Coastal conservation practices (*Satoumi*) and marine protected areas in Japan: institutional approach

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Background
(CBD/SBSTTA Nairobi meeting, May 2010)

- 2012 target of protecting 10% of marine and coastal areas has NOT been achieved
- New 2020 target proposal of protecting 15% of marine and coastal areas faced many objections.

CBD Aichi Target (Para 11)

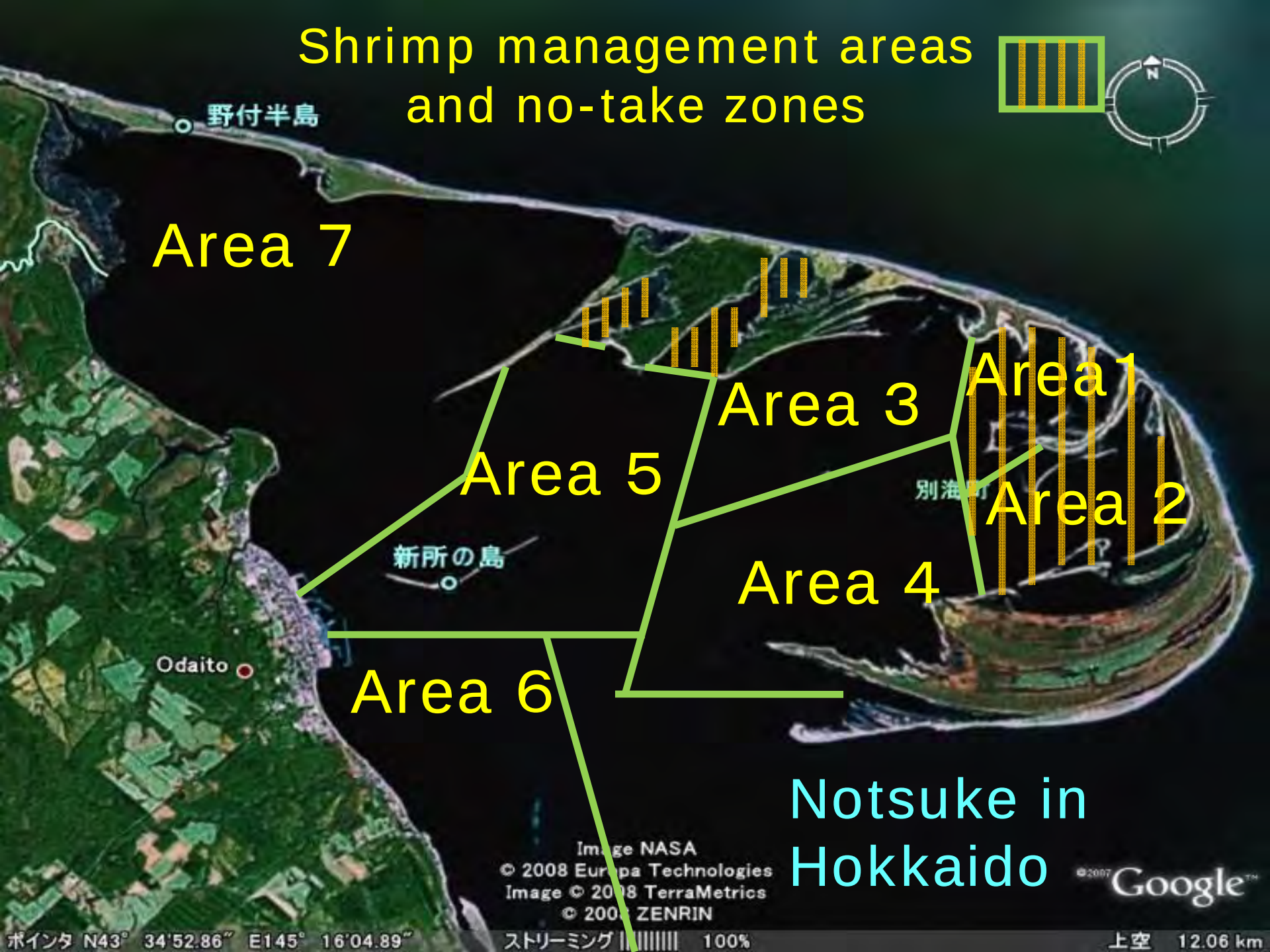
By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascapes.

In Nagoya, Japan, COP10 of CBD in October 2010, Targets toward 2020 was agreed.

Different backgrounds exist for MPAs between Japan and other countries

	Japan	Other countries
Key driving forces	Fishery related policy	Environmental policy
Area scale	Small area (but land and sea connectivity)	Large coverage in the sea
Basic approach	No-take and other local participatory measures (Satoumi)	No-take, no-entry, or other restrictions
Monitoring and enforcement	Peer monitoring, gov't enforcement	Gov't enforcement


Kunashir / Kunashiri
北海道
（札幌）
Sapporo
Notsuke in
Hokkaido
© 2008 Geocentre Consulting
© 2008 Europa Technologies
© 2008 ZENRIN
Image NASA
©2007 Google
ポインタ N43° 18'50.45" E142° 57'54.45"
ストリーミング 100%
上空 539.07 km


Shrimp management areas
and no-take zones
野付半島
Area 7
Area 3
Area 1
Area 5
別海町
Area 2
新所の島
Area 4
Odaito
Area 6
Notsuke in
Hokkaido
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ポインタ N43° 34'52.86" E145° 16'04.89"
ストリーミング 100%
上空 12.06 km

Eelgrass (amamo) provides habitats of shrimps.

Self-imposed agreements include restrictions on fishing gear, season, area, and quota. Additional habitat restoration activities are also conducted.

