



Highlighting stakeholder-engagement, collaboration, and trans-disciplinarity in the quest for sustainable coastal communities: Lessons from stakeholders “captaining the ship”

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MSEAS 2024

Marine Socio-Ecological Systems Symposium

Starting Point & Background Concepts

Tohoku University, SOKAP-Connect Program

The project plan should consist of **co-creation with various stakeholders**, transcending disciplines, and **even between sectors**.

State the vision of a sustainable society that the proposer envisions and the social issues that must be solved to realize that vision

--SOKAP Connect Call

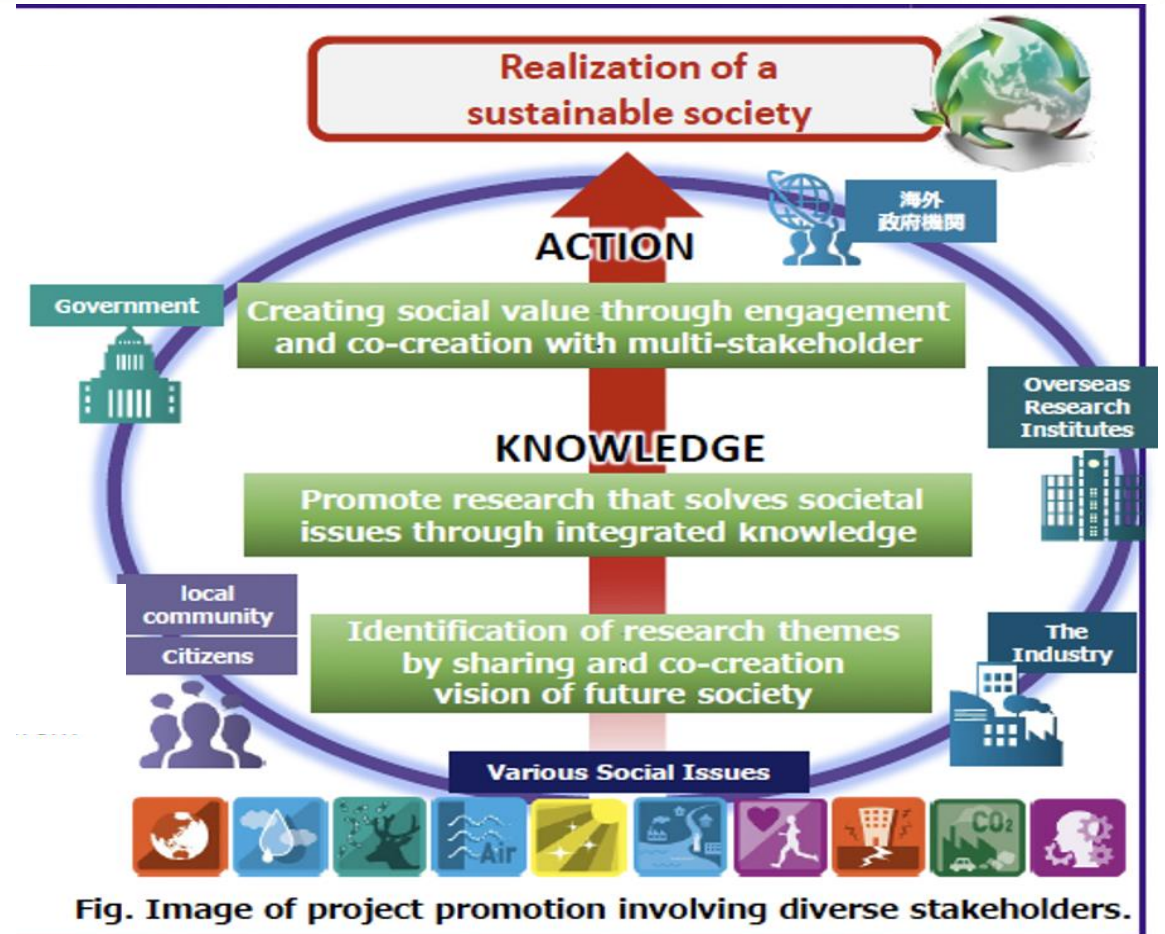


Fig. Image of project promotion involving diverse stakeholders.

Japanese Coastal Communities



Starting Point & Background Concepts

Working from concepts of **sustainable** and **resilient** coastal communities...

Thinking holistically (e.g., of connections) and with local concepts of

Satoumi 里海

Umigyō 海業

Using **social-ecological systems** and **blue justice** lenses

... in the face of social, economic, and environmental **challenges**

... and in **post-disaster** contexts.



SEAQUEST The quest for sustainability through stakeholder-driven collaborative research in coastal communities

Address **challenges** to social and environmental sustainability in ocean resource reliant communities through interdisciplinarity, **stakeholder** engagement, and knowledge co-creation.

