3RD YSLME SCIENCE CONFERENCE
15-19 July 2019
Qingdao, PR China

Sustainable Marine Ecosystem Services and Transboundary Marine Spatial Planning in Yellow Sea

Jungho NAM on behalf of
Korea Maritime Institute

MSP Research Center

KMI 한국해양수산개발원 KOREA MARITIME INSTITUTE

gef UNDP Empowered lives. Resilient nations. UNOPS YSLME UNDP/GEF Yellow Sea Large Marine Ecosystem

Communication Outline

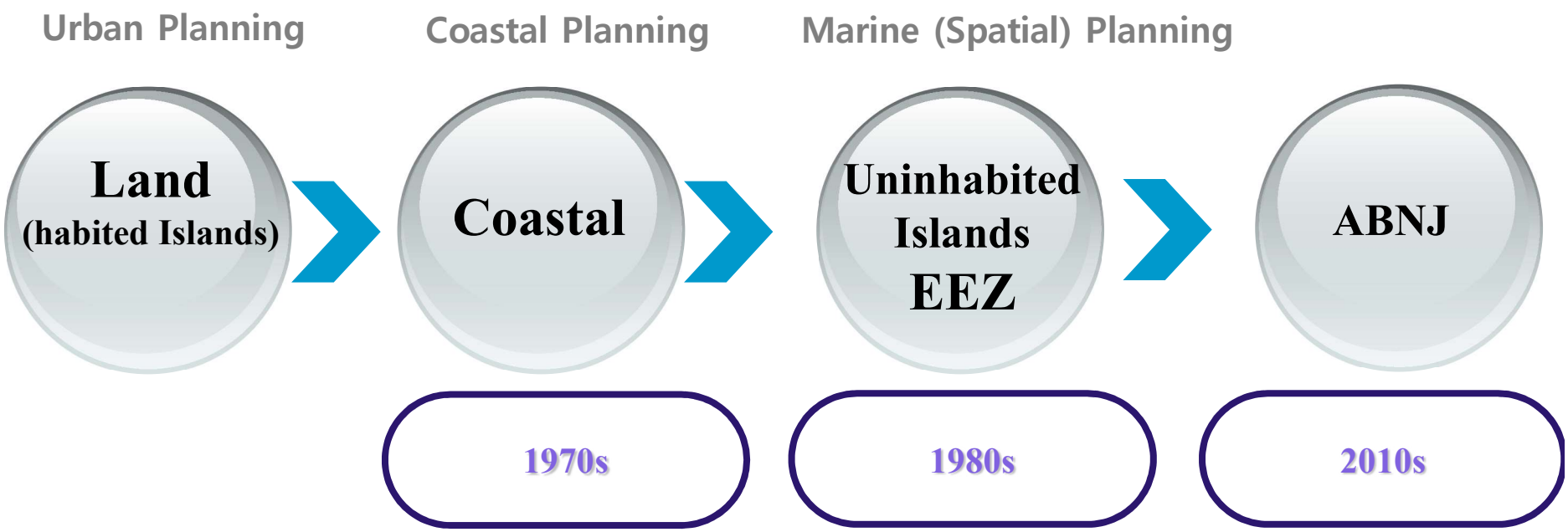
Mainstreaming MES into SAP for YSLME

Sprouting-out of Marine Spatial Planning

Transboundary MSP for Sustainable Yellow Sea

Mainstreaming MES into SAP for YSLME

Evolution of Spatial Management

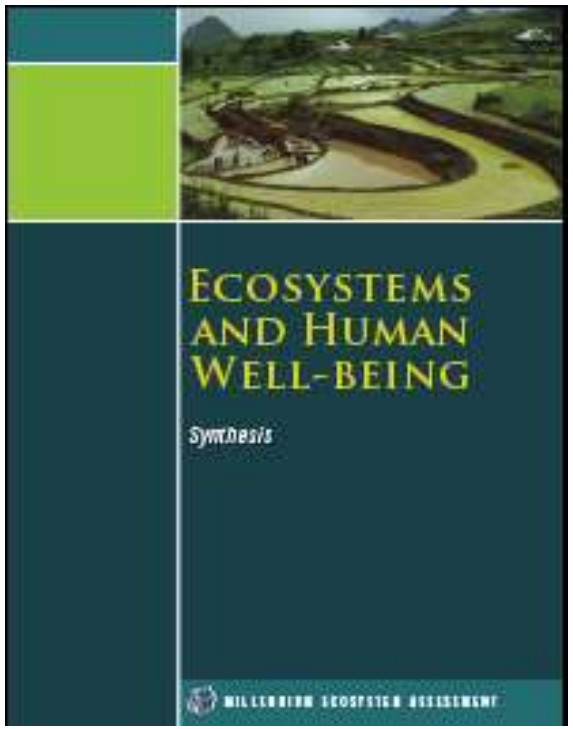


(Nam, 2019)

Emerging ES concept as a Global Agenda for Sustainable Future

Marine

What is the Ecosystem Service?