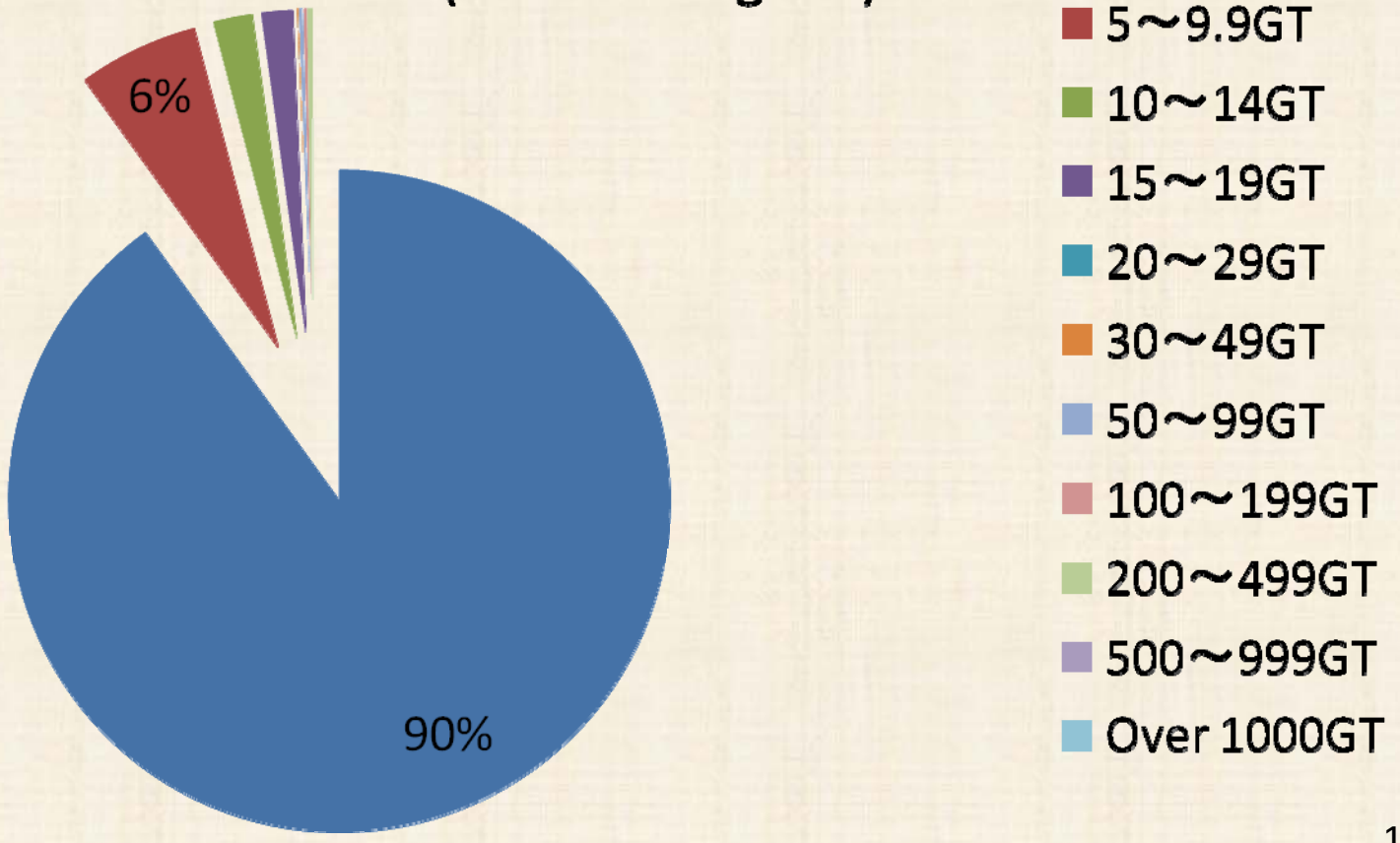
Picture：Courtesy of Notsuke fishery cooperative office

Shrimp trawl boats

Photo: Courtesy of Notsuke Fisheries Cooperative Association

Small-scale fishery is dominant in Japan

Number of Japanese fishing vessels by size
Total 303,842 vessels in 2003 (Fisheries Agency of Japan)