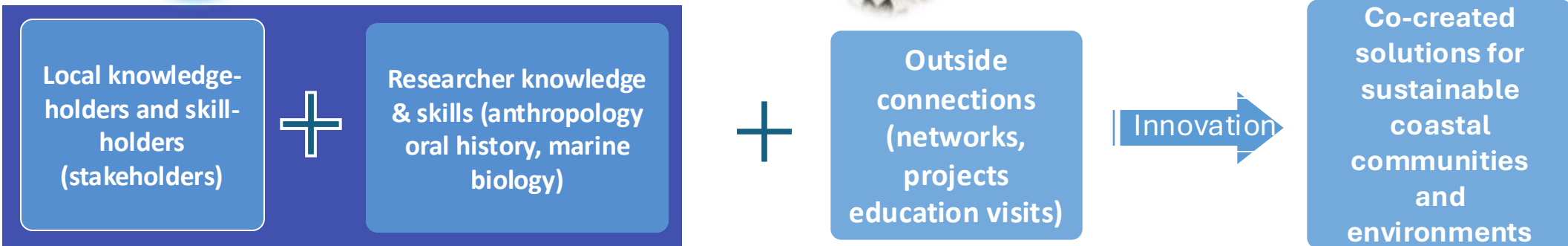
Key Points

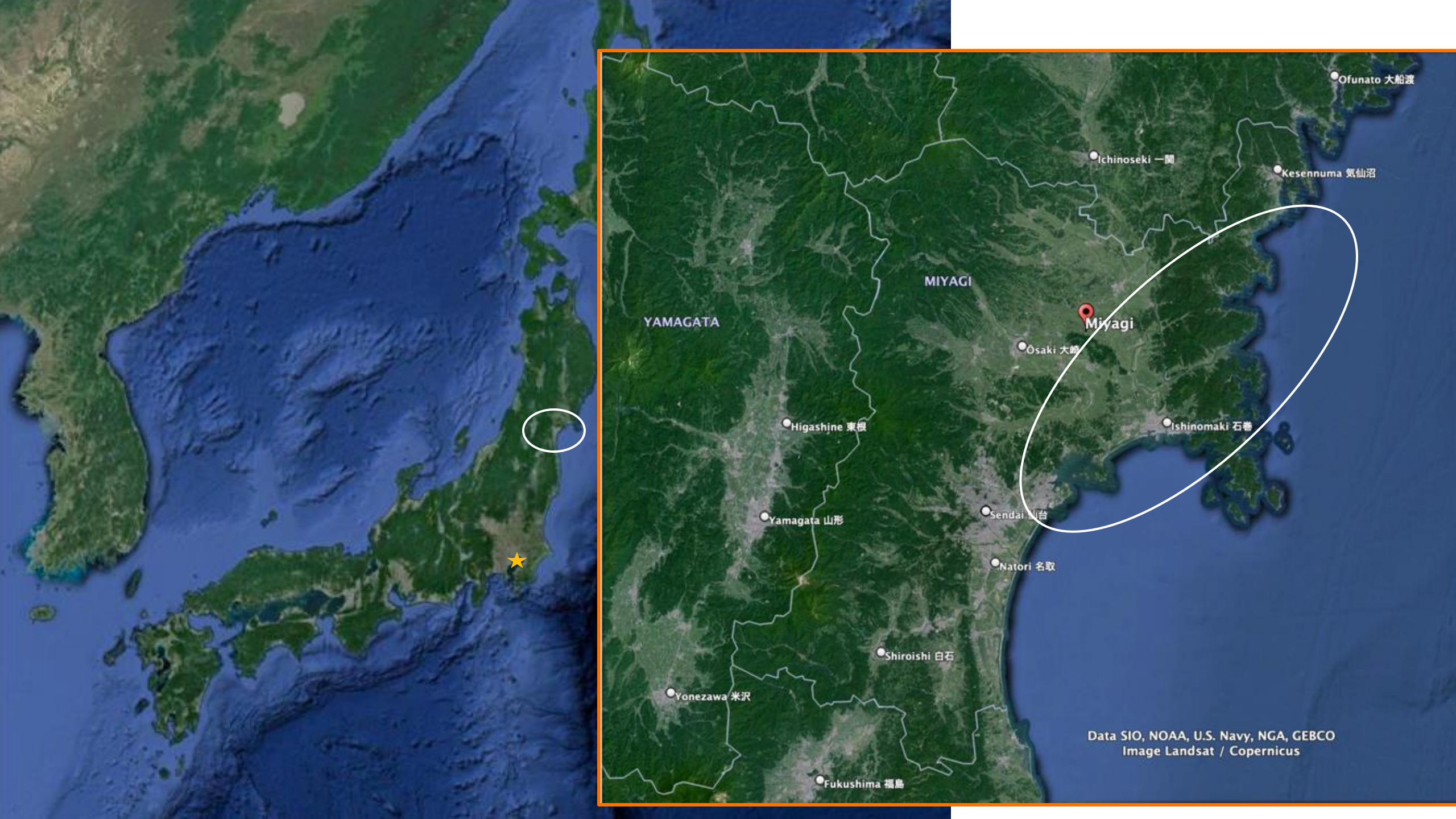
- Stakeholder led (e.g., *suimushi*)
- Holism (SES, Umigyou)
- Ocean Environmental Monitoring and Data Collection, eDNA
- LEK & Oral histories; historical data
- Environmental Education (children)



Serving as the catalyst for executing the vision of social and environmental sustainability through stakeholder-driven activities. **Commencing with local needs**, and taps their local ecological knowledge, diverse backgrounds, and skills in education, entrepreneurship, fisheries, management, and social media.

- COLLABORATORS**
 Shichigahama Town Hall
 Shichigahama Tourism Association
 Shichigahama branch FCA
 REZAIN
 Odyssey NPO (Higashimatsushima)
 Shiogama Urato Islands
 Sendai Umino Mori Aquarium
 Aquamarine Fukushima
 National networks
 TBTI Japan
 International Networks
 TBTI Global · V2V Global Partnership