Marine

Benefits people obtain from ecosystems **(MA, 2005)**

(UNEP, 2006)

ECOSYSTEM SERVICES	Coastal									Marine		
	Estuaries and marshes	Mangroves	Lagoon and salt ponds	Intertidal	Kelp	Rock and shell reefs	Seagrass	Coral reefs	Inner shelf	Outer shelves edges slopes	Seamounts & mid-ocean ridges	Deep sea and central gyres
Biodiversity	X	X	X	X	X	X	X	X	X	X	X	X
Provisioning services												
Food	X	X	X	X	X	X	X	X		X	X	X
Fibre, timber, fuel	X	X	X						X	X		X
Medicines, other resources	X	X	X		X			X	X			
Regulating services												
Biological regulation	X	X	X	X		X		X				
Freshwater storage and retention	X		X									
Hydrological balance	X		X									
Atmospheric and climate regulation	X	X	X	X		X	X	X	X	X		X
Human disease control	X	X	X	X		X	X	X				
Waste processing	X	X	X				X	X				
Flood/storm protection	X	X	X	X	X	X	X	X				
Erosion control	X	X	X				X	X				
Cultural services												
Cultural and amenity	X	X	X	X	X	X	X	X	X			
Recreational	X	X	X	X	X			X				
Aesthetics	X		X	X				X				
Education and research	X	X	X	X	X	X	X	X	X	X	X	X
Supporting services												
Biochemical	X	X			X			X				
Nutrient cycling and fertility	X	X	X	X	X	X		X	X	X	X	X

UNESCO-IOC, 2009

Renewable Goods

- Marine animals for food
- Marine animals for recreation, e.g., whale watching
- Seaweed
- Medicines
- Other raw materials, e.g., building materials, ornaments
- Energy, e.g., wind, wave, tidal, thermal
- Water

Non-Renewable Goods

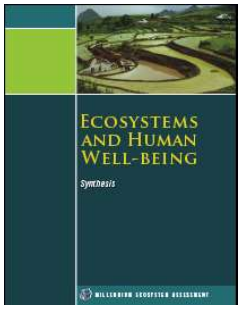
- Oil and gas
- Sand and gravel
- Marine minerals

Renewable Services

- Habitat, e.g., nursery areas for fish
- Protected areas
- Flood and storm protection
- Erosion control
- Nutrient cycling
- Biological regulation
- Waste processing
- Marine transportation routes
- Atmospheric and climate regulation
- Carbon sequestration
- Tourism, leisure and recreation
- Cultural heritage and identity
- Education and research
- Aesthetics

Commutation of Small Steps to Mainstream Ecosystem Services into Policy Regime

1997	Costanza et al
2001~2005	MA (Millennium Ecosystem Assessment)
2006	UNEP
2007	SGAN-UNEP WCMC TEEB, (G8+5 summit)
2008	CBD COP9 ESP(Ecosystem Service Partnership)
2009	UNESCO-IOC
2010	Marine ESP
2011	EU (Ecosystem Ass. & Mapping)
2012	IPBES
2013	1st IPBES Plenary Session



(Nam, 2014)

MES, an Essential Prerequisite for Sustainable Development

UNITED NATIONS

UNEP

Food and Agriculture Organization of the United Nations

BES

IPBES/7/10/Add.1

ipbes Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Distr.: General
29 May 2019

Original: English

Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
Seventh session
Paris, 29 April–4 May 2019

Report of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the work of its seventh session

