

# Redefining Japan's Fisheries in the Age of Policy Reform

The Evolution from Single-Species Management  
to Dynamic Multi-Species Fisheries

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<http://recon.fisheries.agr.iwate-u.ac.jp/>

Pew Marine Fellow



資源

Resource

海

Ocean

Economics

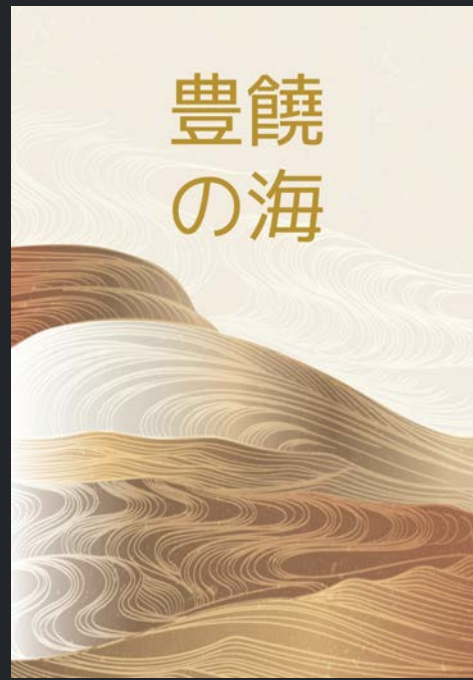
經濟



*“Saika no Umi”  
The Sea of Disaster*



*“Hojo no Umi”  
The Sea of Fertility*





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**Motivation**

**Analysis**

**Stories**

## Motivation

# Reform of Fisheries Policies 2018

(Amendment of the Fishery Act)

expand the total allowable catch (TAC) managed species and *single-species-based fishing quotas*

## Analysis

### Effects on multi-species fisheries ?

## Stories

32% of landing volume in Japan (2003 ~ 2018)  
is from bottom trawler and  
large- scale setnet fishery