YAMAGATA

MIYAGI

Miyagi

Ofunato 大船渡

Kesennuma 気仙沼

Ichinoseki 一関

Osaki 大崎

Ishinomaki 石巻

Higashine 東根

Sendai 仙台

Yamagata 山形

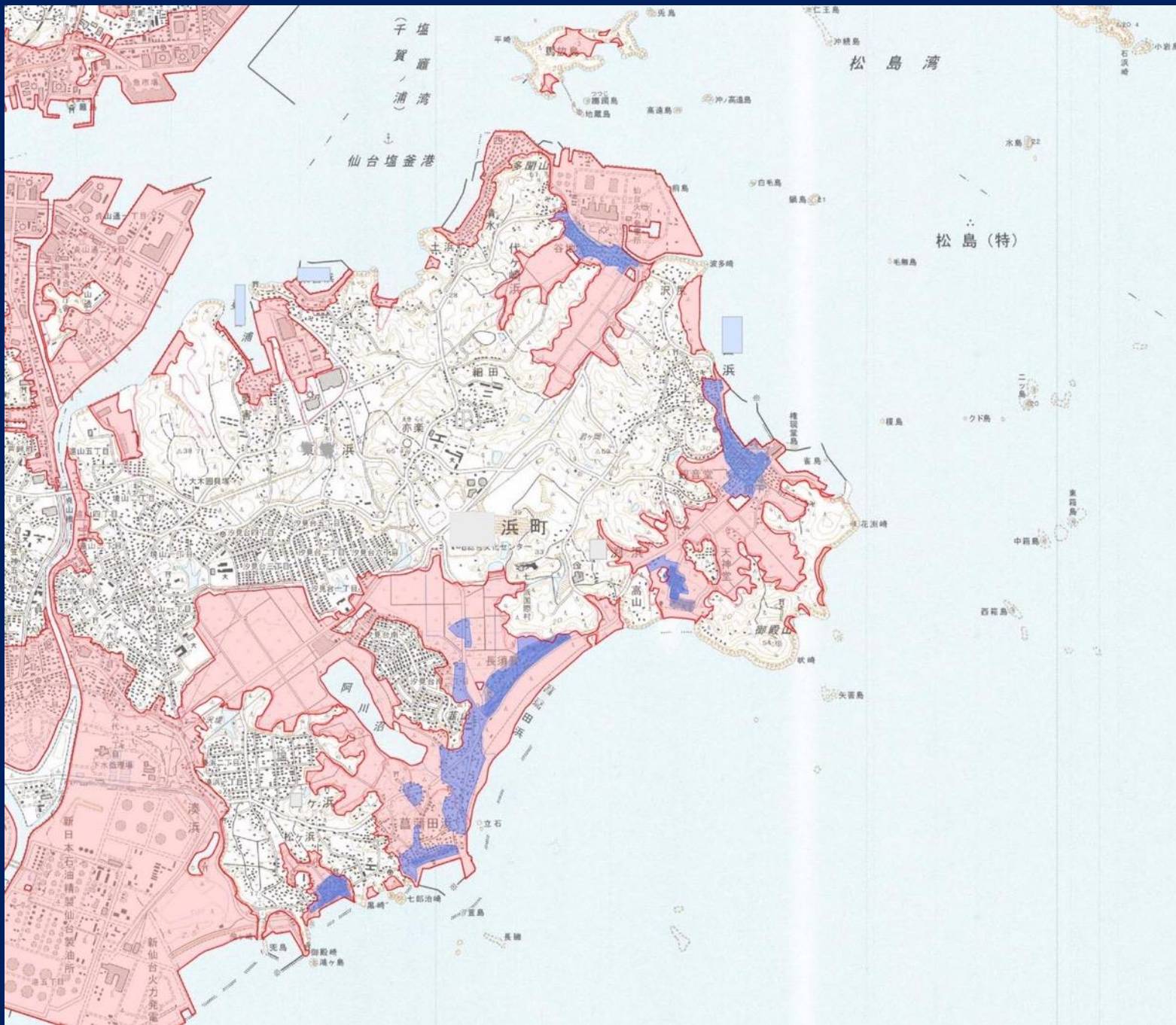
Natori 名取

Shiroishi 白石

Yonezawa 米沢

Fukushima 福島

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus





UMIGYŌ

“In the recent long-term plan for the development of new fishing ports and fishing grounds (Ministry of Agriculture, Forestry and Fisheries, 2022), umigyō is regarded as " **business activities that utilize the value and attractiveness of regional resources** such as the sea and fishing villages, and is expected to create vitality, income, and employment in the region by responding to diverse needs from both domestic and international sources."

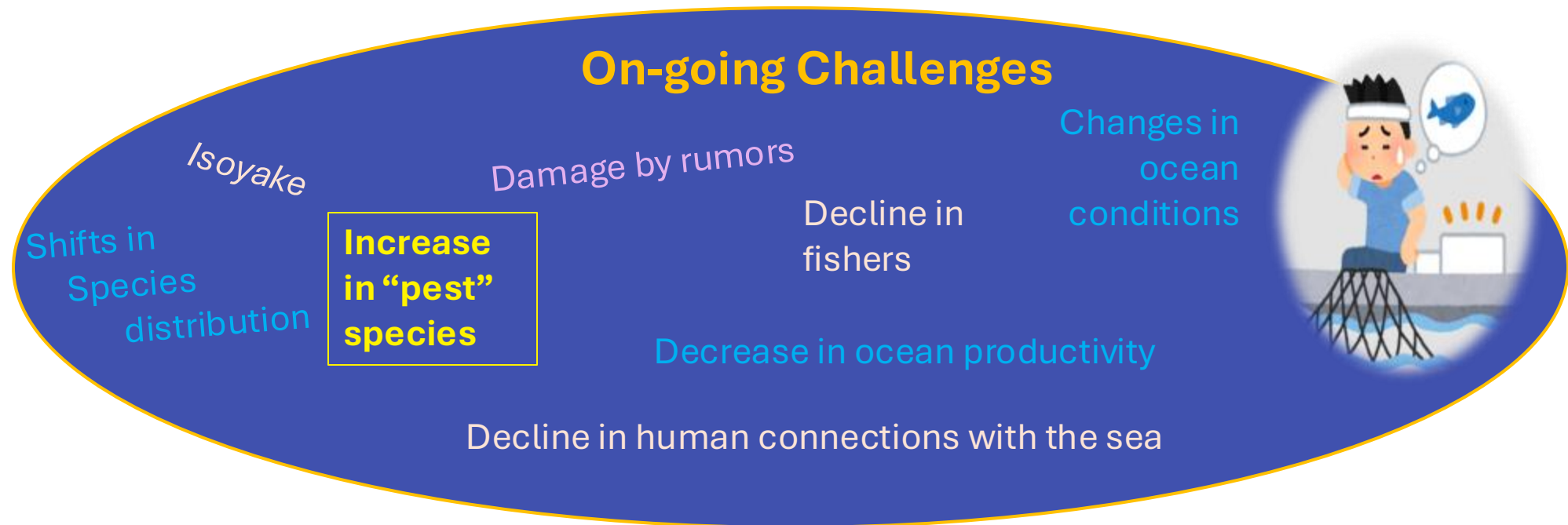
This definition is characterized by its explicit purpose of "creating vitality, income, and employment in the region..".

Sasakawa Peace Foundation, 2023

Value and vitality stem from local culture and heritage, and expressed behaviors— such as social interactions, reciprocity, etc.



