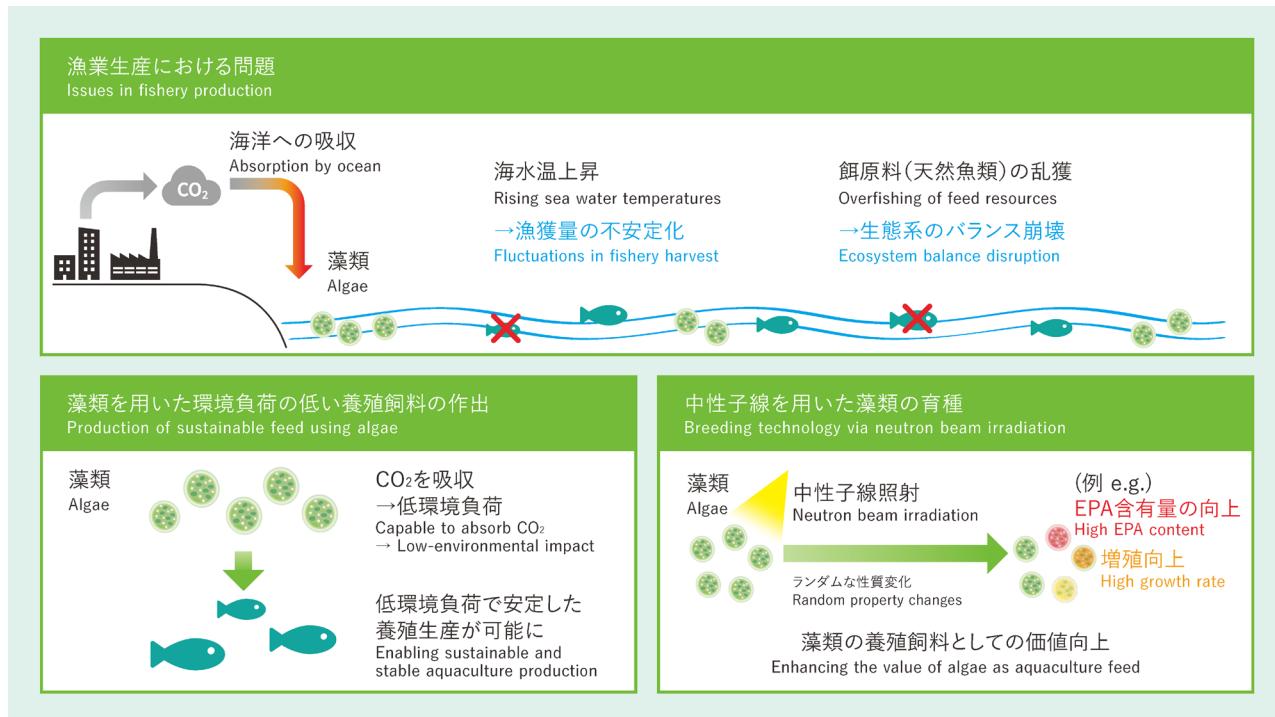


## Producing sustainable aquafeed by breeding algae with neutron beams Breeding algae to enhance feed value

### Background and Technical Challenges

To produce sustainable aquaculture feed, we must enhance algal traits through breeding. Neutron-beam irradiation shows promise due to its effectiveness and ease of commercialization, but optimal conditions are not yet known.



### R&D Goals and Outcomes

Breeding algae with high feed value using neutron beams will contribute to sustainable aquaculture production

### Key Technologies

#### 01 Core Technologies

Irradiating algae with neutron beams under optimal conditions to induce mutations.

#### 02 Key Differentiators

- Established neutron-beam irradiation conditions that induce mutations most efficiently, achieving up to 14.5 times the natural mutation rate
- Successfully bred beneficial algae using neutron beams

**Use Cases** Agriculture, Forestry & Fisheries

**R&D phase** Research

**Technology Schedule** FY27-29

**Commercialization Schedule** TBD

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NTT Space Environment and Energy Laboratories

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**[Contact]**  
Zero Environmental Impact Research Project

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<https://group.ntt/en/newsrelease/2024/07/04/240704a.html>