Motivation

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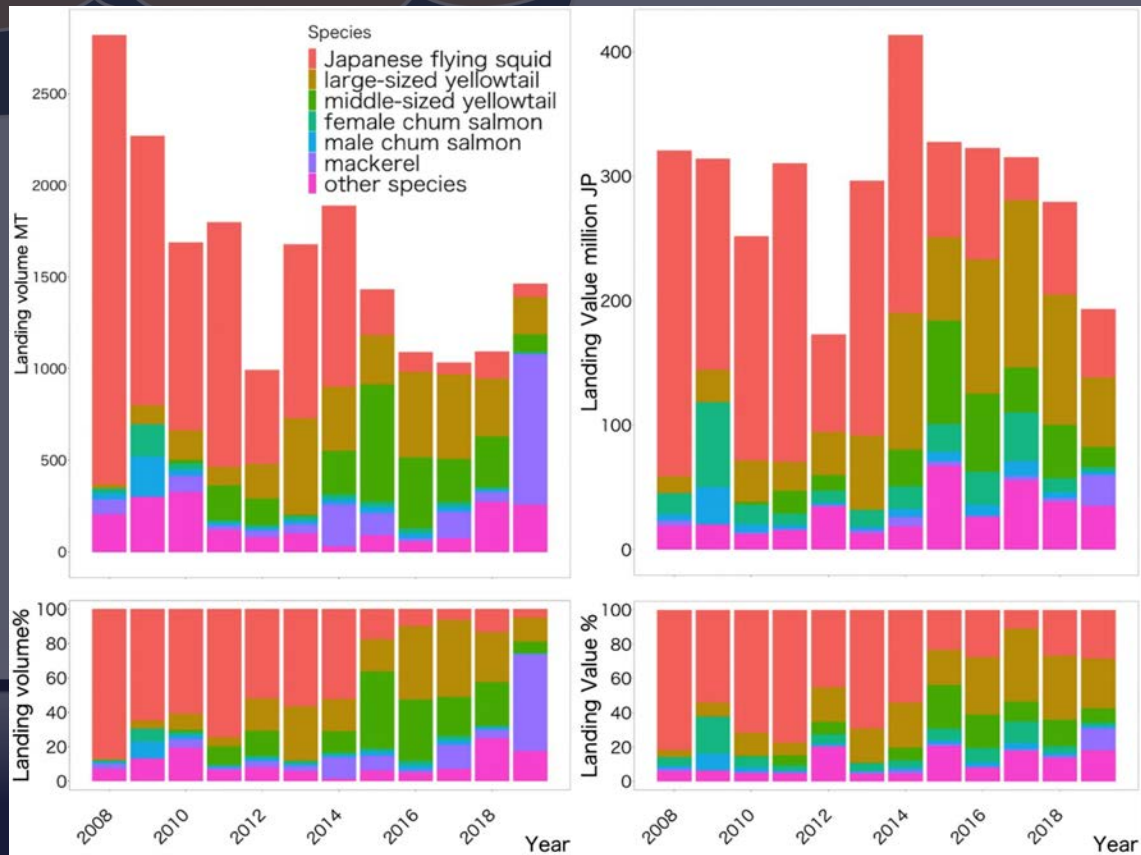
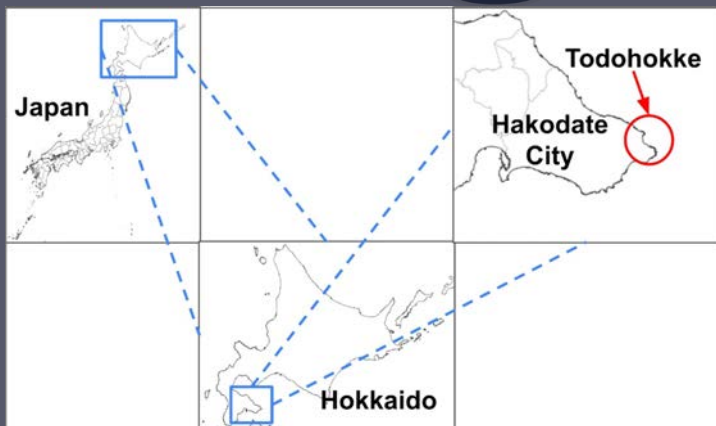
Stories

## Fishery “Portfolio” for multispecies fisheries

“Portfolio diversification, in terms of exploiting multiple species or populations, has been shown to stabilize interannual variability in commercial fisheries and fishing communities”