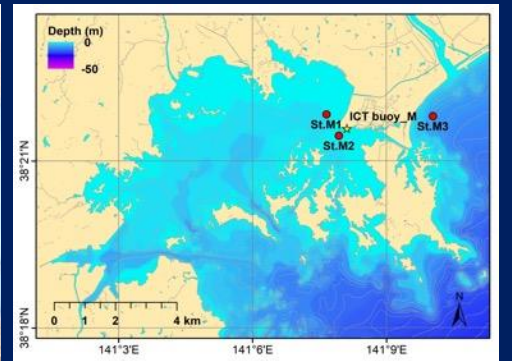
Continuing discussions highlighted local stakeholders' views of the need for addressing pressing environmental problems in their ocean commons, and to broaden innovation surrounding stakeholder usage and connections with their coasts and sea



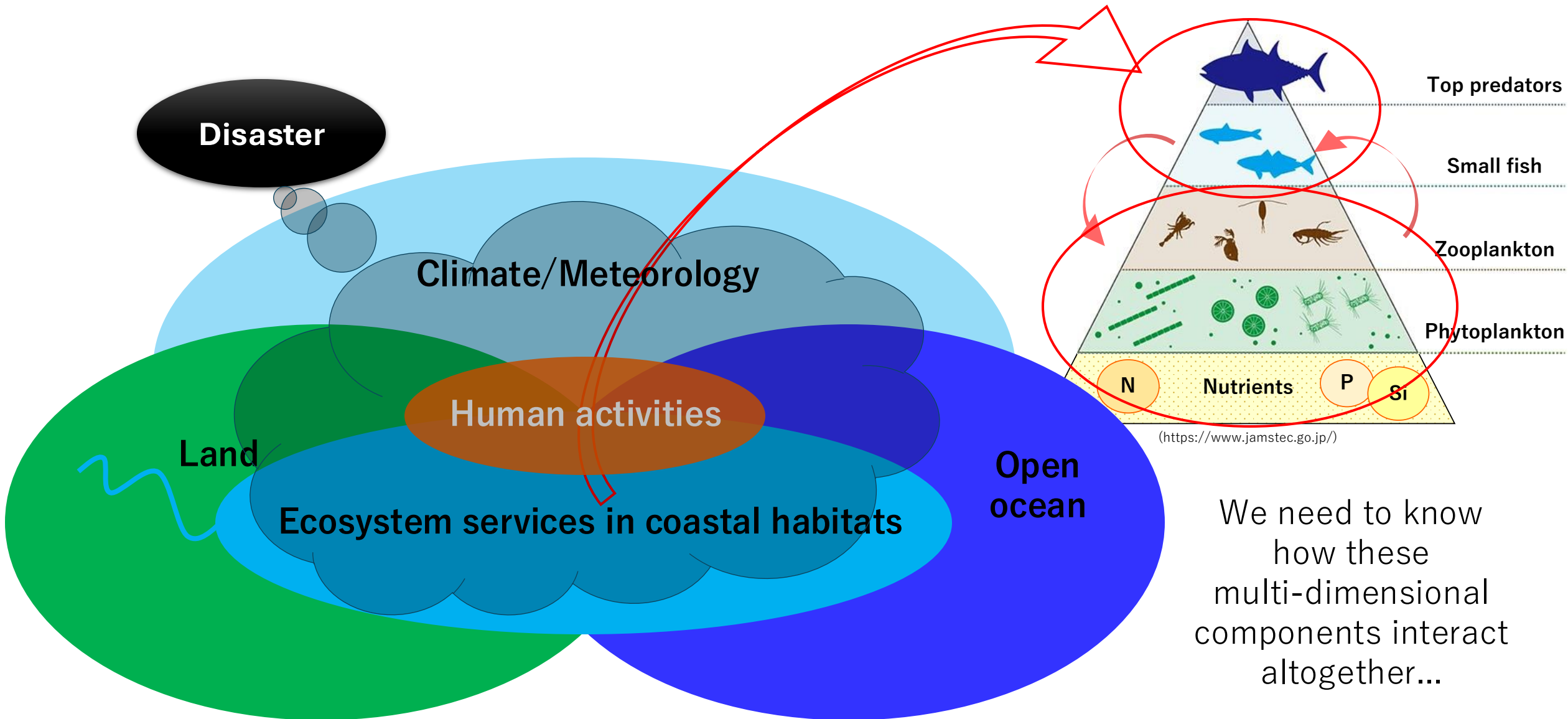
“... fishermen remind us of crucial things taking place in the sea... speaking with them is vital.” Prof Fujii

