

Marine Spatial Planning in Japan: progress and lessons learned

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CTCI Foundation, Taipei

Tokai University
東海大学

Kazumi WAKITA
脇田 和美

Today's talk

1. How is Marine Spatial Planning (MSP) positioned in the Basic Act on Ocean Policy and the Basic Plan on Ocean Policy?
2. Review of coastal and marine planning: from sectoral to integrated approach
3. Recent progress: Tools and projects/actions
ex. Marine Cadastre, Manual on wind energy in ports,
Offshore wind energy, Marine Protected Areas
4. Way forward

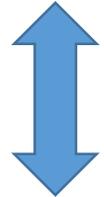
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Act and Plan on Ocean Policy

2007 Basic Act on Ocean Policy
(海洋基本法)

2008 Basic Plan on Ocean Policy
(海洋基本計画)



2013 Basic Plan on Ocean Policy



Every 5 year updated

2018 (SCHEDULED) Basic Plan on Ocean Policy

MSP promotion in the world

Since Feb. 2006,
Ecosystem-based Marine
Spatial Planning has

been developed by IOC

Sep. 2008: Marine Policy 32(5)
“The Role of Marine Spatial
Planning in Implementing
Ecosystem-based, Sea Use

Management”



MSP in the Basic Act on Ocean Policy

海洋基本法

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Chapter III Basic Measures (Art.17-28)

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附則

Supplementary Provisions

**No explicit
wording of
“Marine Spatial
Planning”**

➤ **Headquarters for Ocean Policy**

➤ **Minister for Ocean Policy**

MSP in the Basic Plan on Ocean Policy (2013)

海洋基本計画

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No explicit wording of “Marine Spatial Planning”

term “planning” . . . 3 times in the Basic Plan on Ocean Policy

第1部 海洋に関する施策についての基本的な方針

Chapter 1 Basic Policy of Measures with Regard to the Sea.....12

4 海洋産業の健全な発展 / Sound development of marine industries

第2部 海洋に関する施策に関し、政府が総合的かつ計画的に講ずべき施策

Chapter 2 Measures that the Government Should Take Comprehensively and Systematically with Regard to the Sea32

6 海洋調査の推進 / Promotion of Marine Surveys

第3部 海洋に関する施策を総合的かつ計画的に推進するために必要なその他の事項

Chapter 3 Other Matters Necessary to Comprehensively and Systematically Promote Measures with Regard to the Sea.....91

2 関係者の責務及び相互の連携・協力 / Responsibilities of related parties and mutual coordination and cooperation

第1部 海洋に関する施策についての基本的な方針

Chapter 1 Basic Policy of Measures with Regard to the Sea.....12

4 海洋産業の健全な発展 / Sound development of marine industries

..... it is important to actively make efforts to create new marine industries..... An innovation system should also be formulated under industry-academia-government collaboration and **rational planning needs to be promoted** for these related parties to establish clear goals, conduct surveys, research and development, and put them into practical use.

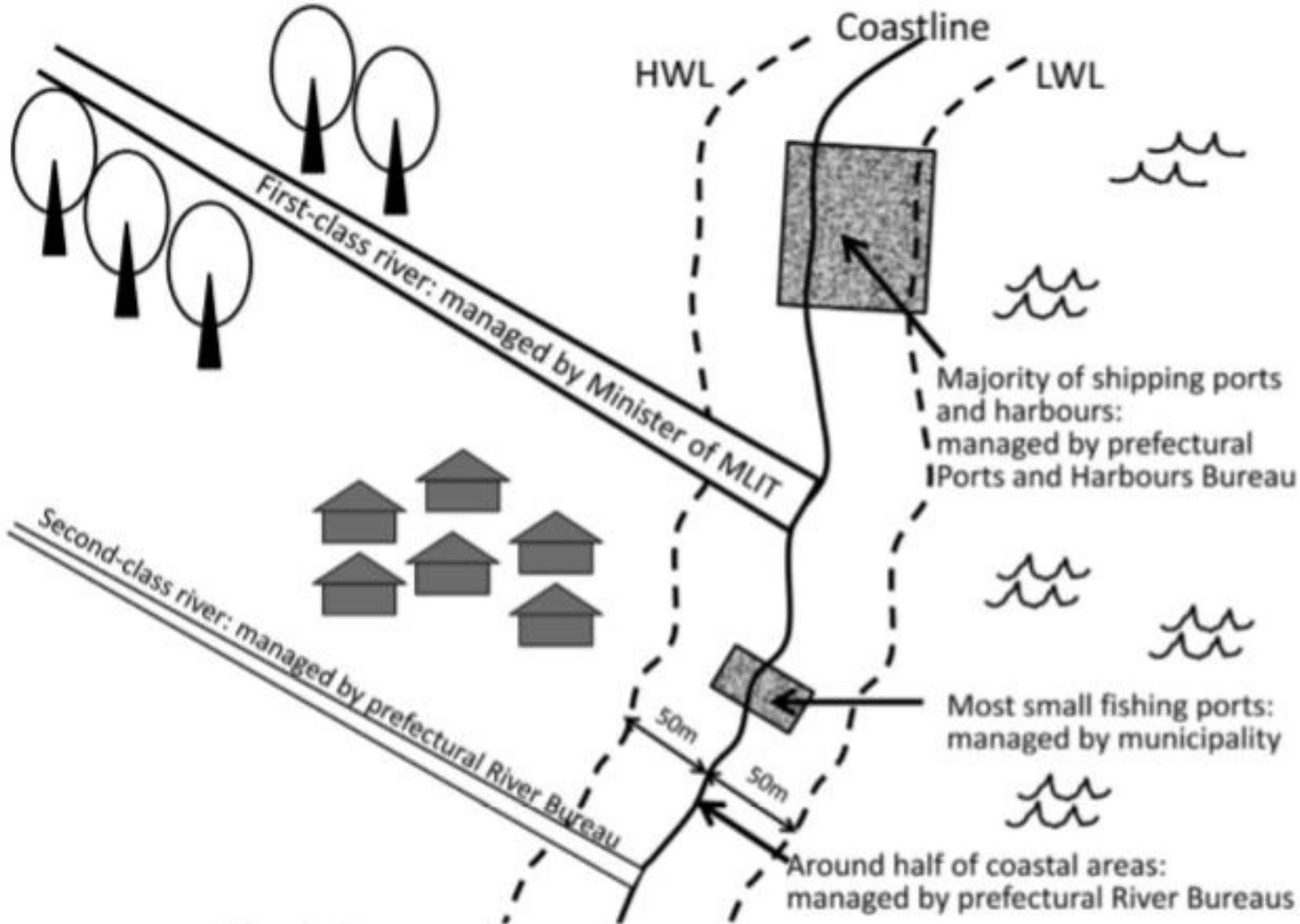
.....