Addendum

Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

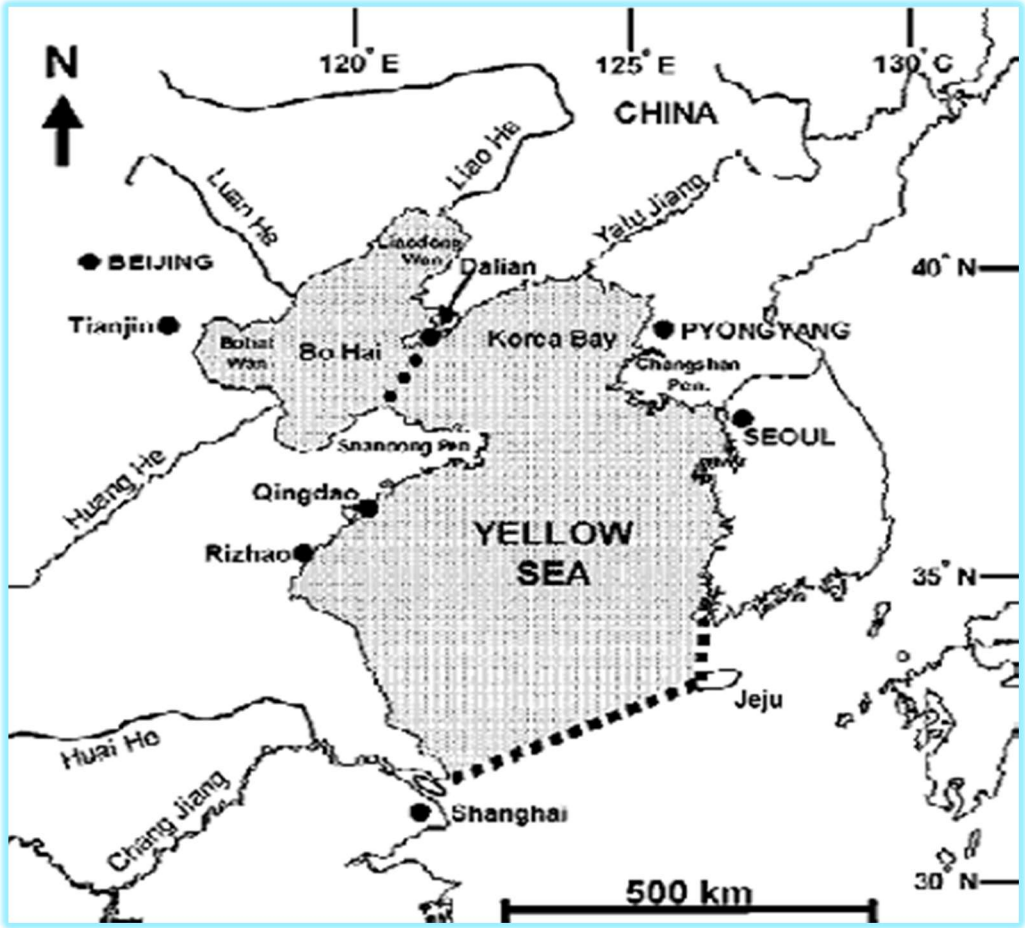
At its seventh session, in its decision IPBES-7/1, section II, paragraph 1 the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) approved the summary for policymakers of the global assessment of biodiversity and ecosystem services as set out in the annex to the present addendum.

		Recent status and trends in aspects of nature and nature's contributions to people that support progress towards target *		Uncertain relationship
		Poor/Declining support	Partial support	
14 LIFE BELOW WATER Life below water	14.1 Prevent and reduce marine pollution			
	14.2 Sustainably manage and protect marine and coastal ecosystems			
	14.3 Minimize and address ocean acidification			
	14.4 Regulate harvesting and end overfishing			
	14.5 Conserve at least 10 per cent of coastal and marine areas			
	14.6 Prohibit subsidies contributing to overfishing			
	14.7 Increase economic benefits from sustainable use of marine resources			

Overview of YSLME Project

Objective is to achieve

Ecosystem-based, environmentally-sustainable management and use of the YSLME and its watershed by reducing development stress and promoting sustainable exploitation of the ecosystem from a densely populated, heavily urbanized, and industrialized semi-enclosed shelf sea



Marine Ecosystem Services and YSLME SAP

Objective is to achieve

Ecosystem-based, environmentally-sustainable management and use of the YSLME and its watershed by reducing development stress and promoting sustainable exploitation of the ecosystem from a densely populated, heavily urbanized, and industrialized semi-enclosed shelf sea

1991 — GEF, World Bank, UNDP, NOAA

2003, A Project plan adopted by member states

2005 — 1st Phase Outset

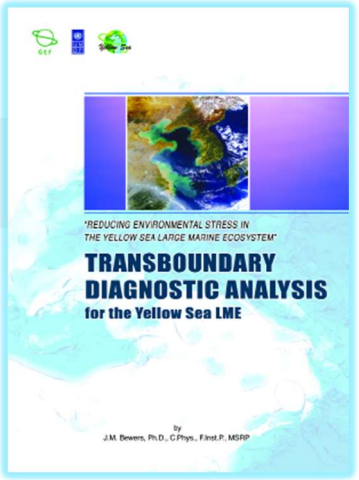
2007 — **TDA** (Transboundary Diagnostic Analysis)

2009 — **SAP** (Strategic Action Programme)

2014 — 1st Phase Completion

2017 — 2nd Phase Resume

By 2020 to Achieve the objective



MES-based 11 Targets and 32 Actions

(UNDP/GEF/YSLME, 2009)

Provisioning Services

Target 1: 25-30% reduction in fishing effort
- Action 1-1: Control fishing boat numbers
- Action 1-2: Stop fishing in certain areas/seasons
- Action 1-3: Monitor and assess stock fluctuations

