TeSH Hokuriku Region Contribution
Potential Startups ①

Hatchery-based aquaculture of mackerel and create new market for fish farming

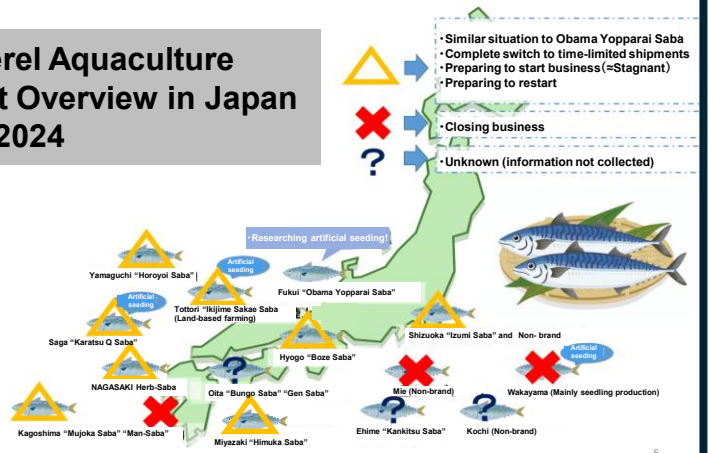
SABAival PROJECT

Fukui Prefectural University

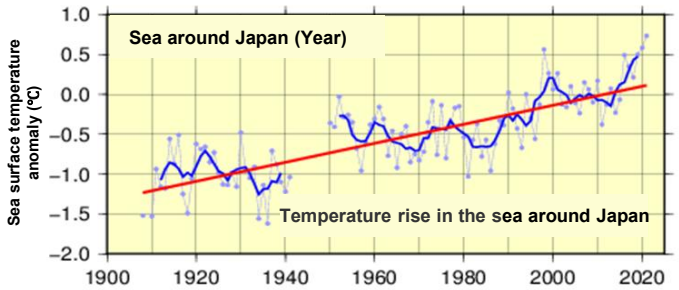
Problem

Mackerel aquaculture endangered in Japan

Mackerel Aquaculture Market Overview in Japan As of 2024



【Factor 1】Massive mackerel mortality due to warmer seawater



【Factor 2】Shortage of mackerel seeds due to poor catch

Achievements in Obama city

From 2016

Obama City, Fukui "SABAival" project

Faculty of Marine Science and Technology, Fukui Prefectural University
Fukui Fisheries Promotion Center
Tagarasu Suisan

Research achievements in hatchery-based aquaculture through industry-academia-government collaboration

2019-2023 **"Obama Yopparai Saba" Business development in fish fattening**

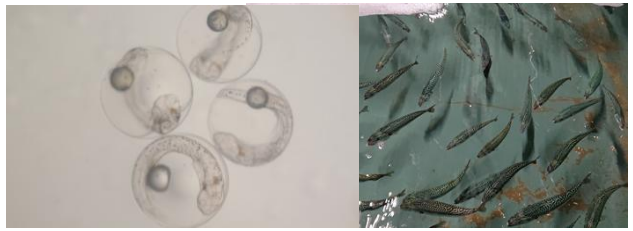
2020 **Successful production of approximately 10,000 artificial seed**

2023 **Test sales of hatcher-based aquaculture of mackerel achieved!**

Results of STEP1

Hatching rate of fertilized egg

25%⇒75%



Challenges through startup

Prof. **Daisuke TAHARA**
Department of Advanced Aquaculture Science
Faculty of Marine Science and Technology,
Fukui Prefectural University

Core technology -Creation of the strongest Hybrid seeds-

Scomber japonicus ✖ **Scomber australasicus**

Patent Application Scheduled

- Taste of S. japonicus & High temperature tolerance of S. australasicus
- No risk of ecological impact
- Not started in fish farming⇒High novelty


Freezing sperm of S. australasicus


Eggs of S. japonicus


Comprehensive hatchery-based Aquaculture of mackerel system

Seeding
Feed
Environment

Business Goals

Domestic mackerel artificial seed market ⇒12 billion yen

Global edible mackerel market ⇒ approx. 200 billion yen