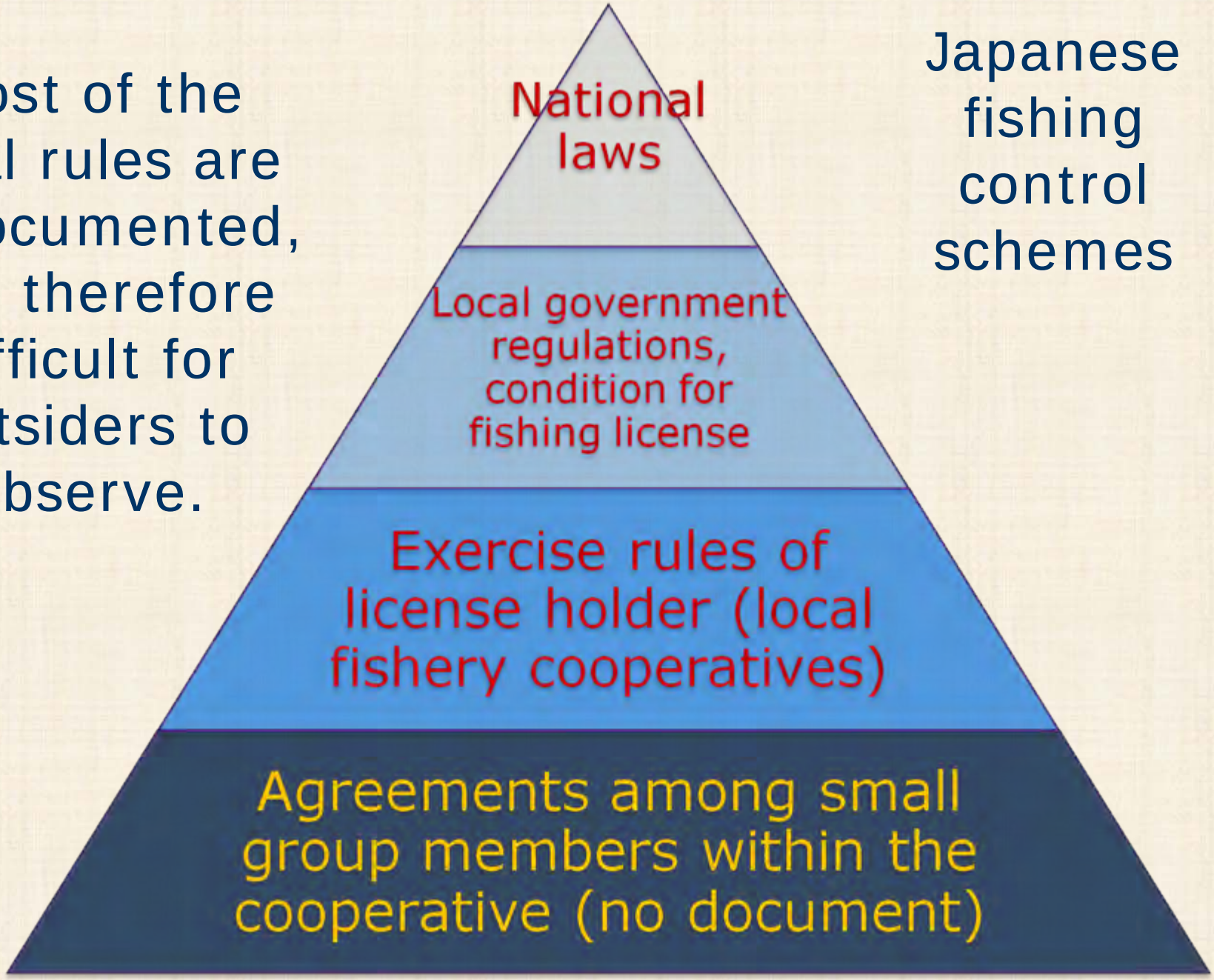


Small scale fishermen have established fishery cooperative associations (FCAs)

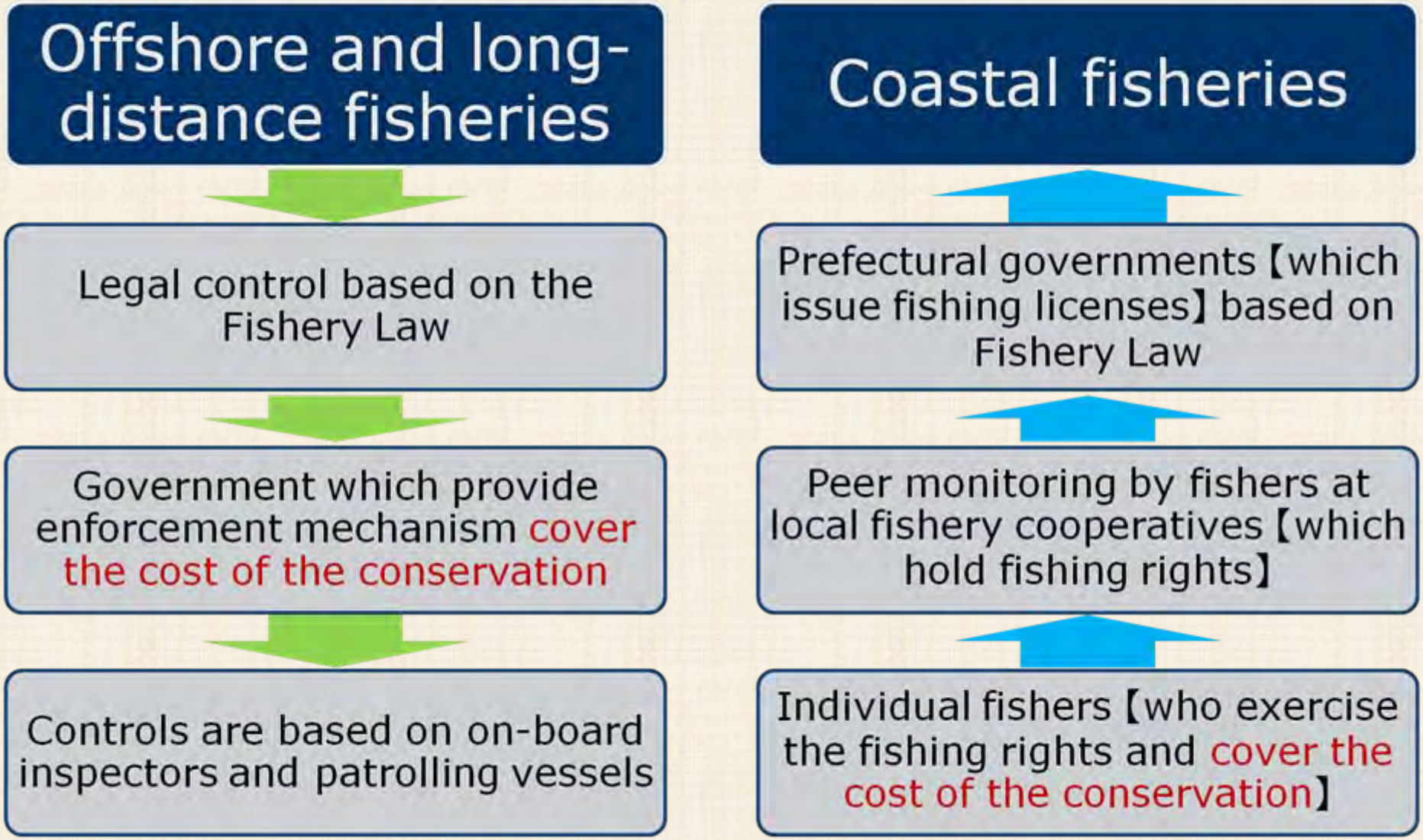
- Around 1,000 fishery cooperative associations (FCAs) exist in Japan.
- Coastal fishermen usually adopt detailed conservation measures proposed by their peer members of FCAs and collectively enforce them.
- Other roles include; collective purchase of gears, ice, and fuel;
- Lending money and settling of sales accounts for fishers.