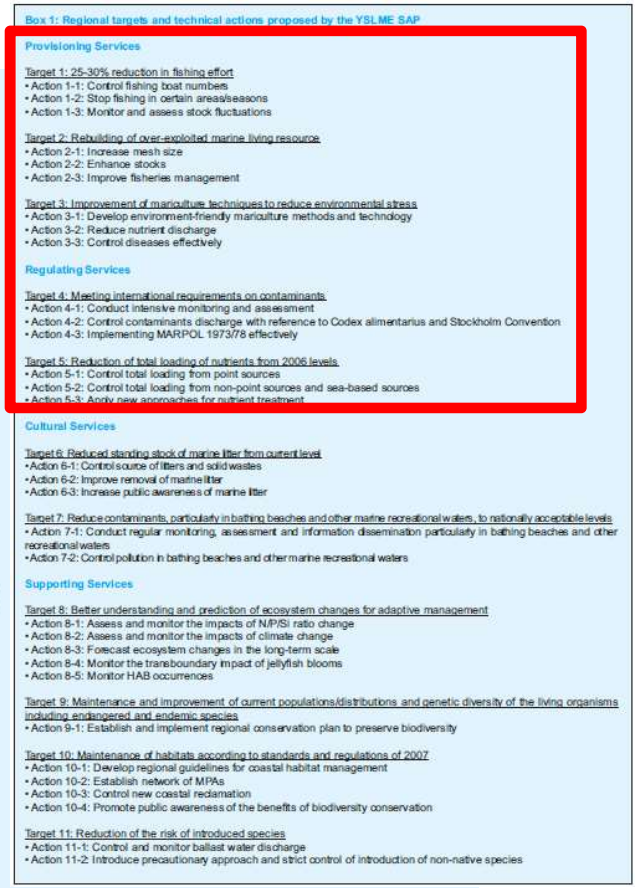
Target 2: Rebuilding of over-exploited marine living resource
- Action 2-1: Increase mesh size
- Action 2-2: Enhance stocks
- Action 2-3: Improve fisheries management

Target 3: Improvement of mariculture techniques to reduce environmental stress
- Action 3-1: Develop environment-friendly mariculture methods and technology
- Action 3-2: Reduce nutrient discharge
- Action 3-3: Control diseases effectively

Regulating Services

Target 4: Meeting international requirements on contaminants
- Action 4-1: Conduct intensive monitoring and assessment
- Action 4-2: Control contaminants discharge with reference to Codex alimentarius and Stockholm Convention
- Action 4-3: Implementing MARPOL 1973/78 effectively

Target 5: Reduction of total loading of nutrients from 2006 levels
- Action 5-1: Control total loading from point sources
- Action 5-2: Control total loading from non-point sources and sea-based sources
- Action 5-3: Apply new approaches for nutrient treatment



Box 1: Regional targets and technical actions proposed by the YSLME SAP

Provisioning Services

Target 1: 25-30% reduction in fishing effort
- Action 1-1: Control fishing boat numbers
- Action 1-2: Stop fishing in certain areas/seasons
- Action 1-3: Monitor and assess stock fluctuations

Target 2: Rebuilding of over-exploited marine living resource
- Action 2-1: Increase mesh size
- Action 2-2: Enhance stocks
- Action 2-3: Improve fisheries management

Target 3: Improvement of mariculture techniques to reduce environmental stress
- Action 3-1: Develop environment-friendly mariculture methods and technology
- Action 3-2: Reduce nutrient discharge
- Action 3-3: Control diseases effectively

Regulating Services

Target 4: Meeting international requirements on contaminants
- Action 4-1: Conduct intensive monitoring and assessment
- Action 4-2: Control contaminants discharge with reference to Codex alimentarius and Stockholm Convention
- Action 4-3: Implementing MARPOL 1973/78 effectively

Target 5: Reduction of total loading of nutrients from 2006 levels
- Action 5-1: Control total loading from point sources
- Action 5-2: Control total loading from non-point sources and sea-based sources
- Action 5-3: Apply new approaches for nutrient treatment

Cultural Services

Target 6: Reduced standing stock of marine litter from current level
- Action 6-1: Control source of litters and solid wastes
- Action 6-2: Improve removal of marine litter
- Action 6-3: Increase public awareness of marine litter

Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels
- Action 7-1: Conduct regular monitoring, assessment and information dissemination particularly in bathing beaches and other recreational waters
- Action 7-2: Control pollution in bathing beaches and other marine recreational waters

Supporting Services

Target 8: Better understanding and prediction of ecosystem changes for adaptive management
- Action 8-1: Assess and monitor the impacts of N/P/Si ratio change
- Action 8-2: Assess and monitor the impacts of climate change
- Action 8-3: Forecast ecosystem changes in the long-term scale
- Action 8-4: Monitor the transboundary impact of jellyfish blooms
- Action 8-5: Monitor HAB occurrences

Target 9: Maintenance and improvement of current populations/distributions and genetic diversity of the living organisms including endangered and endemic species
- Action 9-1: Establish and implement regional conservation plan to preserve biodiversity

Target 10: Maintenance of habitats according to standards and regulations of 2007
- Action 10-1: Develop regional guidelines for coastal habitat management
- Action 10-2: Establish network of MPAs
- Action 10-3: Control new coastal reclamation
- Action 10-4: Promote public awareness of the benefits of biodiversity conservation