→ **considered related to “Marine Spatial Planning”**

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Integrated Coastal Management (ICM)

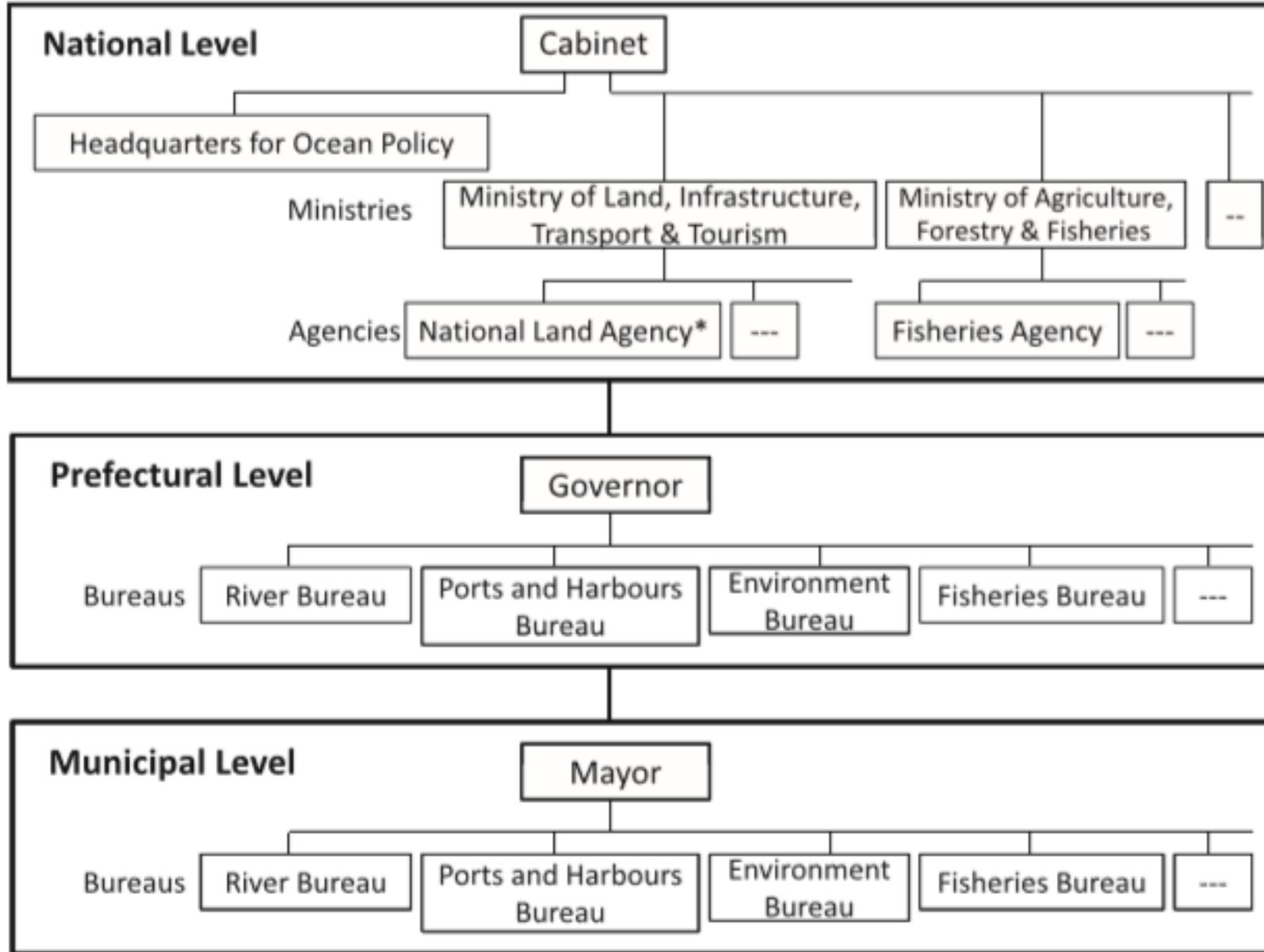


Spatial responsibilities for coastal management in Japan

Needs integration among sectors

(Wakita and Yagi, 2013)

Integrated Coastal Management (ICM)



Japanese government framework related to ICM. *The National Land Agency was integrated into Ministry of Land, Infrastructure, Transport and Tourism as one bureau, the National and Regional Planning Bureau in 2001.

Needs integration among national and local governments

(Wakita and Yagi, 2013)

Guideline for Integrated Coastal Management Plans 2000

Guideline for Integrated Coastal Management Plans was agreed upon at the G-77 and China Design Liaison Conference in 2000.

Poor in implementation

- It was formulated by 17 ministries and agencies related to coastal management
- It is not binding on local governments, but the first and the only national strategic document that approaches coastal areas **to be managed as integrated spaces encompassing land and sea, with integration of among sectors, national and local governments, and all stakeholders.**

Why the Guideline 200 has not been implemented?

