriculture/APEC/carbon credit

## Project Development

### Kazuki Sakamoto (Director)

- Strong network with governments in ASEAN for 6 years work experience
  - Ex. United Nation, JICA



### Tien Nguyen

- Extensive knowledge and network on Viet Nam agriculture industries both at private and public sector
  - Master of Agribusiness from Queensland



## Credit issuance

### Dr. Shinji Wakuta

- PHD for agriculture
  - Expert on decarbonization of agriculture



### Naoya Makino (CTO)

- Expert of global application development
  - Ex. Mercari US, Senior Manager



MERCARI

### Dr. Takashi Tanaka (CRO)

- Aarhus University Assistant Professor
  - Specialized in Digital Crop Production



## Credit Sales

### Hiroya Ishitsubo (CFO)

- Expert on selling carbon credit
  - Ex. World Bank group (IFC) and Japan large banking company



### Shunsuke Tsuboi (CEO)

- Have strong connection with Japanese Government and Companies





# Projects in APEEC

# Project #1 – FAO Project in ASEAN/MAFF/University

**MAFF**

Ministry of Agriculture,  
Forestry and Fisheries

農林水産省



UNIVERSITY  
OF TWENTE.

**Partners:** Ministry of Agriculture, Forestry and Fisheries, FAO and University of Twente

**Objectives:** Technological collaboration between FAO, Twente and Sagri to launch the agri-polygon map for ASEAN regions

**Timeline:**

- 2023-2024: MOU signed with partners
- July 2024: project approved and kicked-off
- Aug 2024- Dec 2024: POC implementation

**Subject theme:** Farmland polygon mapping

**Aim:** Create the effective data platform that enables end-users(farmers, government) to boost smart farming in ASEAN regions.

## Project #2 – MAFF MIDORI Project /ASEAN

# MAFF

Ministry of Agriculture,  
Forestry and Fisheries

農林水産省

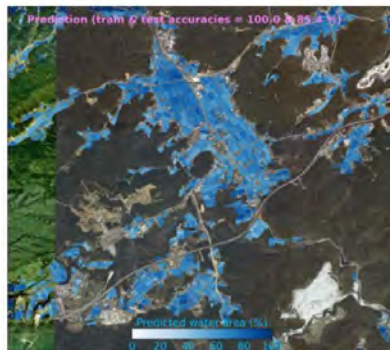


**Partners:** Ministry of Agriculture, Forestry and Fisheries

**Objectives:** MRV for Intermittent Irrigation Technology (AWD) using satellite data and AI in ASEAN region

**Subject theme:** AWD with Satellite and AI

**Aim:** Currently, AWD monitoring relies on localised actual methane gas measurements and estimates from many farming records, but Sagri will enable water detection through the use of satellite data and AI.



## Project #3 - JCM Carbon Credit with Sorimachi/DARD



**Partners:** Sorimachi Vietnam (co-developer), Vietnamese MARD and DARDs, Can Tho University

**Participants:** 6 cooperatives in 3 province namely Kien Giang, Dong Thap, Can Tho

### Timeline:

- 2023-2024: MOU signed with partners
- June 2024: project approved and funded
- Sep 2024- Feb 2025: POC implementation
- Late 2024: Expected announcement of the JCM AWD for Viet Nam

**Method:** AWD in JCM scheme

**Aim:** Lead in AWD JCM implementation in Viet Nam, preparing POC for future business scale-up.

## Project #4 – TSUBASA Project in Peru/JICA/IDB/NGO



### Transformational Start Ups' Business Acceleration for the SDGs Agenda

**Partners:** JICA, IDB and Producers Direct(NGO)

**Participants:** Farmers association in Peru

**Objectives:** Boost the smart farming and carbon farming by the collaboration of satellite analysis and ground data accumulation