Target 11: Reduction of the risk of introduced species
- Action 11-1: Control and monitor ballast water discharge
- Action 11-2: Introduce precautionary approach and strict control of introduction of non-native species

(UNDP/GEF/YSLME, 2009)

Cultural Services

Target 6: Reduced standing stock of marine litter from current level
- Action 6-1: Control source of litters and solid wastes
- Action 6-2: Improve removal of marine litter
- Action 6-3: Increase public awareness of marine litter

Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels
- Action 7-1: Conduct regular monitoring, assessment and information dissemination particularly in bathing beaches and other recreational waters
- Action 7-2: Control pollution in bathing beaches and other marine recreational waters

Supporting Services

Target 8: Better understanding and prediction of ecosystem changes for adaptive management
- Action 8-1: Assess and monitor the impacts of N/P/Si ratio change
- Action 8-2: Assess and monitor the impacts of climate change
- Action 8-3: Forecast ecosystem changes in the long-term scale
- Action 8-4: Monitor the transboundary impact of jellyfish blooms
- Action 8-5: Monitor HAB occurrences

Target 9: Maintenance and improvement of current populations/distributions and genetic diversity of the living organisms including endangered and endemic species
- Action 9-1: Establish and implement regional conservation plan to preserve biodiversity

Target 10: Maintenance of habitats according to standards and regulations of 2007
- Action 10-1: Develop regional guidelines for coastal habitat management
- Action 10-2: Establish network of MPAs
- Action 10-3: Control new coastal reclamation
- Action 10-4: Promote public awareness of the benefits of biodiversity conservation

Target 11: Reduction of the risk of introduced species
- Action 11-1: Control and monitor ballast water discharge
- Action 11-2: Introduce precautionary approach and strict control of introduction of non-native species

Sprouting-out of Marine Spatial Planning

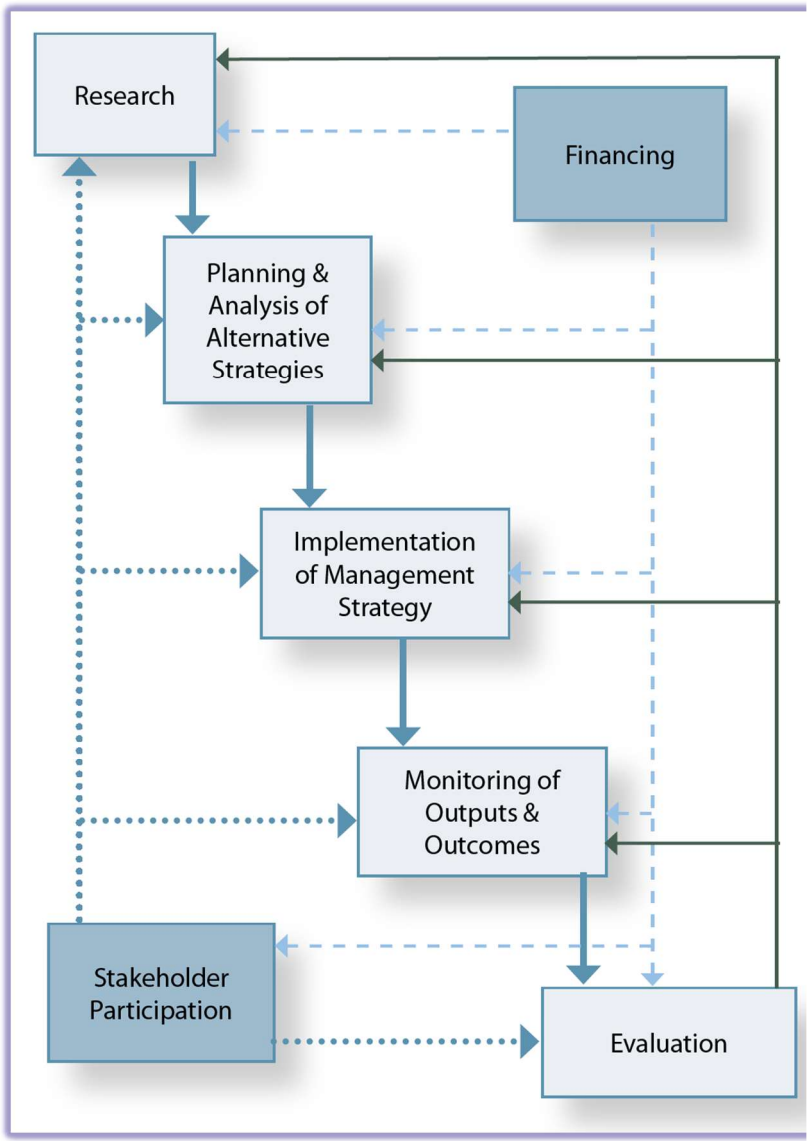
Marine Spatial Planning

Marine spatial planning is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that usually have been specified through a political process. Characteristics of marine spatial planning include ecosystem-based, area-based, integrated, adaptive, strategic and participatory.