Stakeholder Collaborations

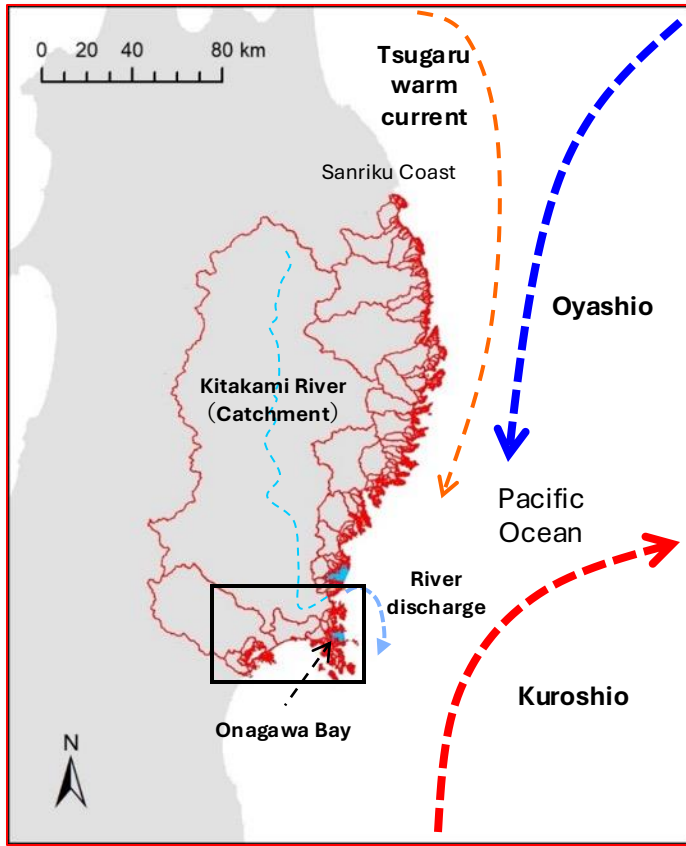
Fisher-Science Modeling LEK



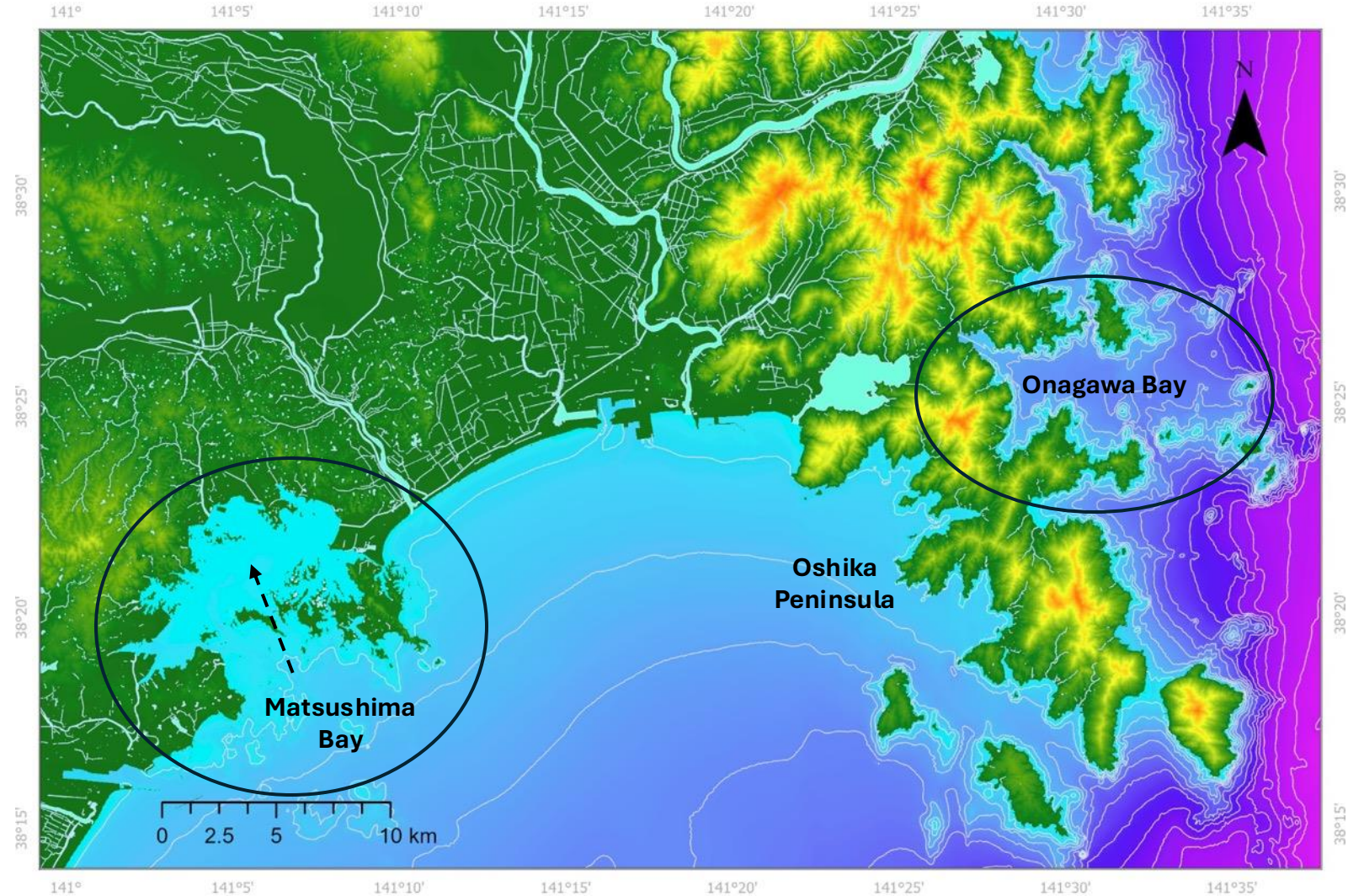
Factors affecting the dynamics of the ecosystem services and fisheries resources in coastal environments?



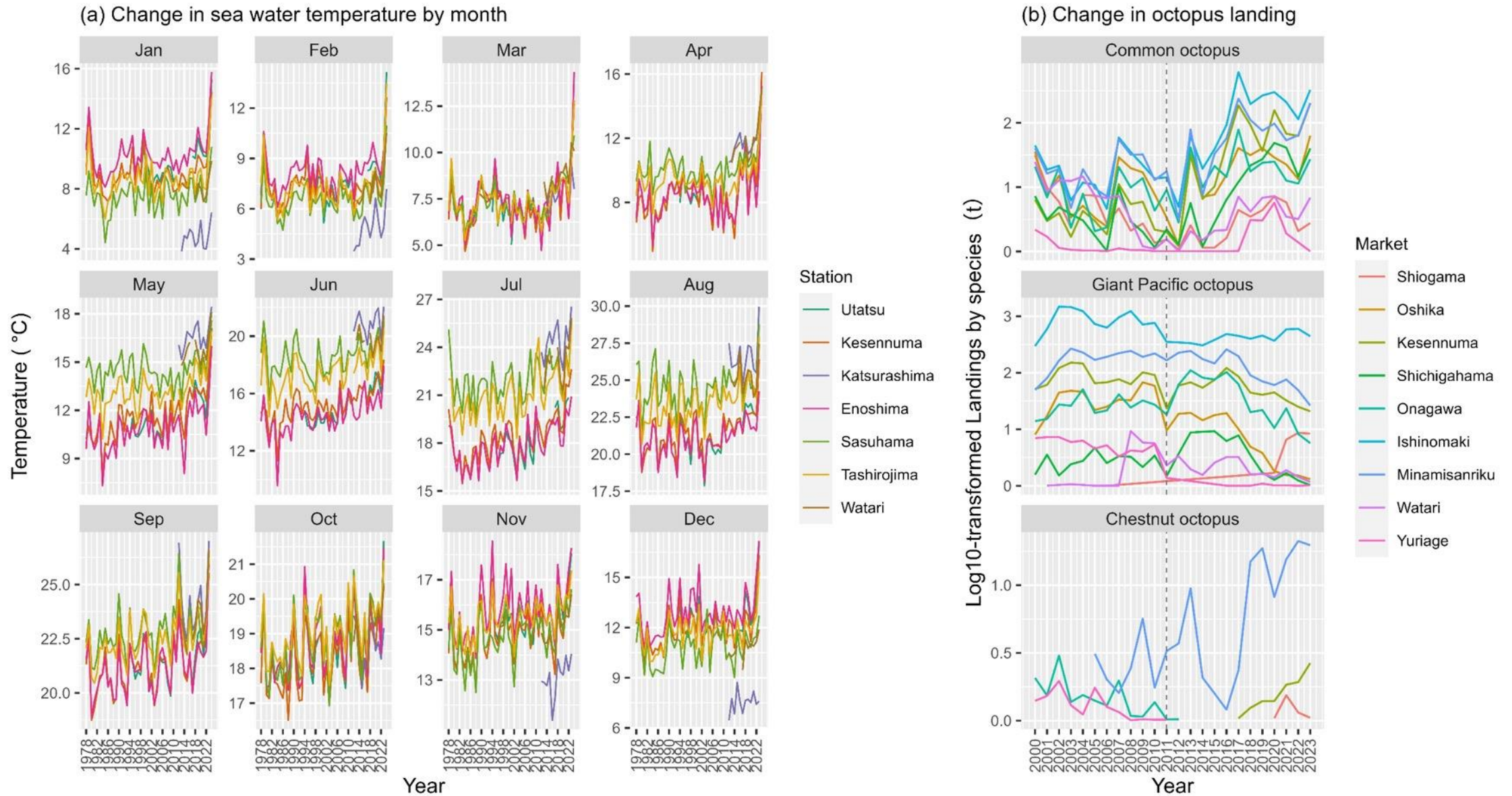
Physical characteristics around Miyagi Pref. and the Sanriku Coast