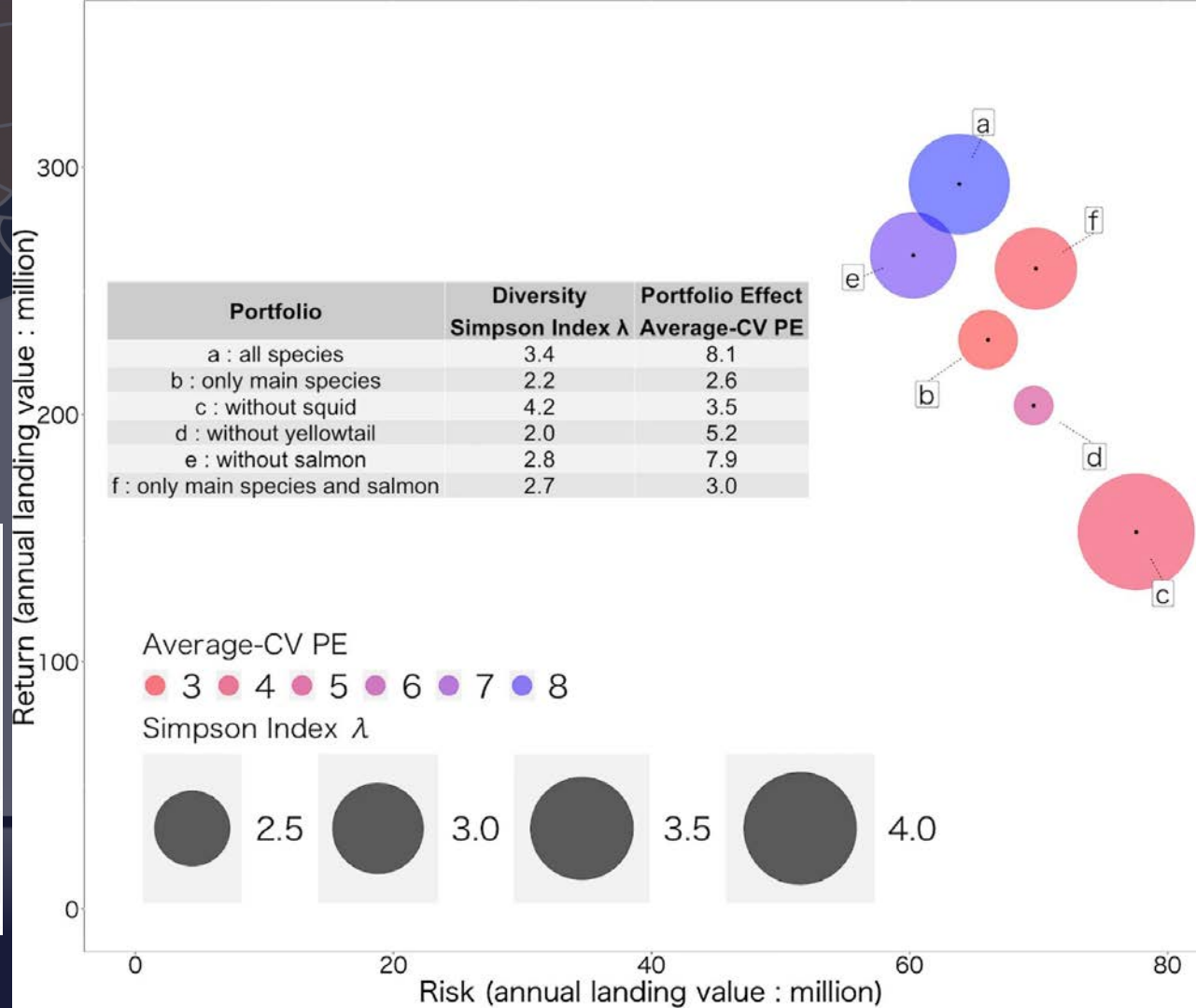
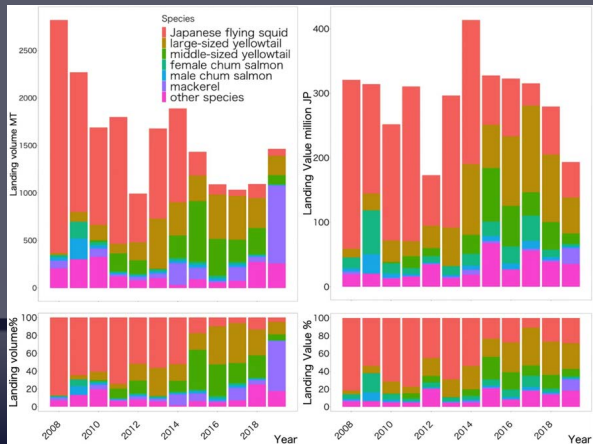
*Fisheries portfolio diversification and turnover buffer Alaskan fishing communities from abrupt resource and market changes*  
Timothy J. Cline Daniel E. Schindler and Ray Hilborn  
*Nat Commun.* 2017; 8: 14042.

Nakamura, K., Abe, K. & Ishimura, G. A multi-species catch reduces risk and enhances stability in the fishery? Implications from a portfolio analysis of the Hokkaido setnet fishery. *Fish Sci* 89, 415–427 (2023).  
<https://doi.org/10.1007/s12562-022-01656-4>