Most of the local rules are undocumented, and therefore difficult for outsiders to observe.

Japanese fishing control schemes



Different practices inside Japan



Office of a local fishery cooperative association

Meeting in a fishery cooperative

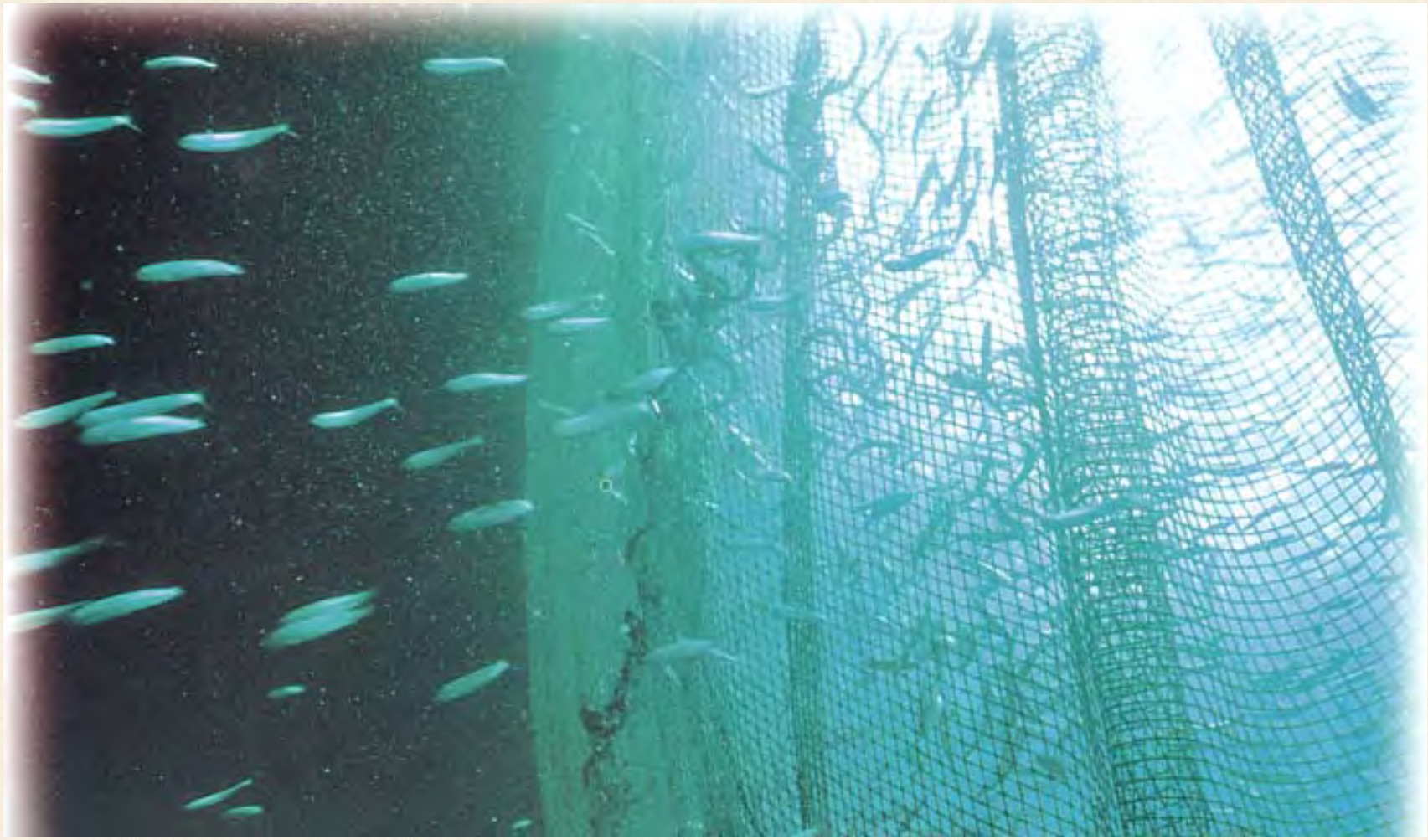
Size restrictions and release of small fish