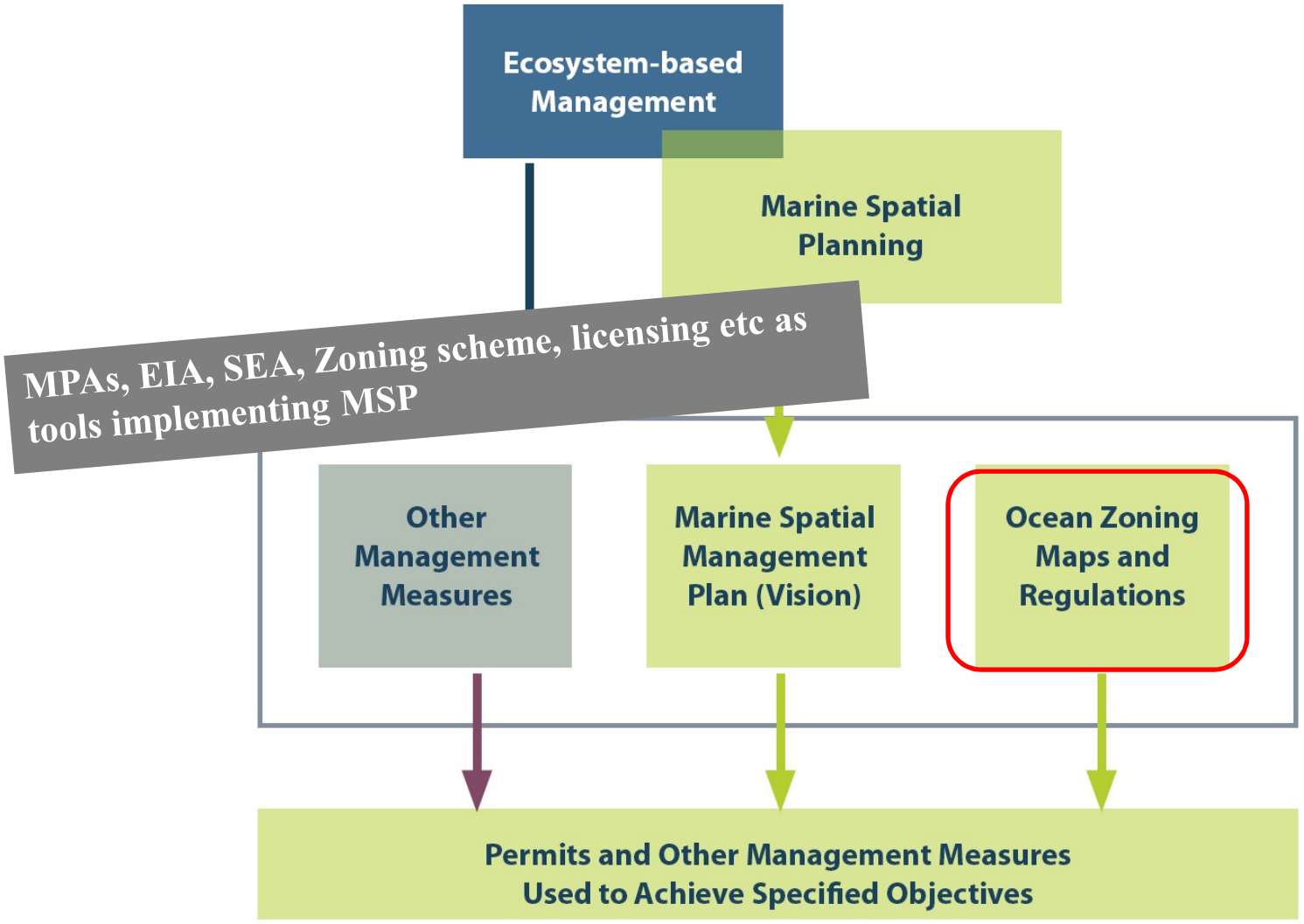
UNESCO-IOC(2009)

a process by which the relevant States and competent authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives

EU Directive
2014/89 on MSP



MPAs and Zoning, representative measures in MSP



(UNESCO-IOC, 2009)