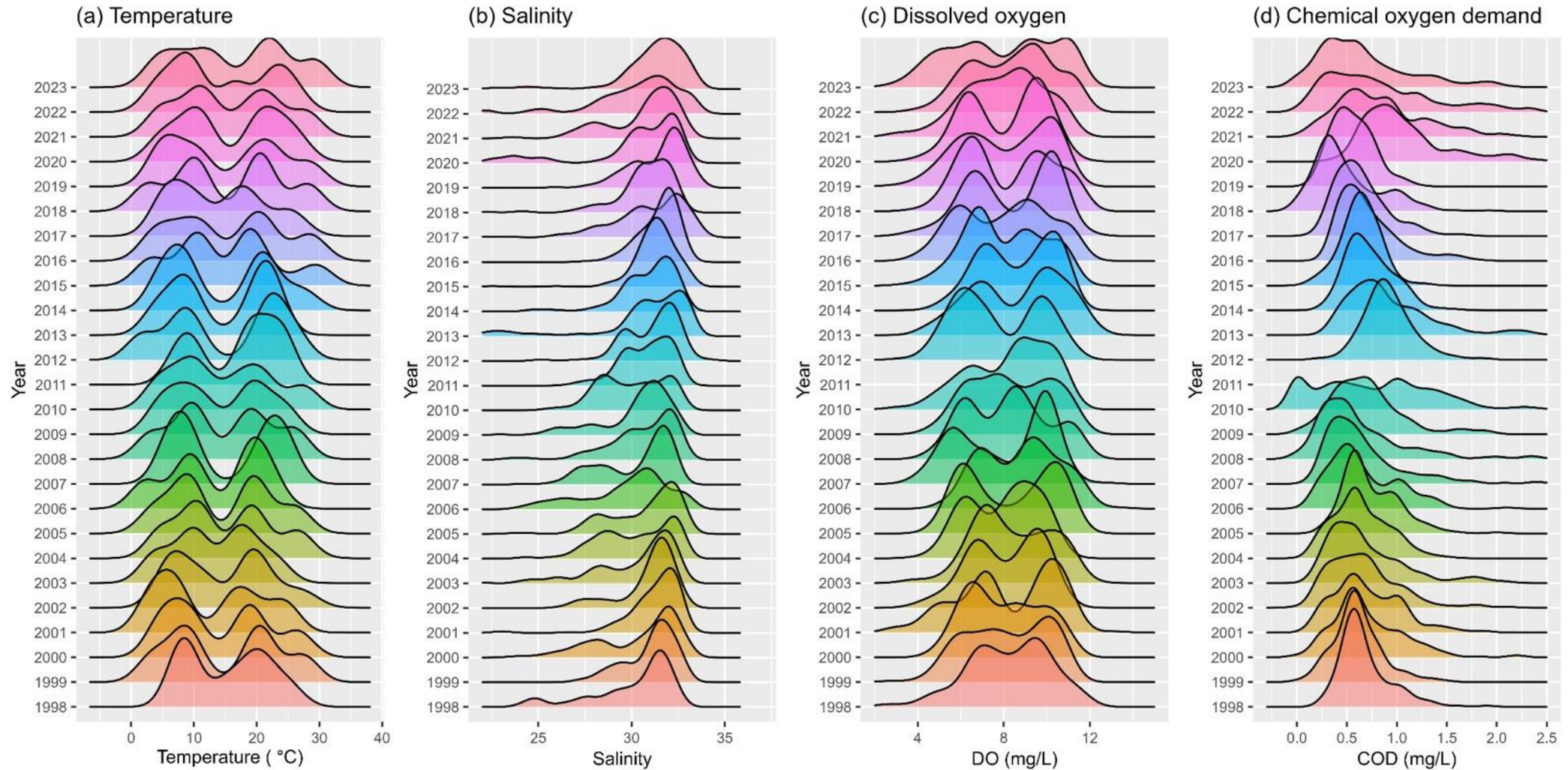
Major physical processes around the Sanriku Coast