三豊地域漁業者検討会

《漁獲サイズの制限》

対象漁法	対象魚種	再放流サイズ
底曳網	ヒラメ	28cm
	クルマエビ	15cm
	ガザミ	15cm

Mesh size regulation



Release of hatched juveniles

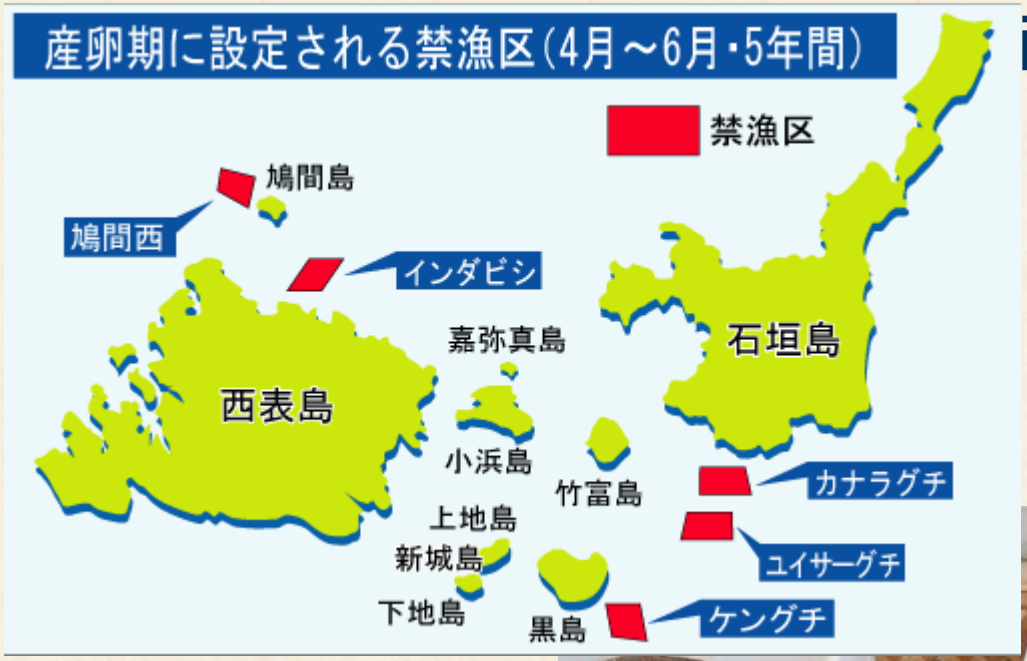
Closed season

資源回復推進支援事業（係船休漁）	
所　　属	新潟漁業協同組合山北支所
船　　名	稲　荷　丸
登録番号	NG3－14578
実 施 日	平成 21 年 9 月 3日

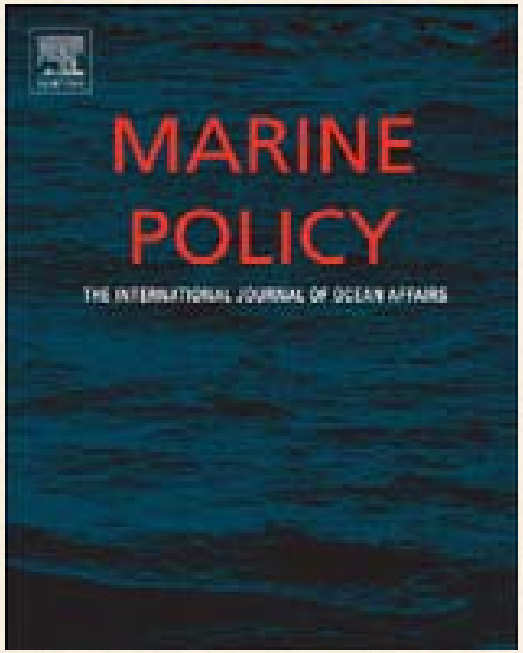
Vessel name：Inari-maru
Registration number：
Execution day：
September 21,2009

Setting of closed area

Example of MPAs in Yaeyama Islands Okinawa since 1998



Number of MPAs in Japan



Marine protected areas in Japan: Institutional background and management framework (2010) Yagi et al. *Marine Policy*

- A survey was conducted to collect information of MPAs in Japan.
- 1161 locations of MPAs were identified.
- Of these, 30% are community-based autonomous MPAs managed by fishery cooperatives.

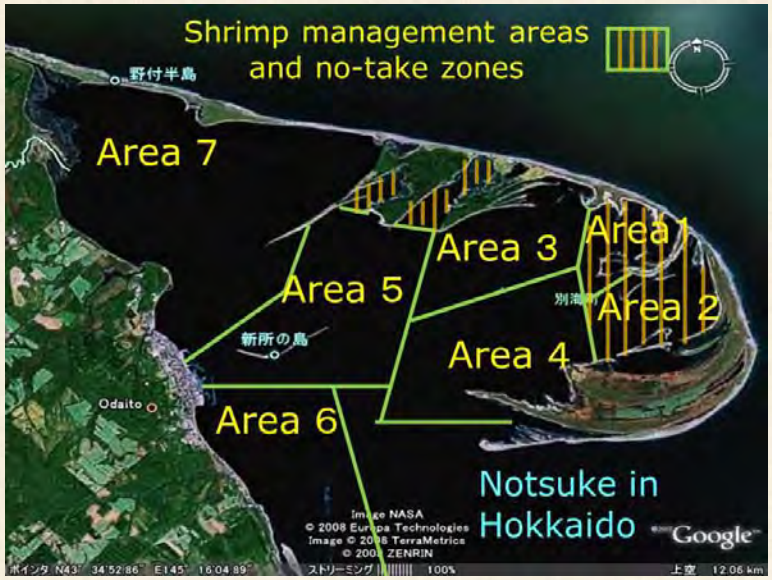
Key characteristics in Japan

- 90% of the MPAs are fishery related regulation.
- The number of such MPAs roughly corresponds to the number of fishery cooperatives (around 1,000) in Japan.
- 30% of MPAs are self-imposed regulations agreed by local fishers in their tenure fishing areas.

