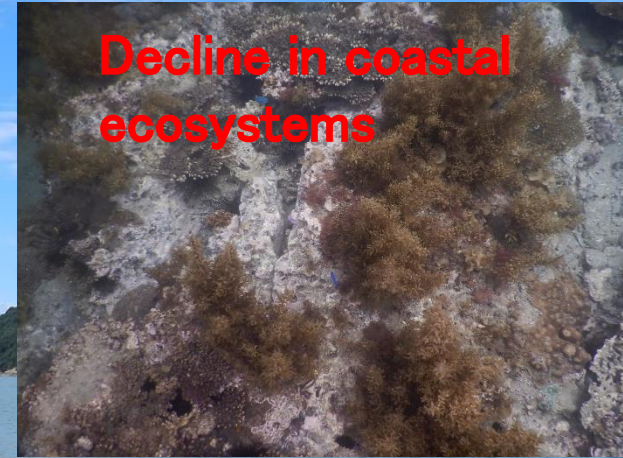




Amakusa Blue Carbon Neutral
～Creation of Clean Energy for
Regional Recycling～

Kumamoto Prefectural Amakusa High School
Science Club Eelgrass Group

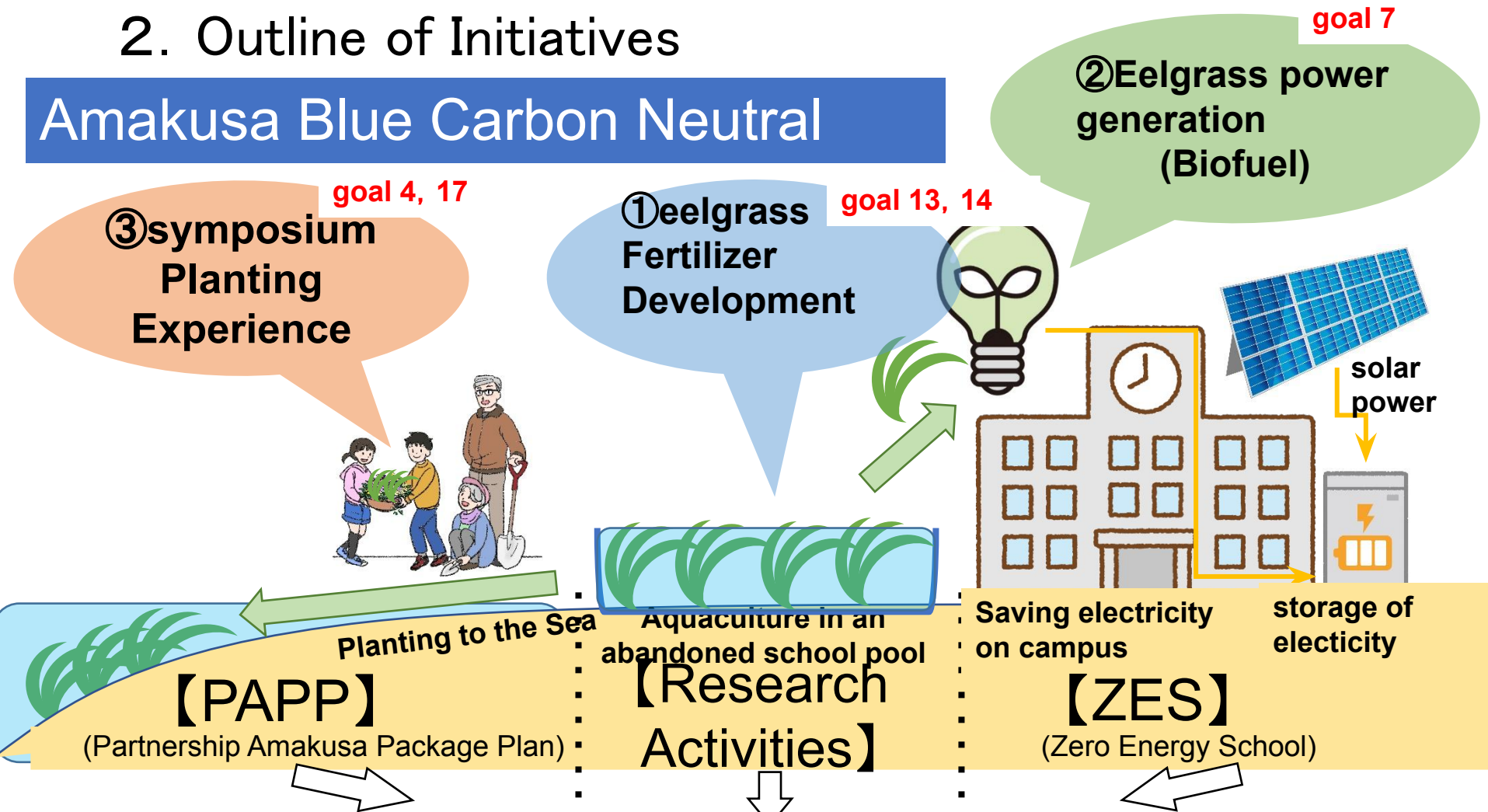
1. Issues that triggered the initiative



Depopulation

2. Outline of Initiatives

Amakusa Blue Carbon Neutral



Aiming for Amakusa Blue Carbon Neutrality through three activities.

- **Conducting eelgrass fertilizer and eelgrass power generation research**
(Also looking to create local jobs)
- **Holding environmental symposiums**
(A place for high school students, government and local residents to think)