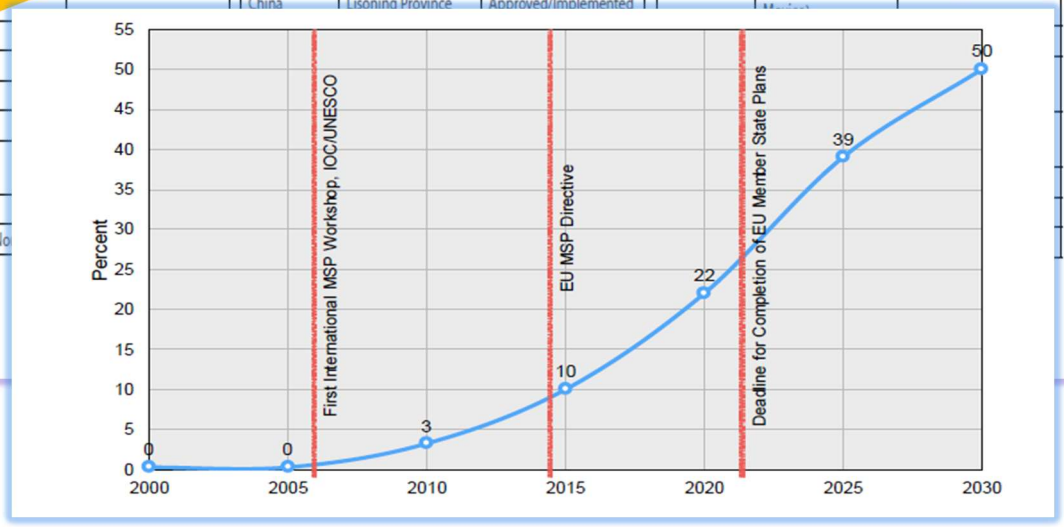
MSP, Rapidly Spreading Out

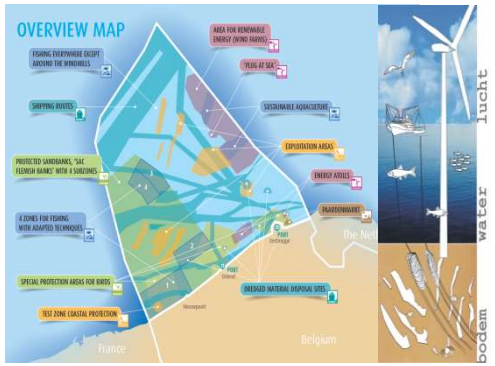
Table 1. The Status of Examples of Marine Spatial Planning in 2013.

Country	Region	Planning Status
Belgium	North Sea EEZ	Approved/Implemented
Netherlands	North Sea EEZ	Approved/Implemented
Germany	North Sea EEZ	Approved/Implemented
Germany	Baltic Sea EEZ	Approved/Implemented
Germany	Mecklenburg-Vorpommern Länd	Approved/Implemented
Germany	Schleswig-Holstein Länd	Approved/Implemented
Germany	Lower Saxony Länd	Approved/Implemented
England	East Planning Regions	Completed/Approved
England	South Planning Regions	Underway
Scotland	EEZ	
Scotland		
Wales		
Northern Ireland		Underway
Ireland	EEZ	
Poland	Baltic Sea	
Lithuania	Baltic Sea	
Estonia	Baltic Sea	
Latvia	Baltic Sea	
Finland	Baltic Sea	
Sweden	Baltic Sea/No	
Norway	Barents Sea	Approved/Implemented
Norway	Norwegian Sea	Approved/Implemented
Norway	North Sea	Approved/Implemented
Portugal	Continental EEZ	Underway
Denmark	Baltic Sea/North Sea	Underway
Israel	EEZ/Territorial Sea	Underway
United Arab Emirates	Abu Dubhai Emirate Waters	
Australia		
		Approved
		Completed/Approved
	oregion	Completed/Approved
	East Bioregion	Completed/Approved
Australia	Coral Sea Reserve	Underway
Australia	Great Barrier Reef	Approved/Implemented
New Zealand	Hauraki Gulf	Underway
China	Lisoning Province	Approved/Implemented
Cambodia	Territorial Sea	Underway
Philippines	Territorial Sea	
USA	Mass	mplemented
USA		plemented
		Underway
	egion	Underway
	Mid-Atlantic	Underway
	East Coast (ESSIM)	Plan Completed, not Approved
Canada	Beaufort Sea	Completed and approved, but not implemented
Canada	Pacific Coast & EEZ (Federal)	Completed
Canada	Pacific Coast & EEZ (MaPP)	Underway
Mexico	EEZ (Pacific & Gulf of	Underway

MSP in 70 countries, some data are missing

1/3 of global ocean area will be covered by MSP in 2030





DE VREES: Prefer to identify a "shared vision", before setting targets per se for the shorter term.

KREINER: Agree that a vision is important, that is being developed together.

NAM: Identify cause and effect, in order to specify targets.

What are the key success ingredients to MSP?

XU: Ensure different departments and ministries are all involved in stakeholder engagement.

DE COMARMOND: Political commitment needed, as well as human and financial resources in order to implement an MSP plan. Starting on a high point (e.g. presidential involvement) has been useful.

What aspects of your MSP might be applicable, and what is unique?

KREINER: "Learn by doing" approach is more practical than "don't start before legislation" approach—the focus should be on what can be done.

DE COMARMOND: "Learn as you go", and "implement as you go", and keep an open mind.