Additional collective activities for habitat rehabilitation

MPA and Satoumi

	MPA in Japan	Satoumi (Sato=village) (Umi=the sea)
Number	More than 1161	No comprehensive data
Area	Defined	Undefined (including enhancing connectivity with land ecosystem)
Period	All year - several weeks	Repeating day activities
Form	Restriction on certain human activity	Restoration or other activities by people



Local people participation for the restoration of Amamo (eelgrass) meadows in the Tokyo Bay (Source; Amamo Revival Collaboration in Kanazawa-Hakkei, Tokyo Bay Area)

Educational process (Source; Amamo Revival Collaboration in Kanazawa-Hakkei, Tokyo Bay Area)

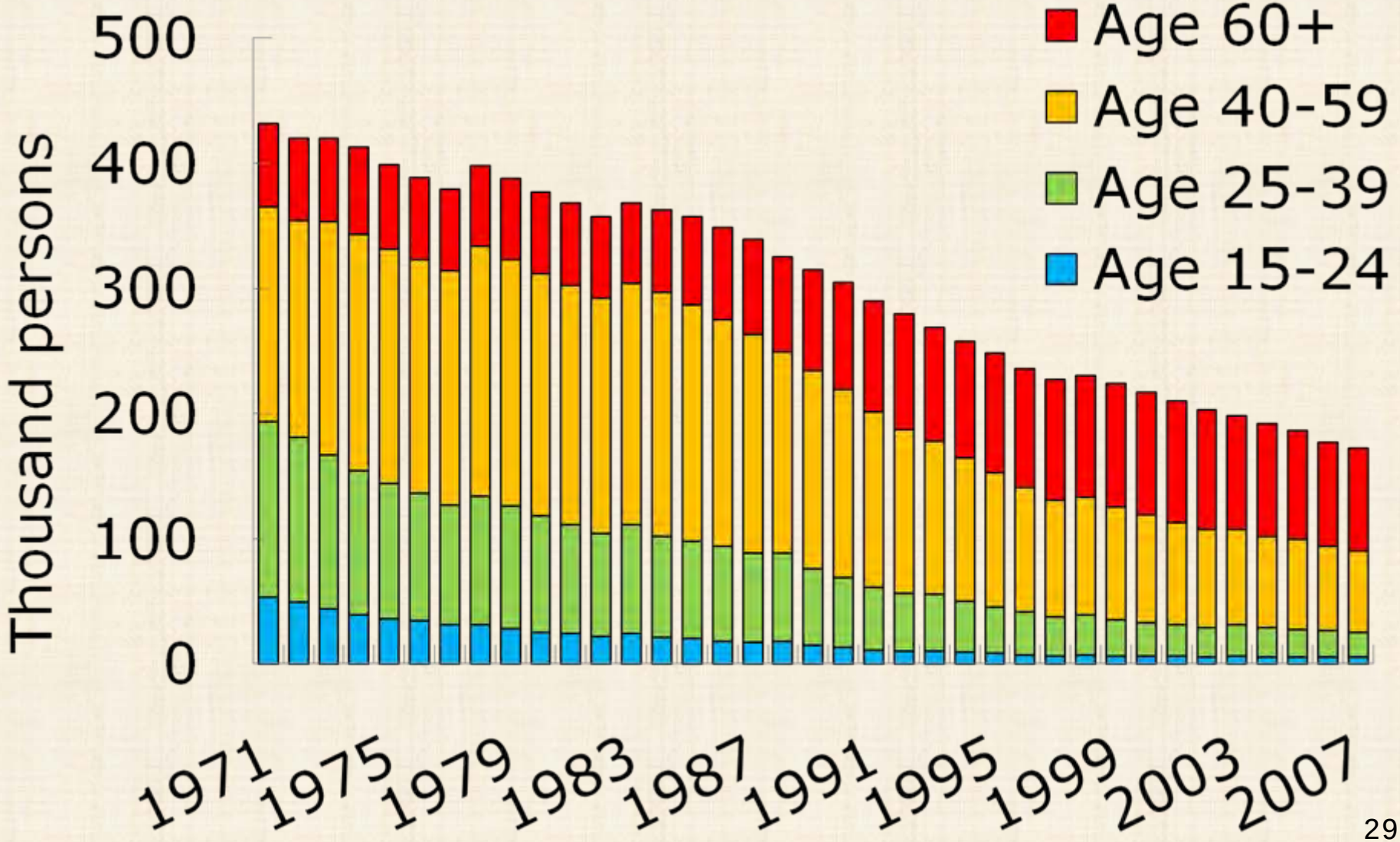
Management practices of MPAs and Satoumi in Japan

- Conservation costs are paid by fishers, as they assume increased future catches can be received by the same group. (existence of limited entry system in fishery)
- Self-imposed rules are, therefore, mutually monitored. Sanctions are imposed against infractions.