**Method:** VM0042, Optimization of fertilizer and increase the stock of the soil carbon

**Aim:** Create the new method for smart farming in the hilly areas of Peru.



## Project #5 – JICA project in Peru/JICA/Farmers Association



**Partners:** JICA(Japan International Cooperation Agency) and Esquibel Farmers association

**Participants:** One Japanese Farmers Association in Peru

### **Timeline:**

- June 2024: project approved and kicked-off
- Aug 2024- Feb 2025: POC implementation

**Method:** VM0042, Optimization of fertilizer and increase the stock of the soil carbon

**Aim:** Preparing POC for future business scale-up in Peru.

Sagri Awarded  
Prime Minister prize

# 内閣総理大臣賞

Prime Minister  
Fumio Kishida

Sagri  
Shunsuke Tsuboi



# Sagri Flywheel

## Agricultural management

Providing data/tools  
Gov to manage  
agriculture, supply  
predictions and  
effective land use

## Farmland Management

Farmland marketplace  
with providing farmland  
value assessment

## Increase Yield

## Increase Yield

Productivity gain via AI  
Co-pilot, farmland  
management, efficient  
use of fertilizers

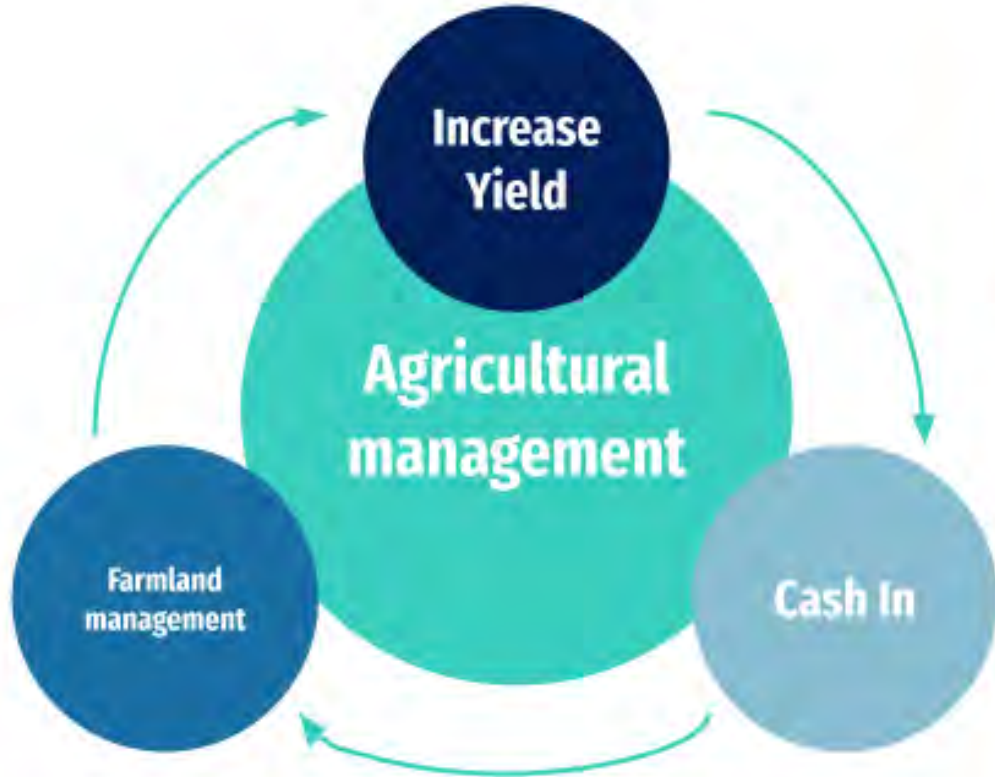
## Agricultural management

Farmland  
management

Cash In

## Cash In

More revenue by  
increasing yield,  
providing additional  
revenue source (Carbon  
credit), Insurance and  
micro-financing.





# Sustainable future for next generation





# Sagri CEO SHUNSUKE TSUBOI

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