Policy Implementation Framework by Mazmanian and Sabatier (1981, 1989)

- Condition 1: Clear and consistent objectives;
- Condition 2: Causal linkages between objectives and actions;
- Condition 3: Structuring implementation processes involving sufficient financial resources and assignment of implementation authority;
- Condition 4: Assigning implementation responsibility;
- Condition 5: Public and stakeholder support; and
- Condition 6: Supportive socioeconomic and policy environment.

Extent to which the Guideline met the effective implementation

Condition	Assessment
1. Clear and consistent objectives	Low
2. Causal linkages between objectives and actions	Low
3. Structuring implementation processes involving sufficient financial resources and assignment of implementation authority <u>①Assigning implementation responsibility</u> ②Assigning implementation authority with adequate hierarchical integration and few hindering points ③Financial resources	Low
4. Commitment and skill of top implementing officials	Low
5. Public and stakeholder support	High
6. Supportive socioeconomic and policy environment	High

Condition 3-① Assigning implementation responsibilities

Principles in developing ICM plans

- 1) Participation and collaboration among all stakeholders
- 2) Spatial integration between land and sea
- 3) Long-term approach considering ecosystem
- 4) Consistent management

Principles in other regions

Central element of ICOM
(Cicin-Sain & Knecht, 1998) **U.S.**

8 principles of the EC (2002) **Europe**

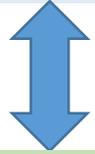
Essential element of ICM
(Chua, 2006) **East Asia**

Adequate in principles

Too much detail in the implementation process set in the Guideline

Setting of the coastal areas

48 coastal areas = Multiples prefectures



Difficult in actual implementation

Cicin-Sain and Knecht, 1998:

“Starting from **single local government or authority** is a good way to implement Integrated Coastal and Ocean Management.”

Chua, 2006:

“...it is advisable to design the integrated coastal management program for **within the administrative boundaries of a coastal municipalities or a province.**”

More detail...

Ocean & Coastal Management 84 (2013) 97–106



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journal homepage: www.elsevier.com/locate/ocecoaman



Evaluating Integrated Coastal Management planning policy in Japan: Why the Guideline 2000 has not been implemented



Kazumi Wakita^{a,*}, Nobuyuki Yagi^b

^a Ocean Policy Research Foundation, Toranomon 35 Mori Bldg., 3-4-10, Toranomon, Minato-ku, Tokyo 105-0001 Japan

^b Graduate School of Agricultural and Life Sciences, The University of Tokyo, 1-1-1 Yayoi, Bukyo-ku, Tokyo 113-8657 Japan

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ABSTRACT

In Japan, the Guideline for Integrated Coastal Management Plans (Guideline) was issued in 2000 to promote planning and implementation of Integrated Coastal Management (ICM). However, to date, no local governments have developed ICM plans in line with the Guideline. This paper clarifies the reasons for the poor implementation using a theoretical approach, the Policy Implementation Framework

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お知らせ

海洋台帳の一部機能（計測/メモの読み込み保存機能等）は、Internet Explorer8及び9ではご利用いただけませんので、他のブラウザをご利用ください。

2016/08/08 イン

2016/04/21 復旧

2016/04/19 海洋

す。復旧まで今しは

2016/03/29 本日

FlashPlayer版海洋

ご利用ください。

2016/03/24

○「計測/メモ」に

・「点入力」の名

・「図形入力」配

した。

・「方位距離」の

・「位置測定」配

○「情報項目」について以下の情報を追加・変更しました。

・「海洋防災情報」を新規追加しました。

・「海洋防災情報」配下に「海底地殻変動情報」及び「津波防災情報図図郭」

を新規追加しました。

・「環境情報」の「海域火山DB」を「海洋防災情報」に移動しました。

An information tool provided by Japan Coast Guard, MLIT to promote understanding, proper use and conservation of the ocean.

海洋台帳

Marine Cadastre

入口は
こちら

アンケートに
ご協力下さい

海洋台帳
について

操作説明

問合わせ

リンク集

タブレット
版はこちら

An example: Tokyo Bay (1)