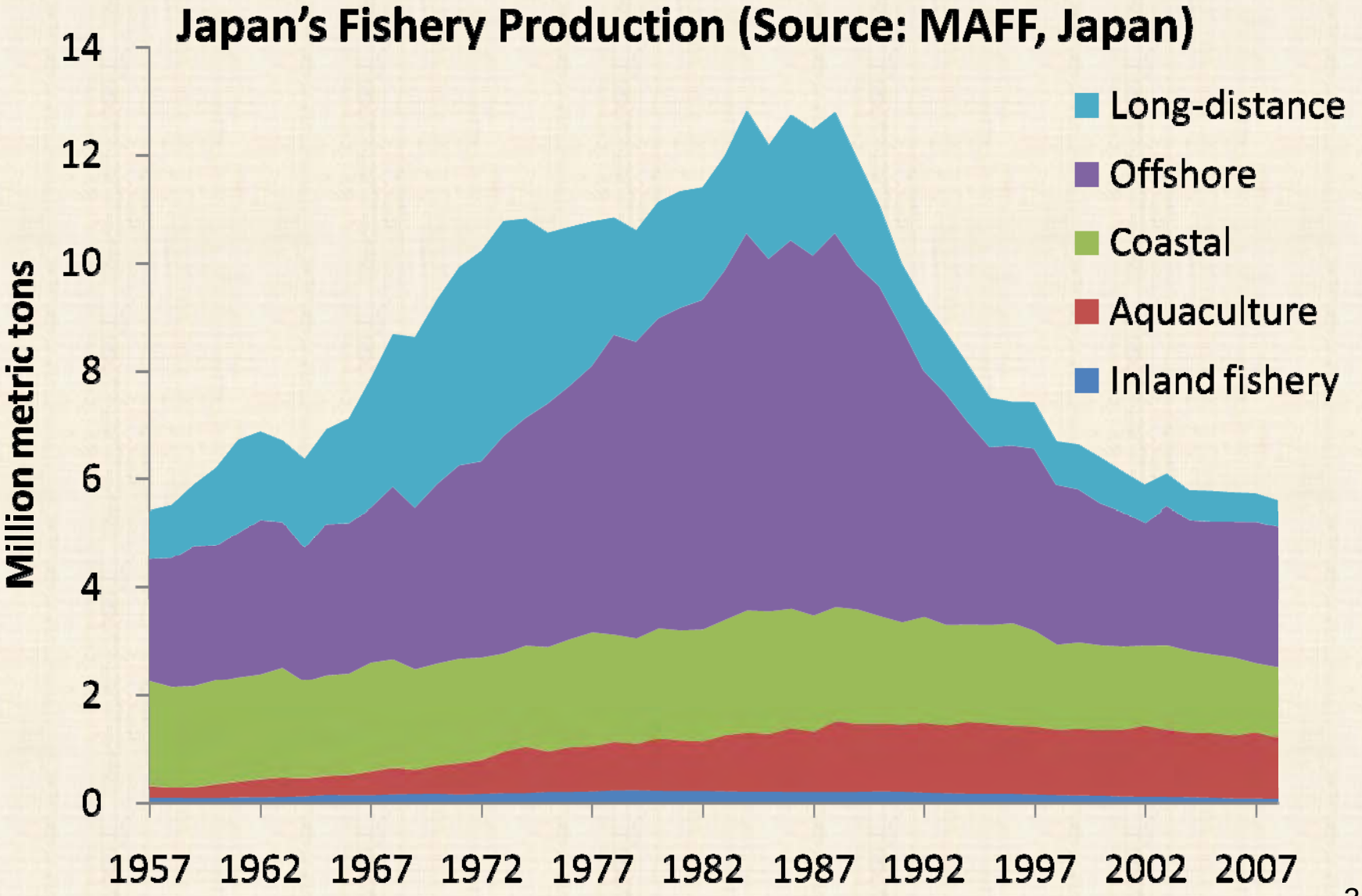
But there are troubles:

Number of fishermen in Japan

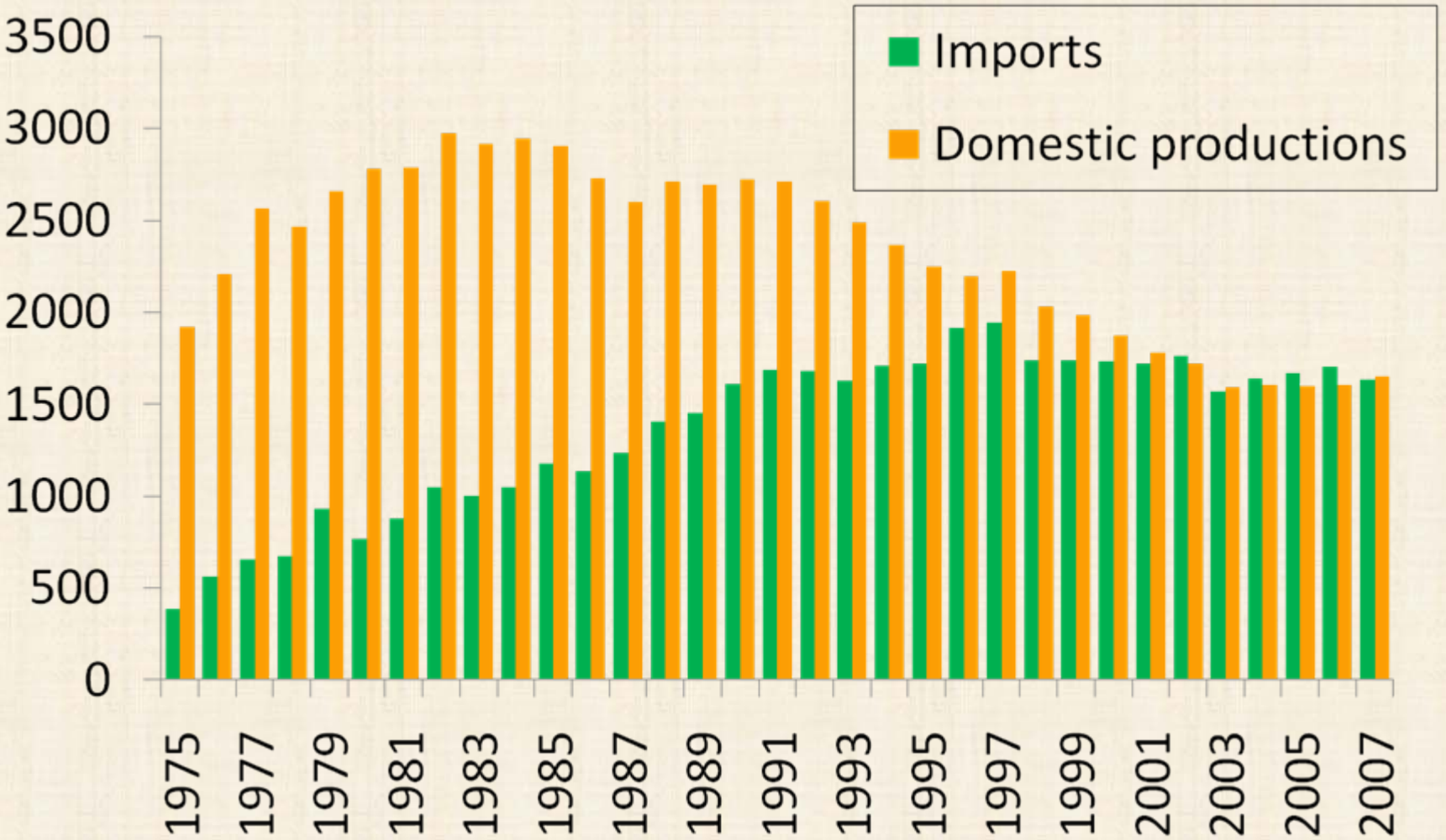
(Source: Ministry of Agriculture, Forestry and Fisheries, Japan)