Change in sea water temperature and octopus landings in Miyagi

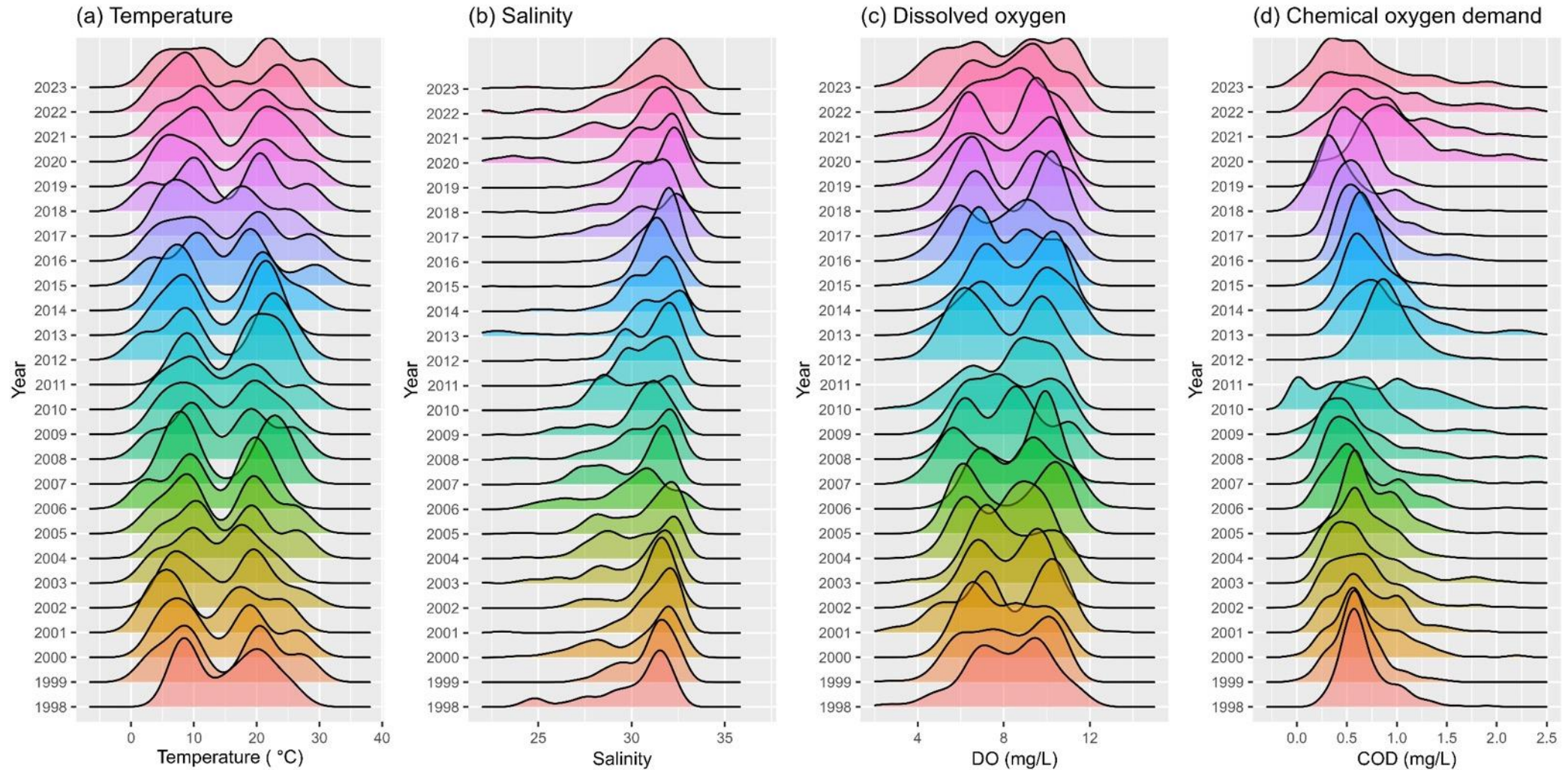


Change in water environment in Matsushima Bay, Miyagi (1998-2023)



(Data source : 宮城県水産技術総合センター)

Change in water environment in Matsushima Bay, Miyagi (1998-2023)



(Data source : 宮城県水産技術総合センター)

Stakeholder Collaborations

Fisher-Science
eDNA

Octopus
“water bug”



スィムシ
 (“water bug”)