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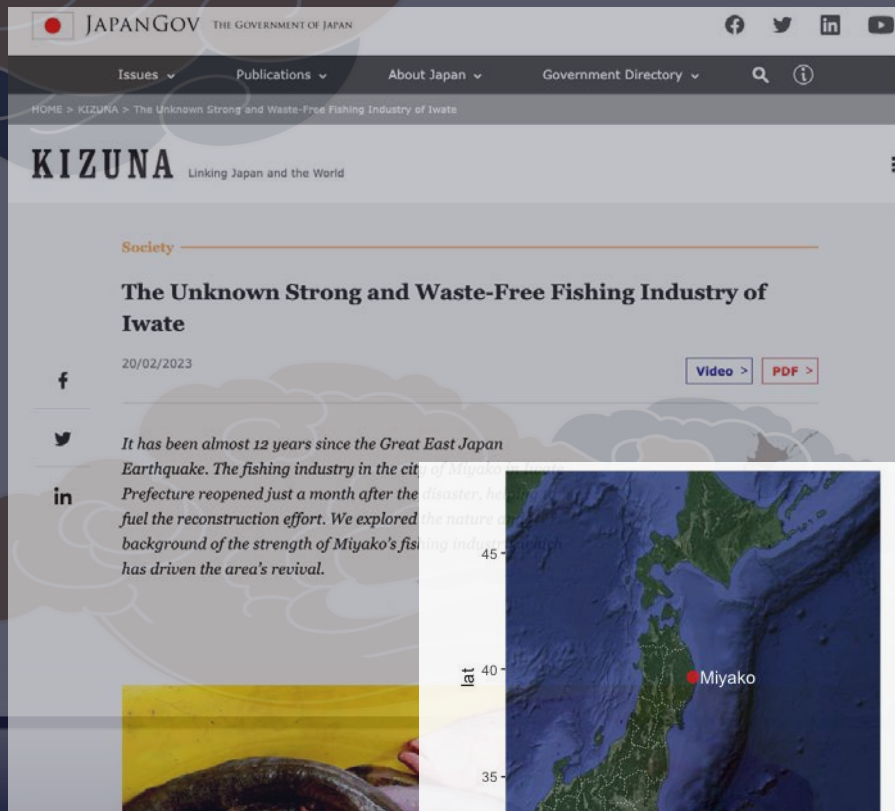
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