

Contributing to the Creation of Coastal Blue Carbon Ecosystems (mangrove/ seagrass/ seaweed)



" MobaDAS "

- A tool designed to propose suitable locations for creation of coastal blue carbon ecosystems-

Main Entities of Coastal blue carbon ecosystems creation

Private companies, local governments, and fisheries cooperatives

Aiming to develop more feasible plans for creating coastal blue carbon habitats!

- ✓ Insufficient access to environmental information related to the growth of blue carbon habitats
- ✓ Uncertainty about whether an area is suitable for the growth of blue carbon habitats

Proposed system

MobaDAS

Moba Data Acquisition System

Easier access to environmental information

Understanding the growth potential of blue carbon habitats in candidate areas

Obtaining more comprehensive environmental information

Creating Coastal blue carbon ecosystems

Realizing abundant oceans
Decarbonized Society

"Moba" is a Japanese word that means blue carbon habitats.

Why MobaDAS?

- The growth of coastal blue carbon ecosystems depends on many environmental factors, making assessments costly, time-consuming and requiring specialized technology.
- MobaDAS** addresses these challenges by integrating satellite imagery, water quality simulation data and publicly available observations to visualize the growth potential of blue carbon habitats.
- This supports more successful coastal blue carbon ecosystems creation projects—while significantly reducing startup costs & contributing to the transition toward a decarbonized society.

Blue Carbon Habitats Creation Project and MobaDAS

Flow of the seaweed bed creation project



Entities involved in creating seaweed beds and their needs

Can we make a seaweed bed?



Citizens/fishermen

I want to create a seaweed bed, but where is the best place?



Government/ private companies

I want more information that will be useful for managing seaweed bed growth.



Seaweed bed maintenance and management implementer

Functions provided by MobaDAS

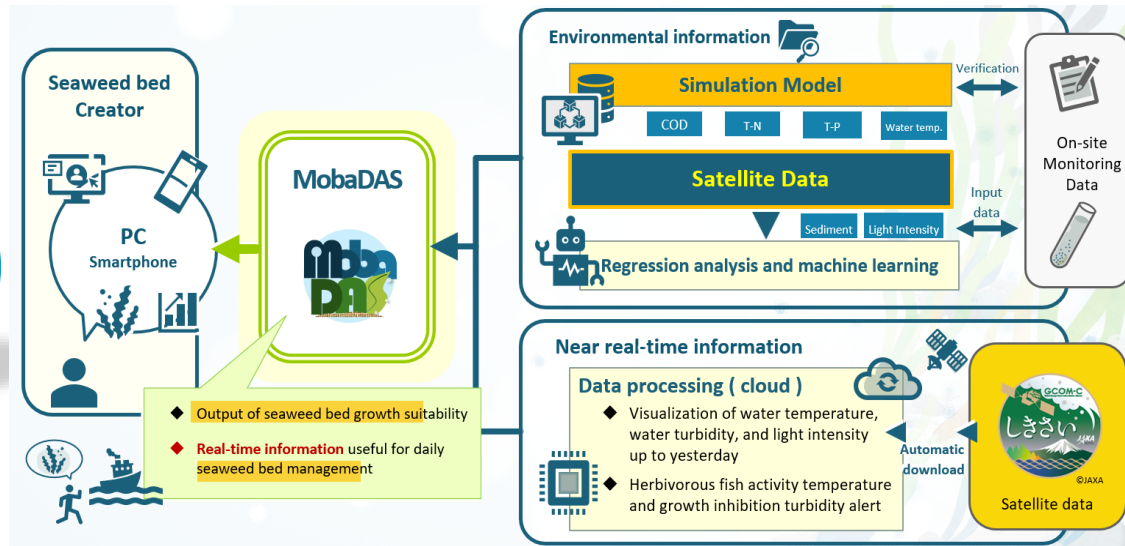
Initial consideration of the seaweed bed project
Setting a goal

Selecting suitable locations for seaweed bed creation
Considering a specific business plan

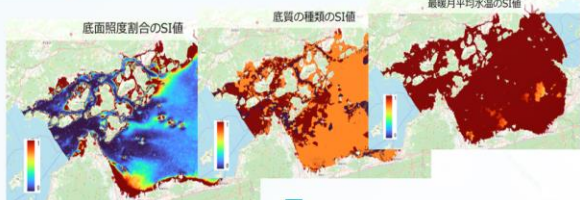
Being useful for daily seaweed bed management
Providing more detailed and real-time information

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Input Data
and
Methodology



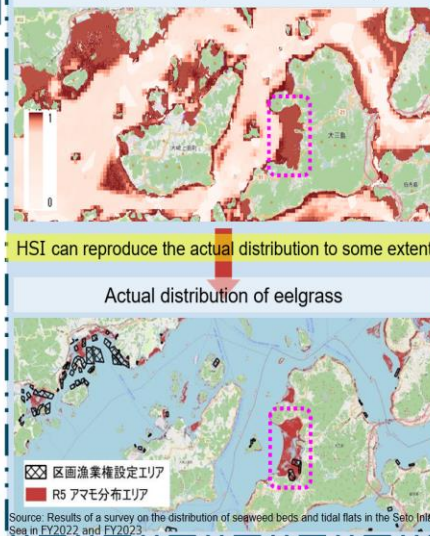
Comprehensive evaluation of environmental factors to determine suitability for seaweed bed growth



$$\text{Habitat Suitability Index (HSI)} = \sqrt[n]{SI1 \times SI2 \times \sim \times SIn}$$



Eelgrass HSI (Estimated Results)



Evaluate the
suitability of
environmental
factors for the
growth of Blue
Carbon Habitats

Features of
MobaDAS