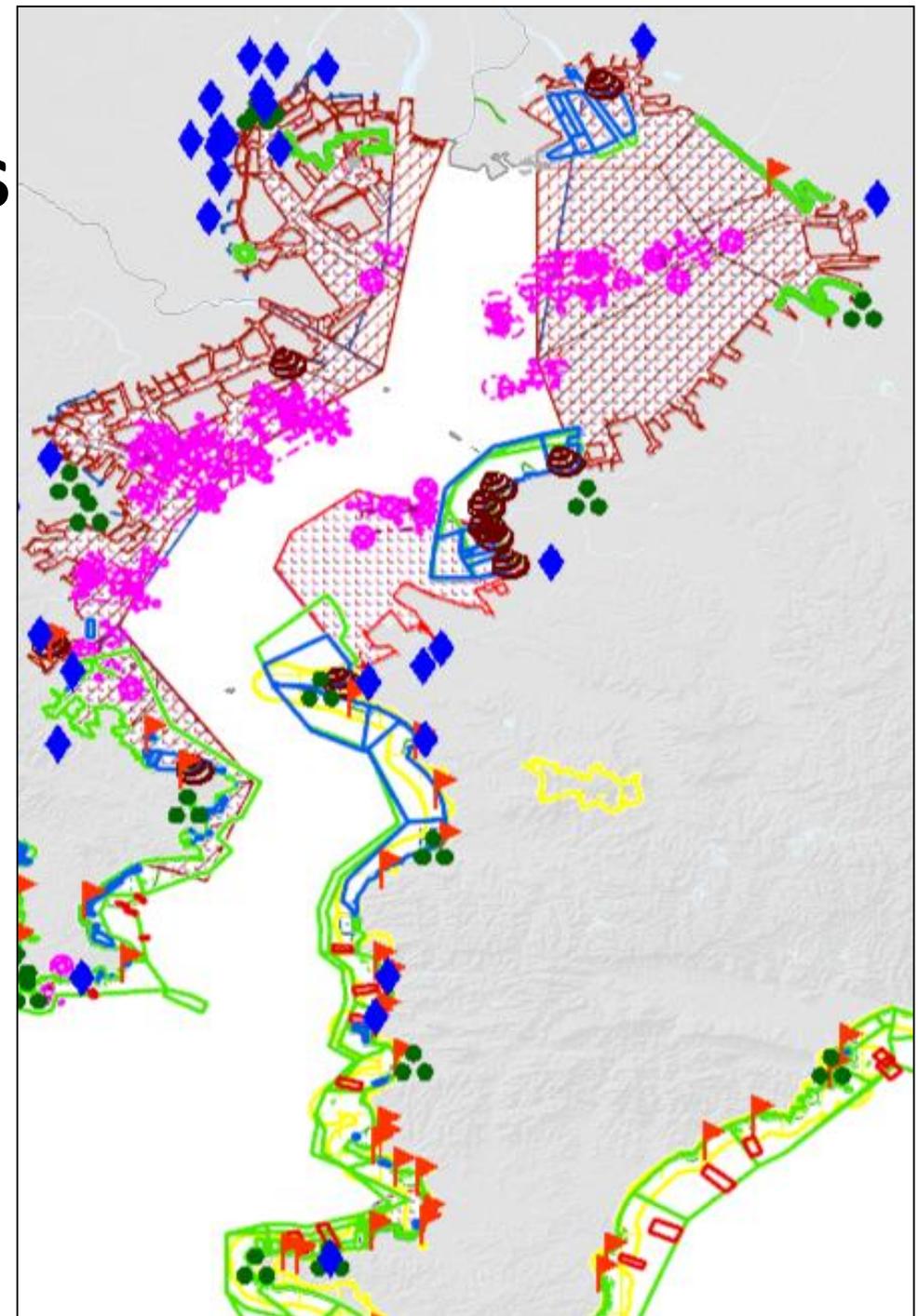
fishing, port, national park areas

社会情報

- 社会情報**
- 史跡
- 名勝
- 天然記念物
- 海水浴場
- 潮干狩り場
- 漁業権(区画)
- 漁業権(定置)
- 漁業権(共同)
- 海岸保全区域
- 国定公園区域

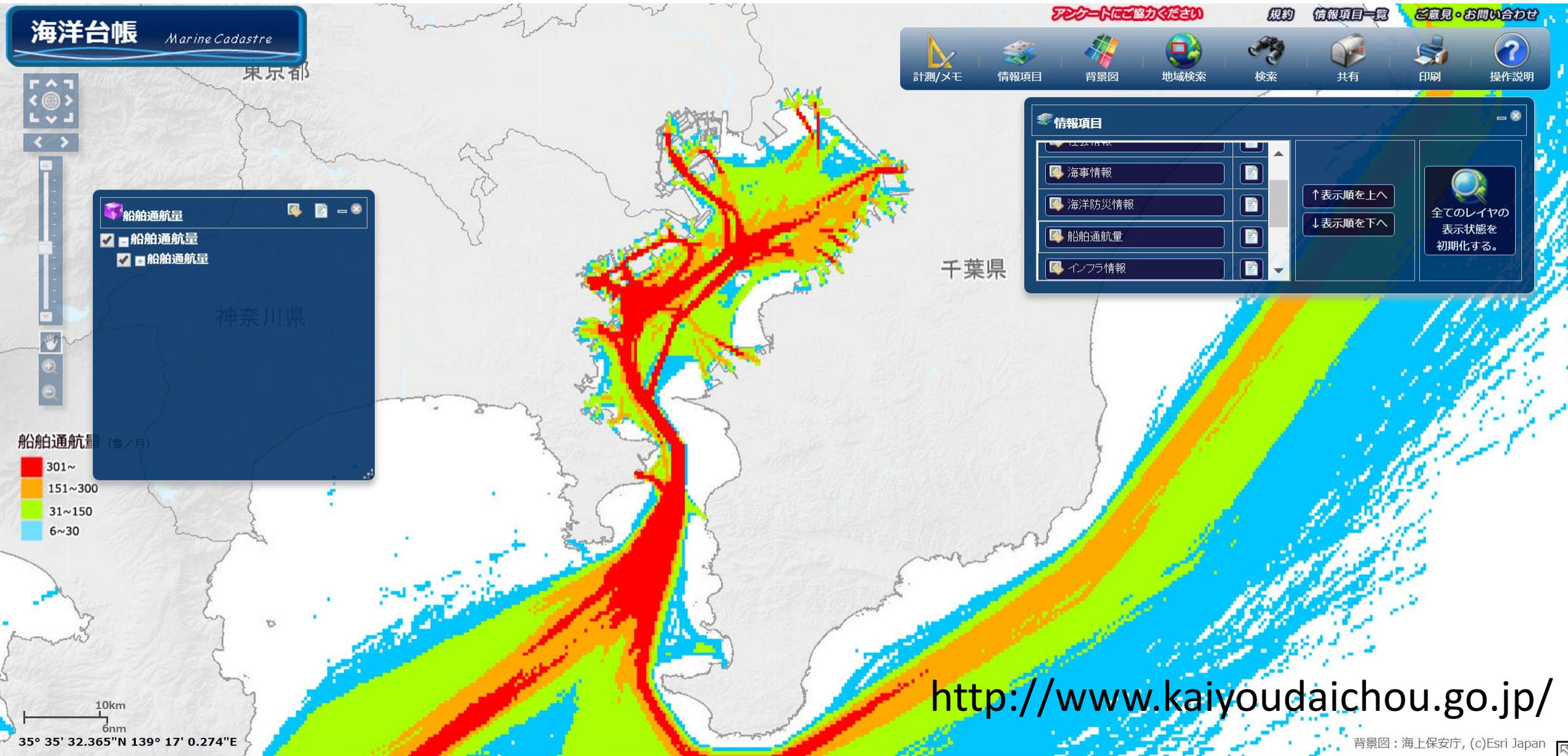
海事情報

- 海底障害物(エリア)
- 指定錨地(エリア)
- 検査錨地
- 投棄区域
- 港則法特定港港区
- 港則法区域
- 港湾区域
- 漁港区域
- 米軍演習区域
- 低潮線保全区域