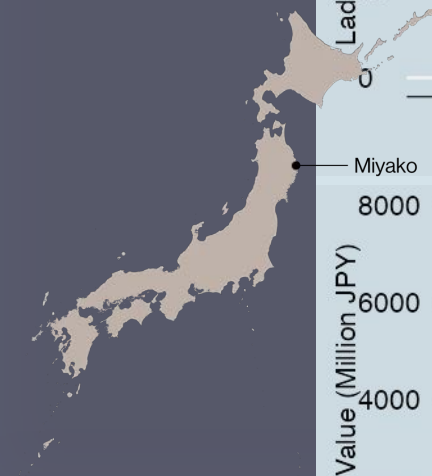
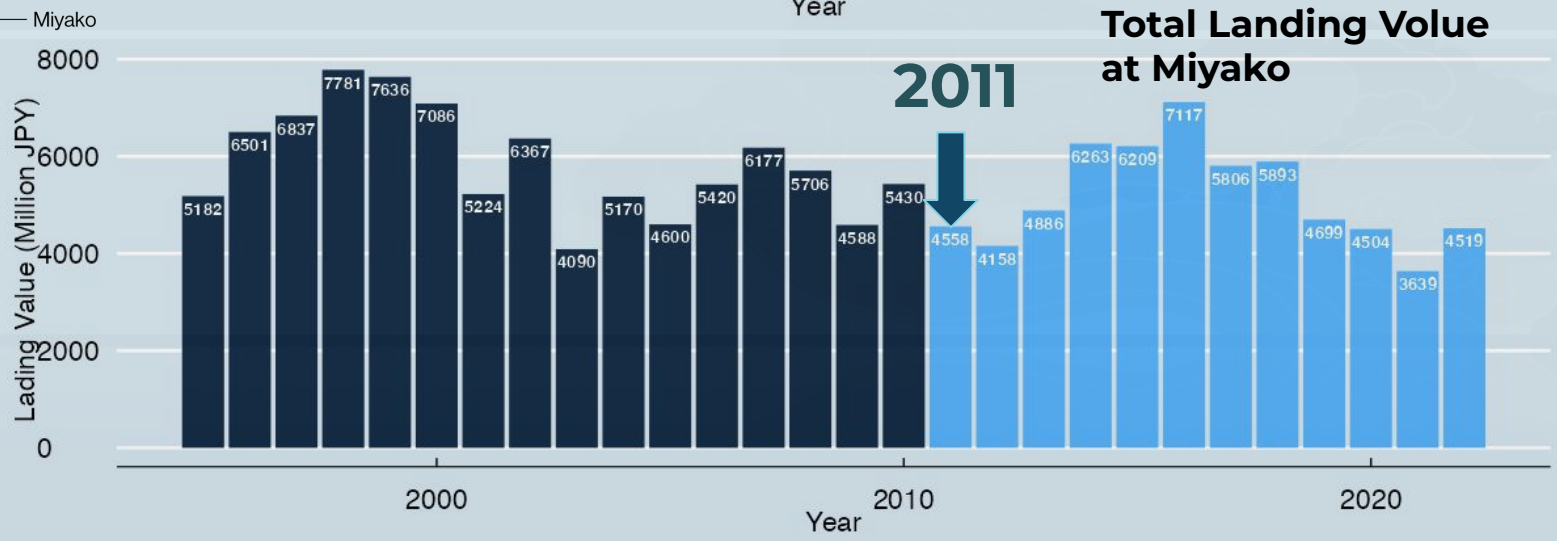
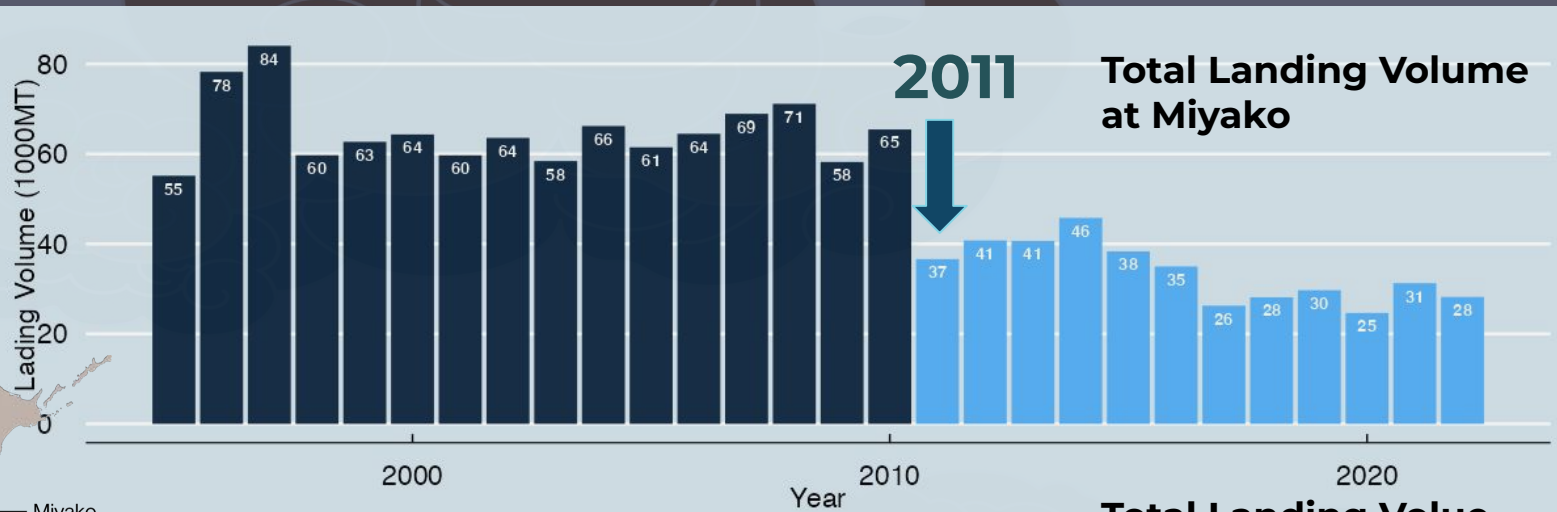
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