- **Amakusa Blue Carbon Neutral Initiative** (The culmination of our research to date)

3. Utilization of STI①

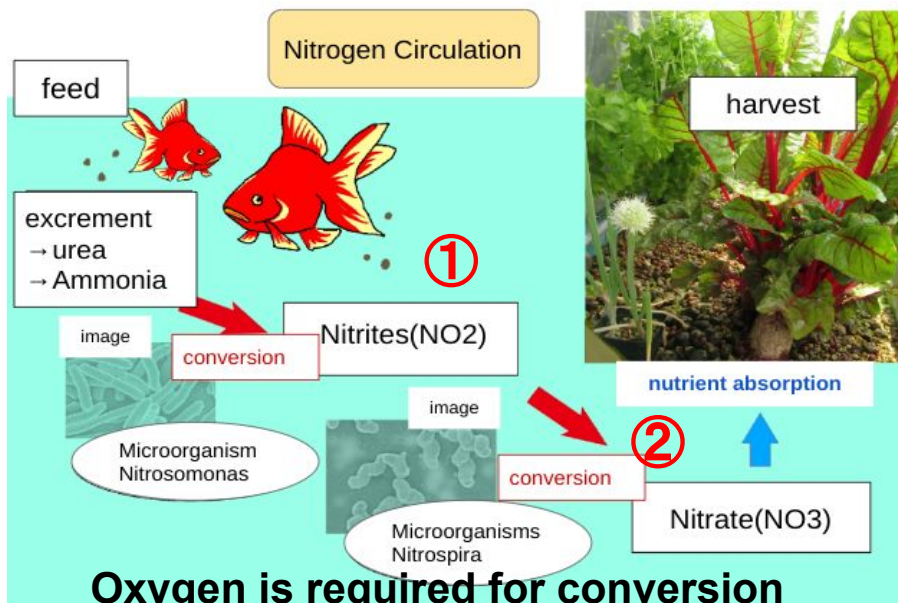
① Eelgrass Fertilizer Development

<Features and Appeal Points>

- Fish waste that would normally be discarded can be put to good use.
- Can be used for stable eelgrass cultivation
- Less environmental impact than using artificial fertilizers

↑ Prevent outbreaks such as the red tide that caused major damage this year

<Process of fish waste decomposition> 引用: <https://bonchist.>



Oxygen is required for conversion (nitrification) to (1) and (2)