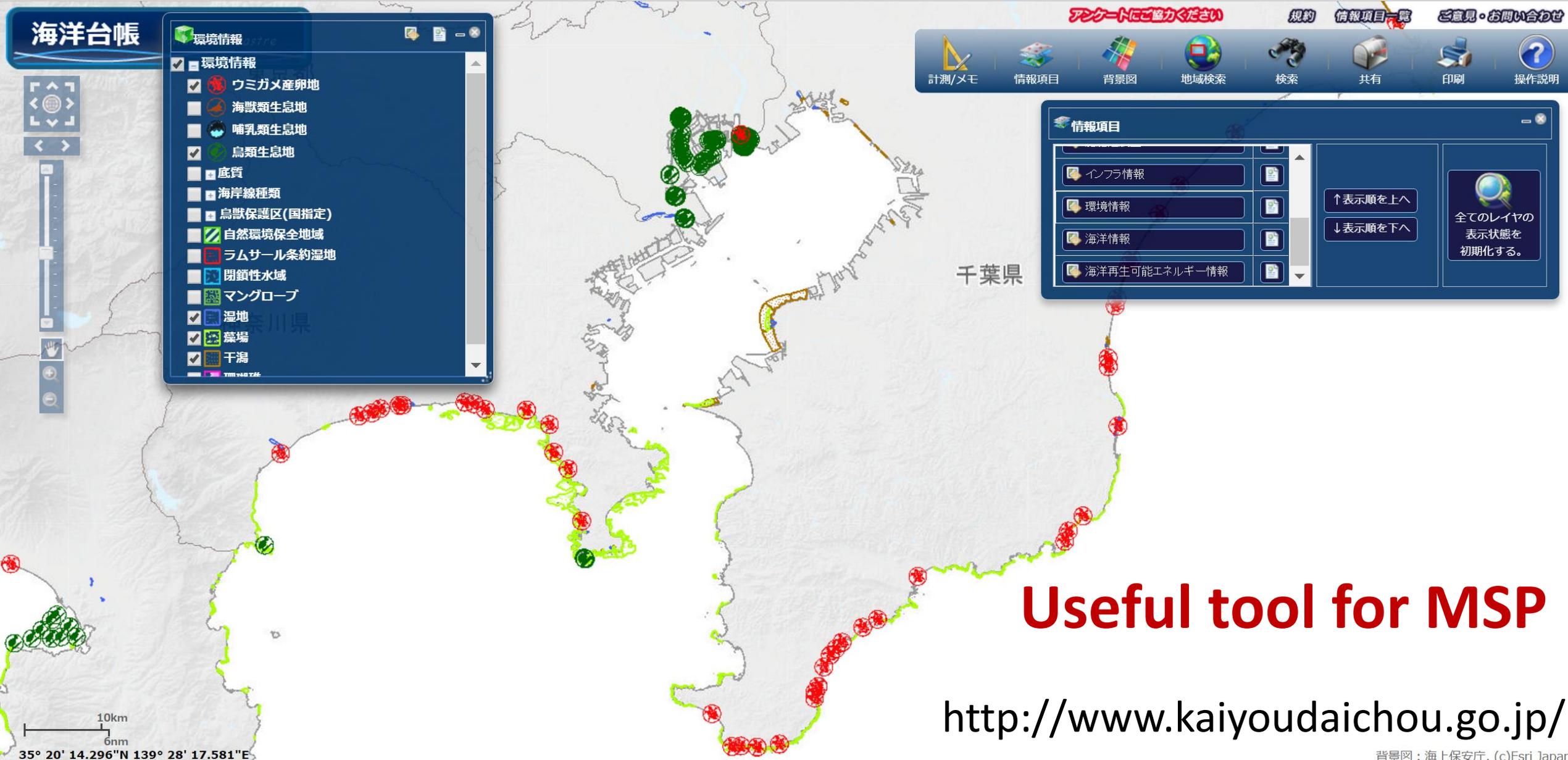


<http://www.kaiyoudaichou.go.jp/>

An example: Tokyo Bay (2) shipping traffic



An example: Tokyo Bay (3) natural environment



Useful tool for MSP

<http://www.kaiyoudaichou.go.jp/>

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我が国の洋上風力発電の現状(現在稼働中及び実証実験予定のもの)

千葉県銚子沖／福岡県北九州沖
 経産省(NEDO)
 洋上風力発電等技術研究開発

2MW
 タワ
 式
 ム
 銚子沖・北九州沖と
 ともに、H24年度中に設置
 予定。



風況観測タワー
 波浪観測装置

北海道瀬棚港
 自治体(せたな町)
 洋上風力発電所
 せたな町により、600kWの
 洋上風車2基がH16年4月
 より稼働中。



山形県酒田港

Ports and Harbours

「ハブー(株)」により、2MW級の洋
 上風車5基がH16年月より稼
 働中。



長崎県五島沖
 環境省
 浮体式洋上風力
 発電実証事業

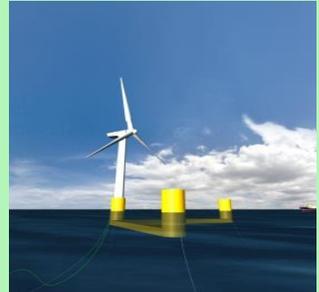
我が国初となる系統
 連系を行う浮体式洋
 上風力発電施設として、100kW小規模試
 験機をH24年6月に
 設置、H25年度に
 2MW級実証機を設
 置予定。