e.g., *Cirolana harfordi japonica*

Cirolanid isopods

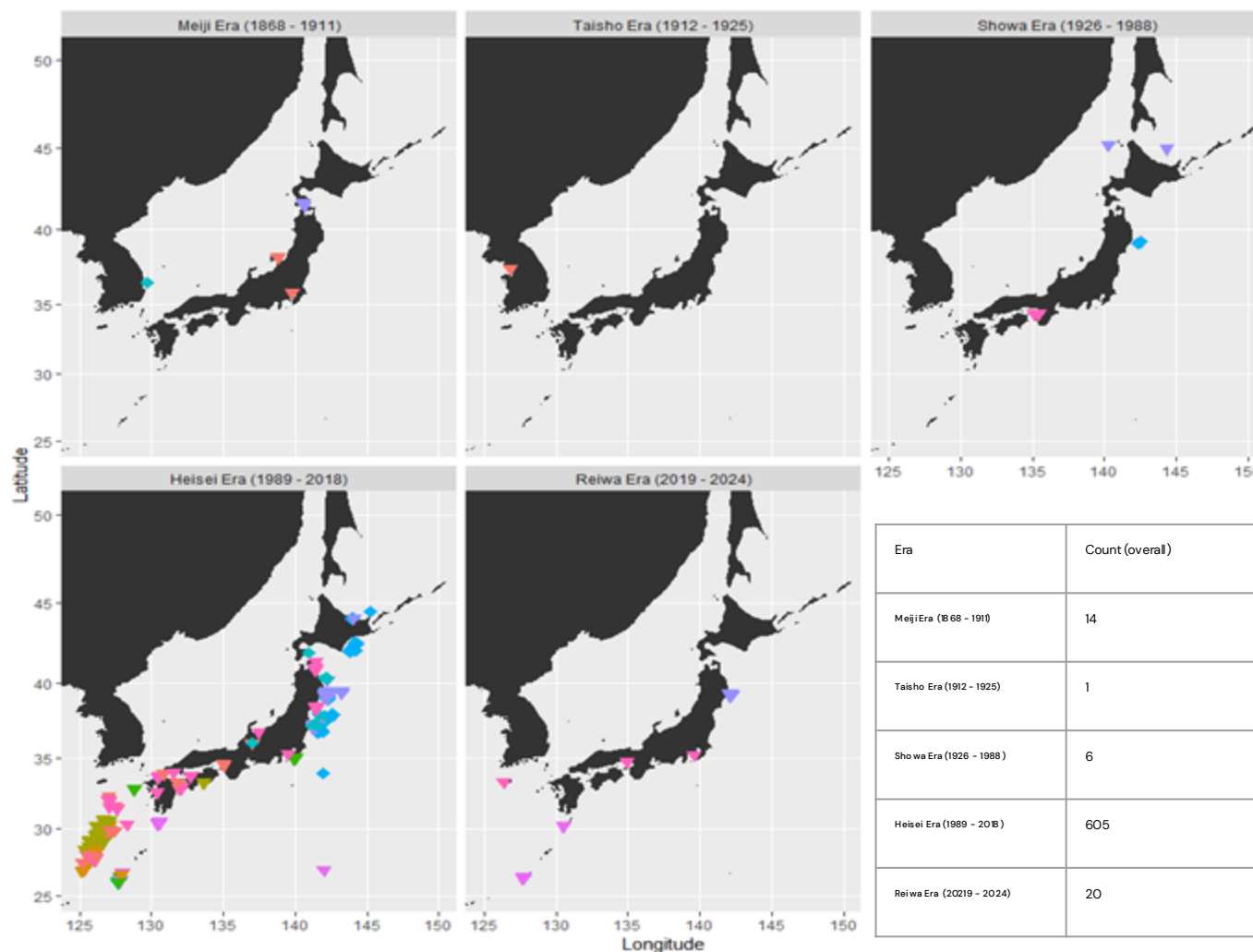
Amphipods



”Cirolanid isopods are important to marine food webs around the world but can also be damaging pests to the fishery industry, especially to fish cultured in nets. These isopods are also known to attack dead, dying or living animals including humans.” M. Thomson, University of Sydney

Museum Data of Octopuses Fished in Japan

Species	Count (overall)
<i>Amphioctopus fangsiao</i>	48
<i>Amphioctopus marginatus</i>	28
<i>Amphioctopus membraneus</i>	0
<i>Amphioctopus ovulum</i>	32
<i>Callistoctopus luteus</i>	7
<i>Callistoctopus minor</i>	0
<i>Callistoctopus ornatus</i>	9
<i>Enteroctopus dofleini</i>	65
<i>Muusoctopus profundorum</i>	51
<i>Octopus conispadiceus</i>	323
<i>Octopus cyanea</i>	16
<i>Octopus sinensis</i>	71



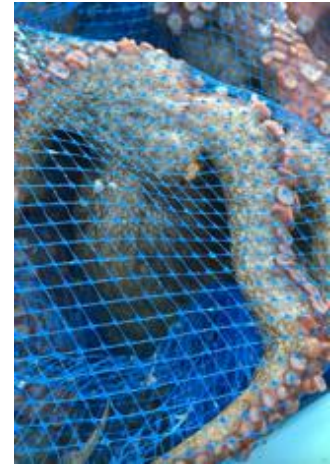
Stakeholder Collaborations

Highlighting & Incorporating

Local Knowledge + oral history



eDNA collection & educ. workshops



Stakeholder Activities



令和5年度宮城県農山漁村発イノベーション人材育成研修

宮城県農山漁村発イノベーション人材育成研修

～起業・新規事業のために～
(参加費無料)

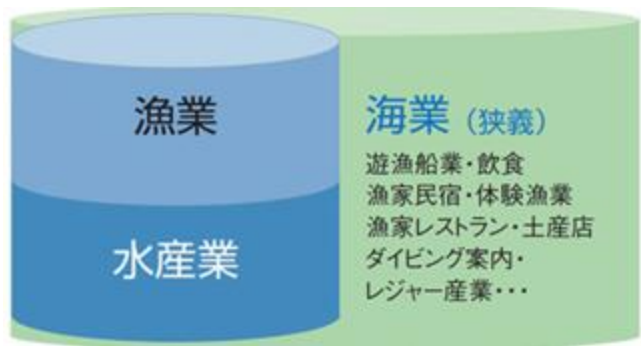
参加者募集!

「農山漁村発イノベーション」とは、6次産業化を促進させて、農林水産物だけでなく地域の文化・歴史や森林、景観などの多様な地域資源も活用し、農林漁業者はもちろん、地元の企業なども含めた多様な主体の参画によって新事業や付加価値を創出する取組のことです。
この研修では、地域にある資源を活用して多様な「なりわい（ビジネス）」を創出するために、アイデア出しから事業計画書作成までを一体的に習得する講義とワークショップを実施します。

※6次産業化：農林漁業者が生産から加工、販売まで一貫して取り組むこと

期間	令和5年10月～令和6年2月（研修全7回、個別支援1回）
対象者	宮城県内で、3年後までに農山漁村の地域資源を活用した事業を始める意向のある方 【対象者の例】 <input checked="" type="checkbox"/> 宮城県居住の地域おこし協力隊 <input checked="" type="checkbox"/> 地域資源を活用した事業を検討している事業者（経営者・新規事業担当者等）
定員	15名（申込順）

主催 宮城県
※この事業は宮城県が創設した「イノベーション」地域活性化事業に活用するものです。



Examples of Partner Collaborations

Outputs--- Public Outreach

Engaging research collaborators and diverse coastal community stakeholders to share knowledge, inspire innovation, and realize holistic understandings for social and environmental sustainability

③ Creative Public Outreach



Social media dissemination

Website

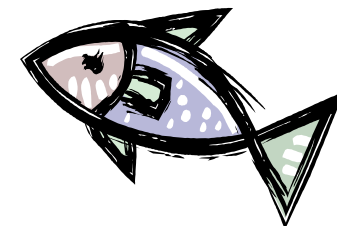
Social media (e.g., Instagram, YouTube, LINE, FB)

Public engagement

- Collaborative workshops
- UMIGYO Field visits by stakeholders
- Educational & citizen-science activities
- webinar

Educational outputs

- Film shorts
- Photographic exhibits
- oral history podcasts
- focus on gender



Concluding Thoughts

Working to strengthen connections between people and the sea, as well as people in other areas and sectors (*umigyo*), as a means to strengthen sociocultural and environmental sustainability.

Lots of challenges, not least of which is time.

We have excited and interested stakeholders; am curious to see how well we can combine LEK with the modeling.

Looking to expand SEAQUEST locally to a longer running project

And also, for collaboration with others internationally



Thank you!

ご清聴ありがとうございました



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