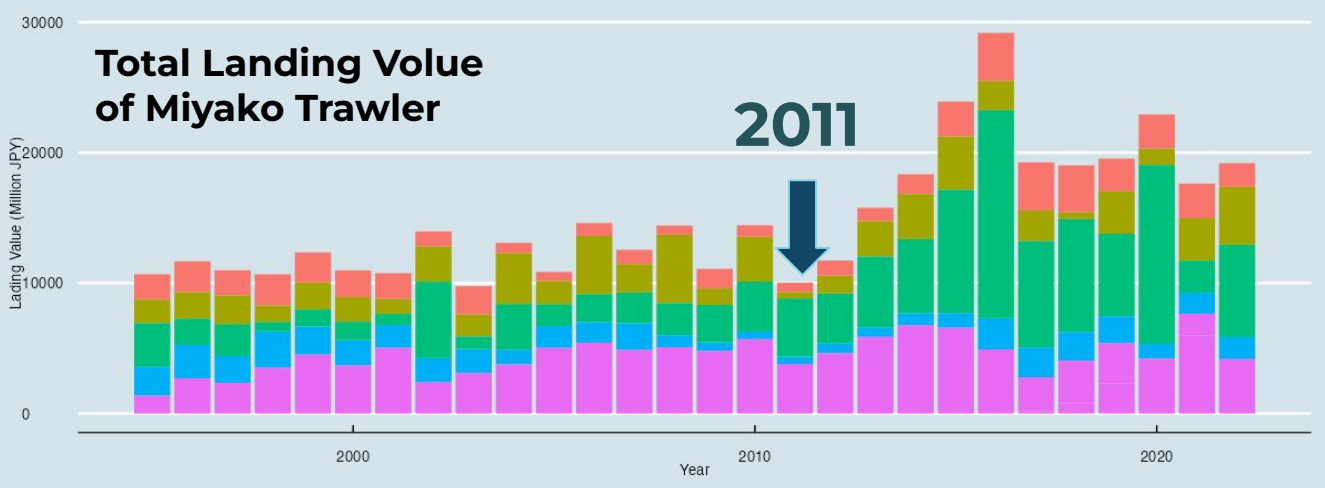
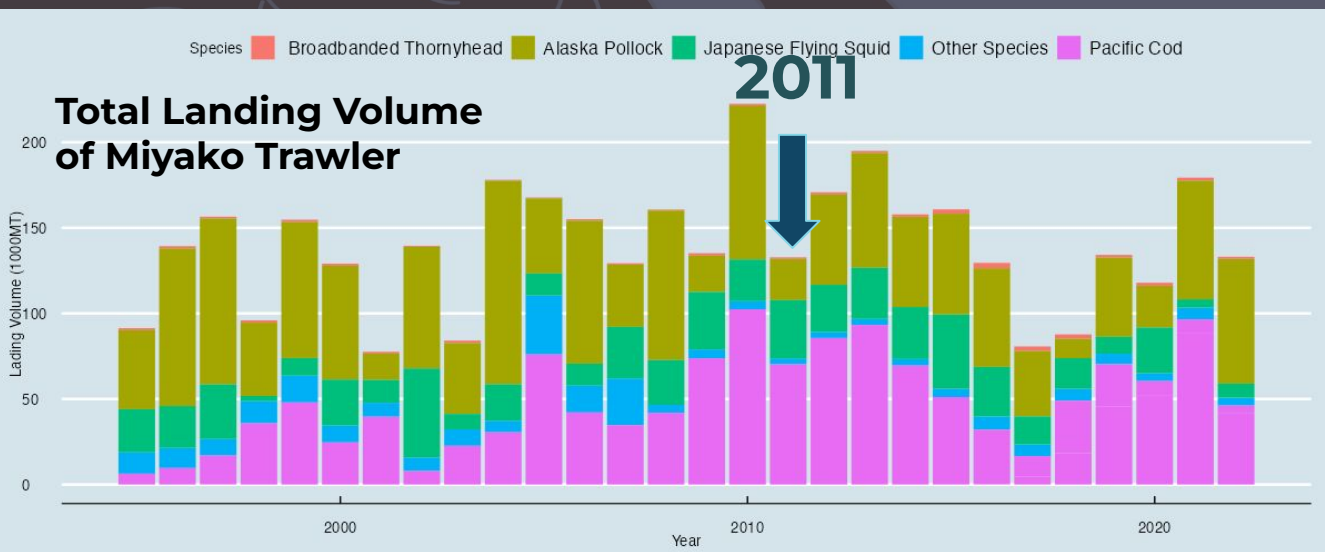
# The Unknown Strong and Waste-Free Fishing Industry of Iwate, 20/02/2023