DHC8-Q400 32.8m
 B787 56.7m
 ハブ高さ 23m
 全長 70m
 小規模試験機
 実証機
 ハブ高さ 50m
 全長 170m
 B787全長の約5割に相当
 直径 2.2m
 直径 80m
 海床から 約 60m
 海床から 約 20m

福島県沖(具体的箇所は今後調整)
 経産省
 浮体式洋上ウインドファーム実証研究事業

2MW級の風車1基、世界初となる7MW級の風車2基及
 び浮体式洋上変電所を設置して、浮体式洋上ウインド
 ファームの安全性・信頼性・経済性を明らかにする。
 浮体の形式は、セミサブ型とアドバンスド・スパー型。




3コラム型セミサブ
 アドバンスド・スパー型

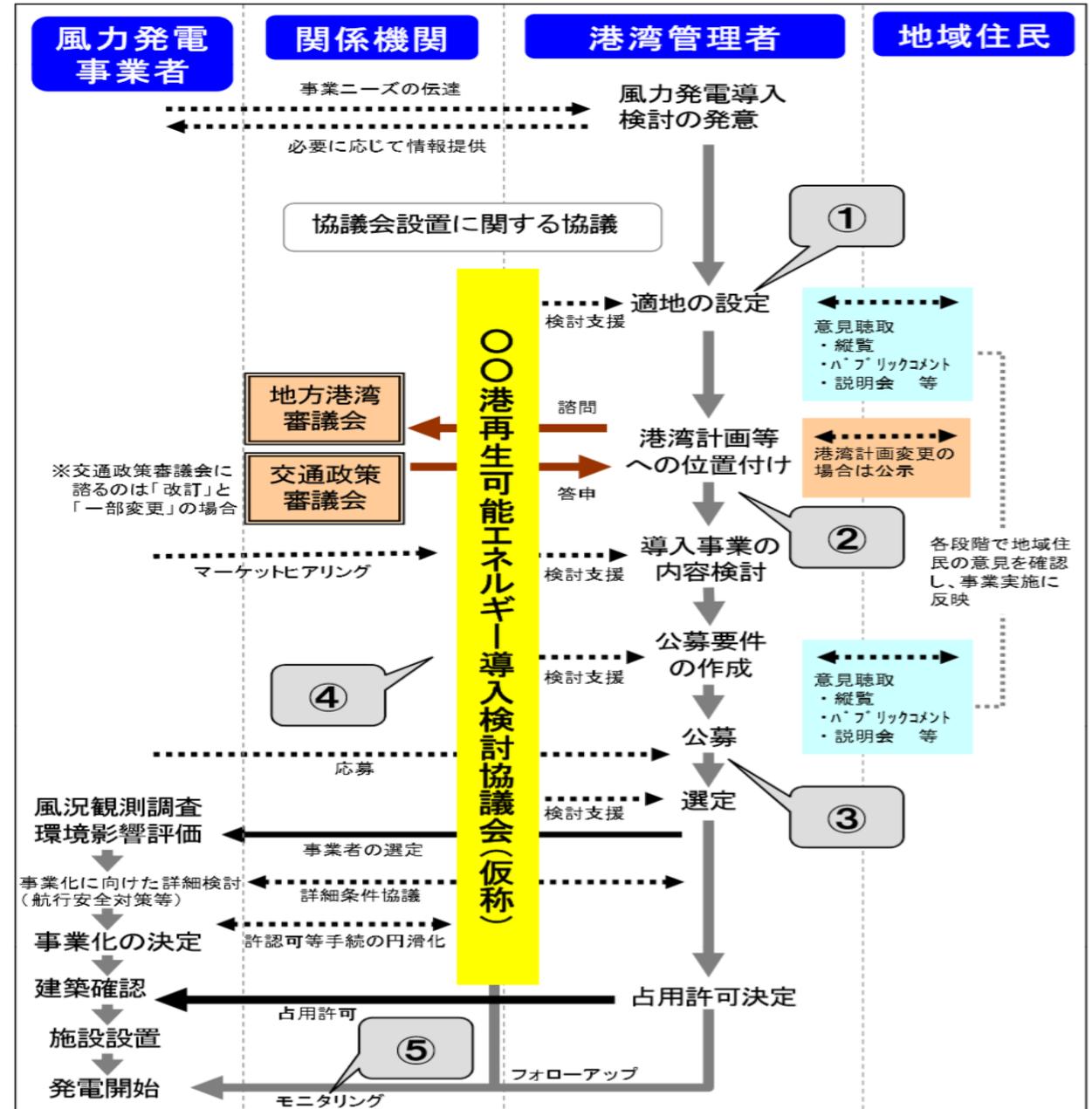
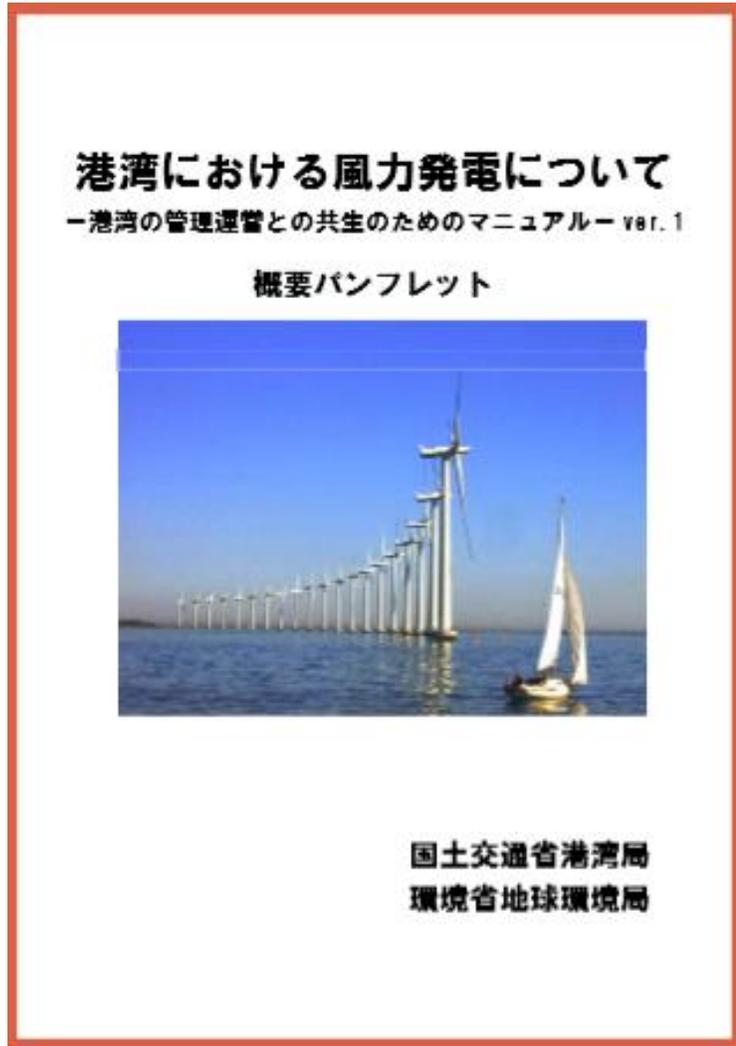
茨城県鹿島港
 民間会社
 洋上風力発電所