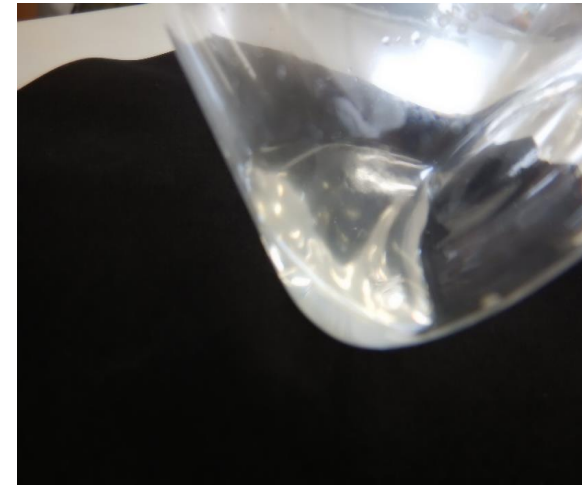
- Measuring ammonia nitrogen and nitrate nitrogen
 - Measure dissolved oxygen saturation, dissolved oxygen concentration, and dissolved oxygen gas concentration
 - Fish feces composition measurement
- ※ Ongoing ongoing research

3. Utilization of STI②

② Eelgrass power generation

- Since it is not food, it is 100% biomass feedstock.
- The supply as biomass is abundant.

There are limits to the supply of woody biomass in Japan.



(1) Eelgrass fertilizer development and (2) Eelgrass power generation mix

- Become carbon neutral with local circulation
- Potential for stable fuel supply.
- Can create new industries in the region

4. Characteristics of the initiatives

characteristic: ③ Symposium + Eelgrass seedling planting experience

Holding environmental symposiums to disseminate measures based on research results

- Held twice to date (last October and this August)
- Held jointly with Amakusa City
- Eelgrass planting workshop was held (last October)

※ Simultaneous with the Eelgrass Study Session



Amakusa Protect Project アマプロ SUSTAINABLE DEVELOPMENT GOALS

天草の海を守りたい
高校生の想いから生まれた
環境シンポジウム

2021
10/31(日)
9:30~15:40
天草市民センター

SDGs市民社会ネットワーク理事
新田英理子氏講演
持続可能な天草の未来のために
〜次世代へつなげるSDGs〜

パネルディスカッション
天草でできる未来の環境を考える

アマモの体験活動

協賛：天草高校科学部 金子さん

講演会や発表、体験活動を希望される方は
天草高校ホームページより申込をお願いします。

Amakusa Protect Project アマプロ SUSTAINABLE DEVELOPMENT GOALS

天草の海を守りたい
高校生の想いから生まれた
環境シンポジウム

8/27(土)
9:30~13:10
天草市民センター

岡山大学水産学部 准教授
八木光晴氏講演
「海の豊かさを守るために：世界の、九州のマイクロプラスチック問題」

パネルディスカッション
天草でできる海洋ごみ削減を考える

海洋プラスチックごみ発生抑制啓発動画上映
天草高校×京都芸術大学×天草市の共同企画制作動画

協賛：天草高校科学部 金子さん

講演会等の参加を希望される方は
天草高校ホームページより申込をお願いします。



5. Future Vision

Plans for future development

- **Collaboration with companies refining bioethanol**

※Currently in the process of approaching companies that have a presence in the local area.

- **Collaboration with companies and laboratories that utilize bacteria**

to purify butanol ※Approaching local universities for collaboration.

- **Collaboration with organizations that utilize fish waste**

- **Collaboration with overseas environmental NPOs**

※Another species of eelgrass in Kiribati (*Cymodocea serrulata* ?)

※Started ecological research with Okinawa Prefectural Koyo High School

※**Research results and methods deployed in Kiribati**



Photo:

Eelgrass collected in Kiribati→



アマプロ (Amakusa protect project) 2022

Thank you very much for your attention.