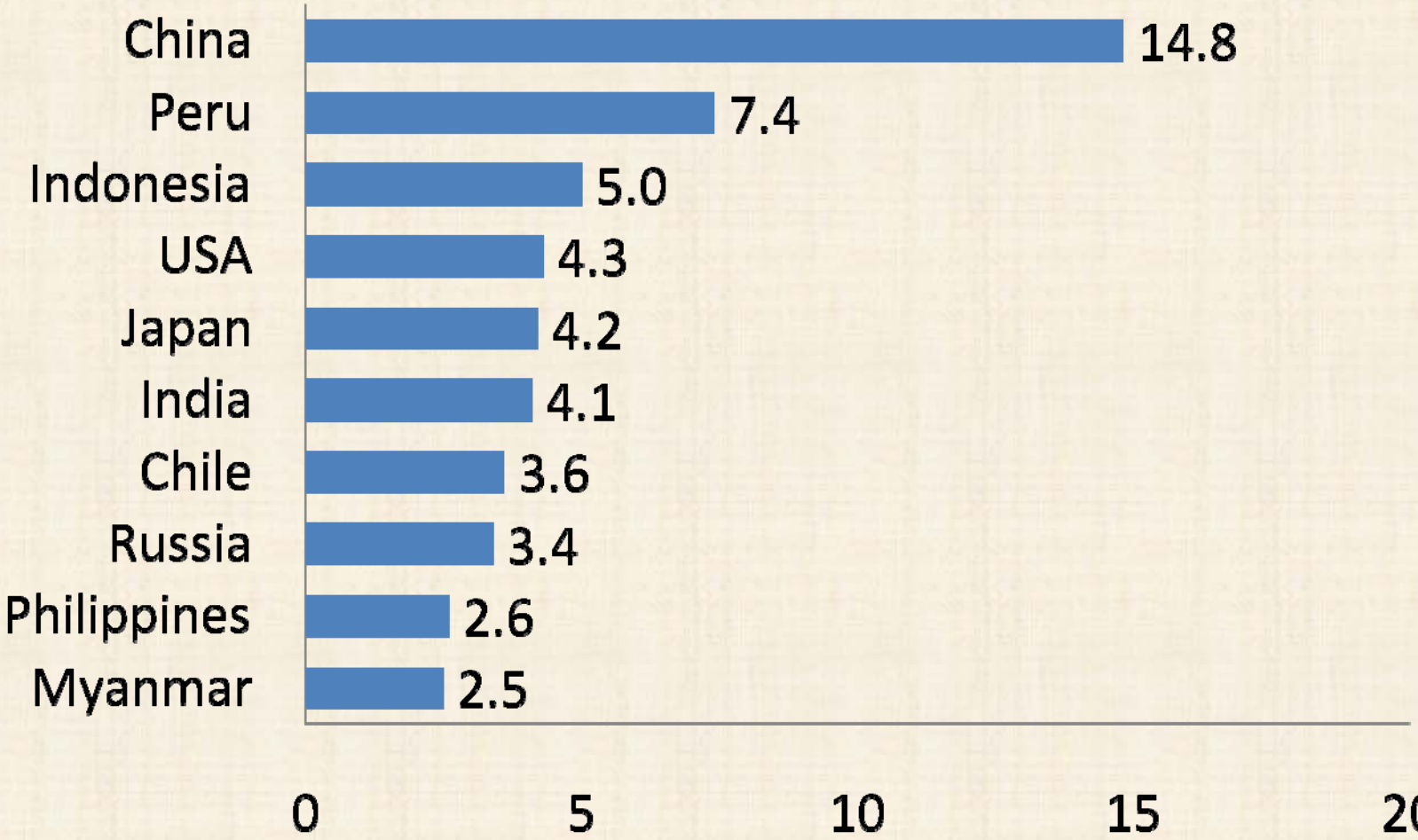
Trend of production is different



Japan's domestic productions and imports in fishery products (unit: billion JPY)



Top 10 country of world marine capture fishery (FAO: SOFIA 2011) Unit: million metric tons



Findings in Japan so far

- Government regulation to limit new entries in the area is critically important to sustain autonomous management by FCAs.
- If the costs of conservation are properly shared by the interest groups, the activity would be sustainable.
- If the economic performance of Japan's fishing industry become weaker, Satoumi and MPAs may face some difficulties.

Implications for international policy

- Evaluation standard for MPAs should not be limited to the area coverage (such as 10% of the sea).
- Future evaluation standard for conservation activities should include: (i) institutional characteristics such as monitoring and participation mechanism, and (ii) outcome on stock rebuilding and ecosystems rehabilitation.