民間事業者「(株)ウインド・パ
 ワー・いばらき」により、2MW
 の洋上風車7基がH22年6月
 より稼働中。
 また、H24年に8基を追加予
 定。将来的には沖合に100
 基程度の建設を計画中。




[注]右3件グレイ=既存、左上・中央下2件グリーン=経産省+NEDO、左下クリーム1件=環境省
 (出典:総合海洋政策本部資料)

Manual on wind energy in ports



(Ports and Harbours Bureau, MLIT and Global Environment Bureau, MOE, 2012)

Points to be considered in Site Selection



(Ports and Harbours Bureau, MLIT and Global Environment Bureau, MOE, 2012)

A demonstration project in Fukushima

福島洋上風力 コンソーシアム
Fukushima FORWARD

テキストサイズ 小 中 大 訪問者数 01294

ツイート いいね! 237 G+ 5 B! 4 English

ホーム プロジェクト概要 ニュースリリース 研究通信 フォトギャラリー 海上工事 資料 お問い合わせ

福島洋上風力コンソーシアム実証研究事業 実証研究事業紹介映像

- Funded by Ministry of Economy, Trade and Industry
- Led by a consortium composed of the University of Tokyo and 9 companies of related industries
- The first floating offshore wind farm in the world

2011年度から2015年度までの実証研究事業のホームページはこちら <http://www.fukushima-forward.jp/index.html>

発電状況記録映像



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Concept of Marine Protected Area (MPA) in Japan

Marine areas designated and managed by law or other effective means, in consideration of use modalities, aimed at the conservation of marine biodiversity supporting the sound structure and function of marine ecosystems and ensuring the sustainable use of marine ecosystem services.

(Ministry of Environment, 2011)

Progress on MPA in Japan

2007 Basic Act on Ocean Policy

HOP

2008 Basic Plan on Ocean Policy ← **MPA stipulated**

HOP

As one of the means to ensure the biodiversity and realize sustainable use of fishery resources, the government should, in accordance with the Convention on Biological Diversity and other international agreements, clarify how to establish marine protected areas in Japan under coordination between related ministries and appropriately promote the establishment thereof.

2010 CBD/COP10 Aichi Target

2011 National Marine Biodiversity Conservation Strategy

MOE

2011 8th meeting of the Headquarters for Ocean Policy

HOP

2013 Basic Plan on Ocean Policy

HOP

**- Promotion of settings, management effectiveness,
and networking of MPAs**

Marine Protected Areas (MPAs) in Japan

区域		根拠法	%
自然公園(普通地域および海域公園地区)	国立公園	自然公園法(S32:1957)	0.3
	国定公園	自然公園法(S32:1957)	
	都道府県立自然公園	都道府県条例	
自然海浜保全地区		瀬戸内海環境保全特別措置法(S48:1973)	
自然環境保全地域(海中特別地区と普通地区)		自然環境保全法(S47:1972)	
鳥獣保護区(鳥獣保護区、特別保護地区)	国指定鳥獣保護区	鳥獣の保護及び狩猟の適正化に関する法律(T7:1918)	
	都道府県指定鳥獣保護区		
生息地等保護区		種の保存法(H4:1992)	
天然記念物		文化財保護法(S25:1950)	
保護水面		水産資源保護法(S26:1951)	
沿岸域水産資源開発... (注)		沿岸域水産資源開発促進法(S27:1971)	6.9
都道府県漁業者団体... 各種指定区域		漁業法(S24:1949)	2.1
	資源管理規定対象水面、組合の自主管理区域	水産業協同組合法(S23:1948)	
共同漁業権区域		漁業法(S24:1949)	
合計			8.3*