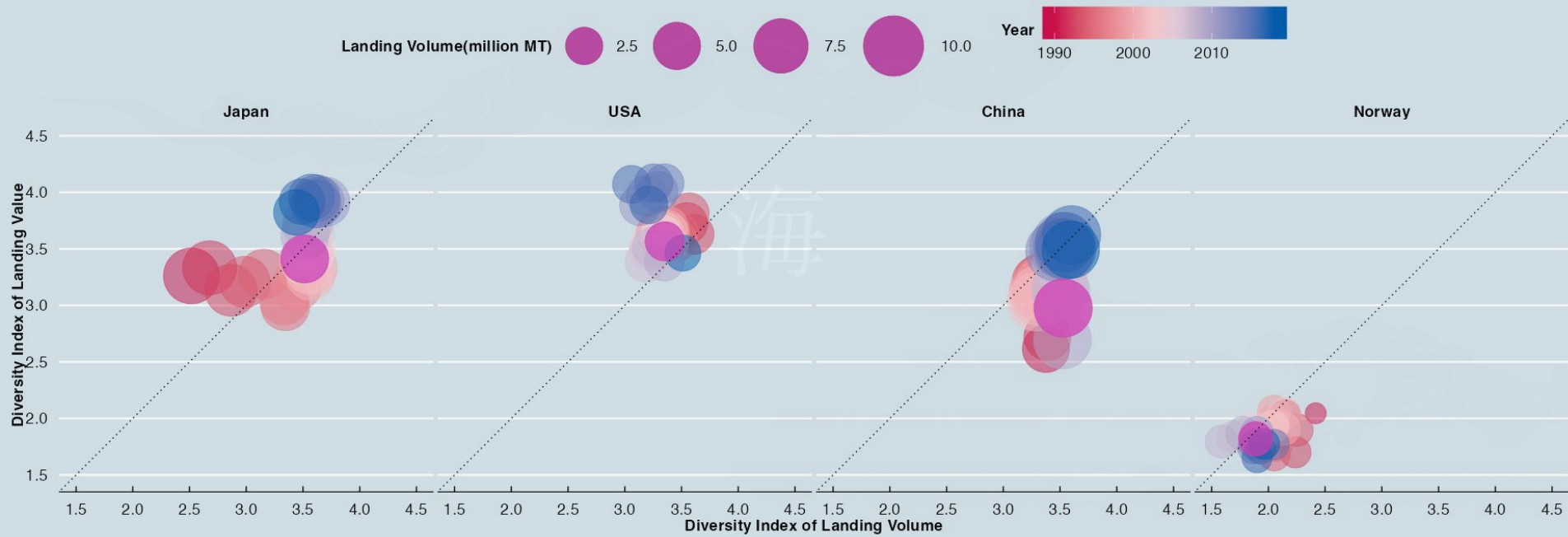
[https://www.japan.go.jp/kizuna/2023/02/unknown\\_strong\\_and\\_waste-free\\_fishing.html](https://www.japan.go.jp/kizuna/2023/02/unknown_strong_and_waste-free_fishing.html)



[https://www.youtube.com/watch?v=mflfHMu5b\\_Y](https://www.youtube.com/watch?v=mflfHMu5b_Y)







## Diversity Index in Landing Value and Volume

Shannon Diversity Index data from Sea Around Us Project

<https://www.searoundus.org/> in prep Ishimura et al.,



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WEALTH OF  
OCEAN NATION