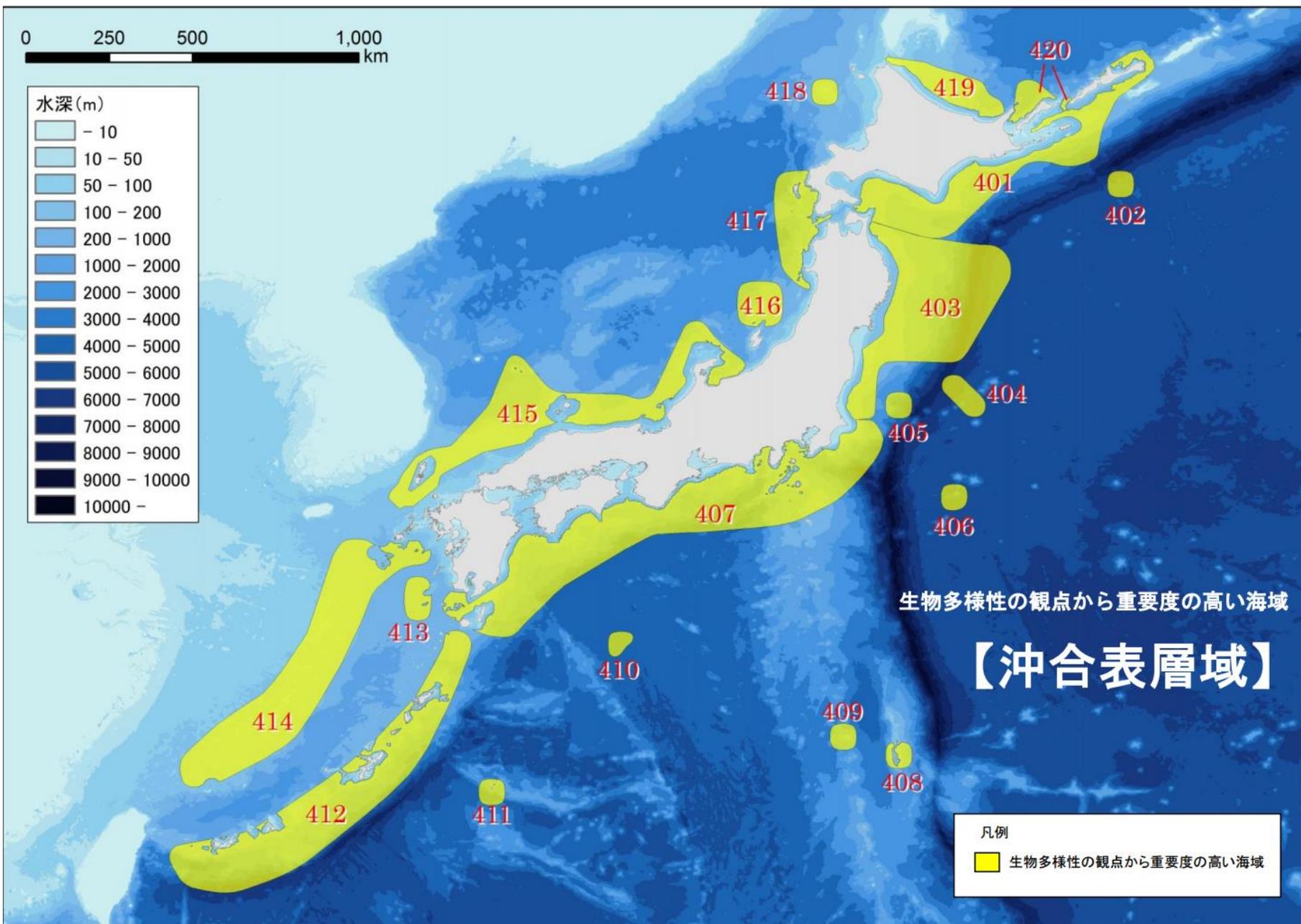
Sustainable Management of Fishery Resources

(Tsurita and Matsuda, 2015, * Excluded areas of duplication)

Ecologically or Biologically Significant marine Areas (EBSA) identified by Japan

EBSA was identified scientifically through 3-year research and discussion by the Commission led by the Ministry of Environment.

- 270 coastal areas;
- 20 offshore surface areas;
- 31 offshore bottom areas.



EBSA offshore surface areas

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Way forward (1)

Position Document of Advisor to Headquarters for Ocean Policy
(March 28, 2016)

Development of renewable ocean energy

- Industrialization of wind energy would speed up if **zoning of non-designated ocean space** is implemented and a broad-scale road map for industrialization is provided by the national government

Major designated ocean areas

海洋台帳

社会情報

- 名勝
- 天然記念物
- 海水浴場
- 潮干狩り場
- 海ゴミ
- 漁業権 (区画)
- 漁業権 (定置)
- 漁業権 (共同)
- 海岸保全区域
- 国定公園区域
- 国立公園区域
- 海域公園区域
- 港則法びょう地
- 港則法区域
- 港湾区域
- 漁港区域

計測/メモ 情報項目 背景図 地域検索 検索 共有

アンケートにご協力ください 規約 情報項目一覧

情報項目

- 基本情報
- 社会情報
- 海事情報
- 海洋防災情報

↑表示順を上へ
↓表示順を下へ

200km
100nm
11° 31' 25.647"N 136° 56' 38.429"E

<http://www.kaiyoudaichou.go.jp/>

海上保安庁 | 背景図: 海上

Way forward (2)

Report of the Offshore Wind Energy and Ocean Renewable Energy Working Group, Advisor to Headquarters for Ocean Policy (March, 2016)

- **Broad-scale wind farm needs a certain amount of ocean space. Hence, use and zoning of non-designated ocean space is essential. ...**

If a zoning of 20km × 150km ocean space in multiple areas could be developed, 20 GW offshore wind energy industry would be developed and 5% of national energy demand would be provided by them,

Way forward (3)

Offshore wind energy

- How to develop zoning and rule of use in non-designated ocean space
- How to promote collaboration and cooperation with fisheries

Environmental Impact Assessment

- How to develop detail of EIA for various marine industries

Marine Protected Area

- How to develop and effectively manage MPAs

Thank you.

多謝。

ありがとうございました。