DE COMARMOND: Stakeholders must feel invested or MSP process will fail, even if high levels of commitment are initially experienced.

What are the new threats?

XU: In order to respond to new threats, the Chinese Sea Area law allows local government to revise reporting every two years.

NAM: The new threat is resource depletion.

DE VREES: Important to learn from one another, and similar processes, e.g., 20 yrs of ICZM has developed principles which also apply to MSP, but are not always used.

TAKE HOME MESSAGES: ONE PRIORITY FOR THE FUTURE

XU: An MSP platform should be developed for use by a "community of practice".

NAM: Reliable data linking MSP and Blue Growth.

DE COMARMOND: "Don't reinvent the wheel"... share knowledge and adapt processes.

KREINER: Embed MSP into an impartial institution, not a project.

DIGGON: Increase capacity to undertake MSP, creating "champions"/MSP ambassadors for the future.

DE VREES: "Keep it Simple", "learn by doing", and undertake planning for high-priority issues initially as subsequent plan cycles become easier.

(UNESCO-IOC, EU, 2017)

2nd International Conference on
MARINE/MARITIME SPATIAL PLANNING
15-17 March 2017, Paris UNESCO HQ

Conference Conclusions: adoption of a joint roadmap

Joint Roadmap to accelerate Maritime/Marine Spatial Planning processes worldwide (MSP)

Introduction

Oceans have an essential role for life on earth, sustainable development, employment and innovation. However there are increasing pressures facing oceans: climate change, acidification, eutrophication, biodiversity loss, pollution, over-exploitation and illegal activities. Many countries have undertaken the transition to move towards a more integrated and ecosystem-based management of the marine environment, in the pursuit of sustainable development of the ocean and seas.

The Joint Communication on International Ocean Governance by the High Representative of the EU for Foreign Affairs and Security Policy and the European Commission identifies priority areas for EU action; in particular action 10 on maritime spatial planning.

The objectives and programme of work of the IOC/UNESCO are aimed at promoting ecosystem based management, including through the development and dissemination of the marine spatial planning approach and building of related technical capacity within Member States.

There are different levels of implementation of marine/maritime spatial planning (MSP) processes in the world, including areas where MSP is in its infancy and where joint learning, improved cooperation or capacity building is needed, or areas where arrangements for MSP may exist but a strategic approach to facilitate coordination would be beneficial.

The Directorate General for Maritime Affairs and Fisheries of the European Commission, (DG MARE) and the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) are committed to support the implementation of the universally agreed Agenda 2030 for Sustainable Development, and in particular the dedicated goal SDG 14, in a comprehensive, consistent and holistic way, both within the EU and beyond at the international level, and the Strategic Plan for Biodiversity 2011-2020 and its 20 Aichi Biodiversity Targets.

(UNESCO-IOC, EU, 2017)

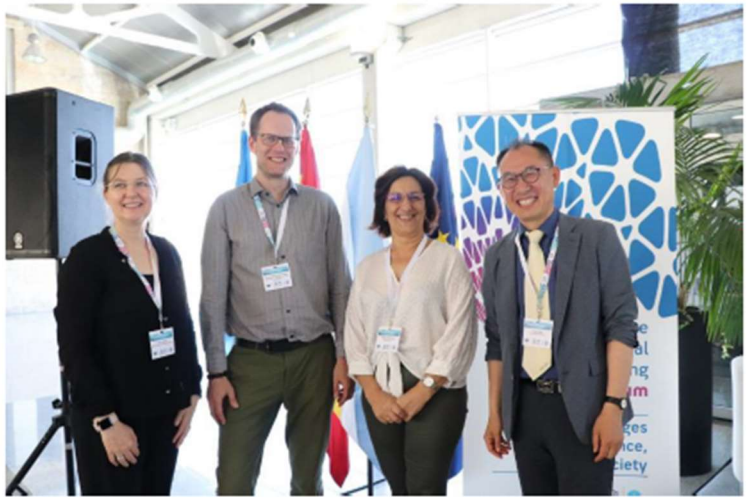
IOC-UNESCO
7, Place de Fontenoy
75352 PARIS 07 SP
MSPglobal@unesco.org
mspglobal2030.org
@MSPglobal2030
#OceanAction15346

3rd MSPforum Vigo

12-15 May 2019

Final Report
Vigo, Spain

Panel 1: How to do an MSP Plan



The first panel was moderated by Fátima Lopes Alves (Port Administration of Aveiro, PT) and focused on sharing how each of the 10 MSP steps were developed by Sweden, Republic of Korea, Seychelles and Canada:

- Jan Schmidtbauer Crona, Swedish Agency for Marine and Water Management (SE)
- Jungho Nam, Director of the MSP Research Center at the Korean Maritime Institute (KR)
- Joanna Smith, Nature United (The Nature Conservancy) (CA)

Trade-off, a Core Part in ES-based Planning & Decision Making

Core is "Trade-Off"

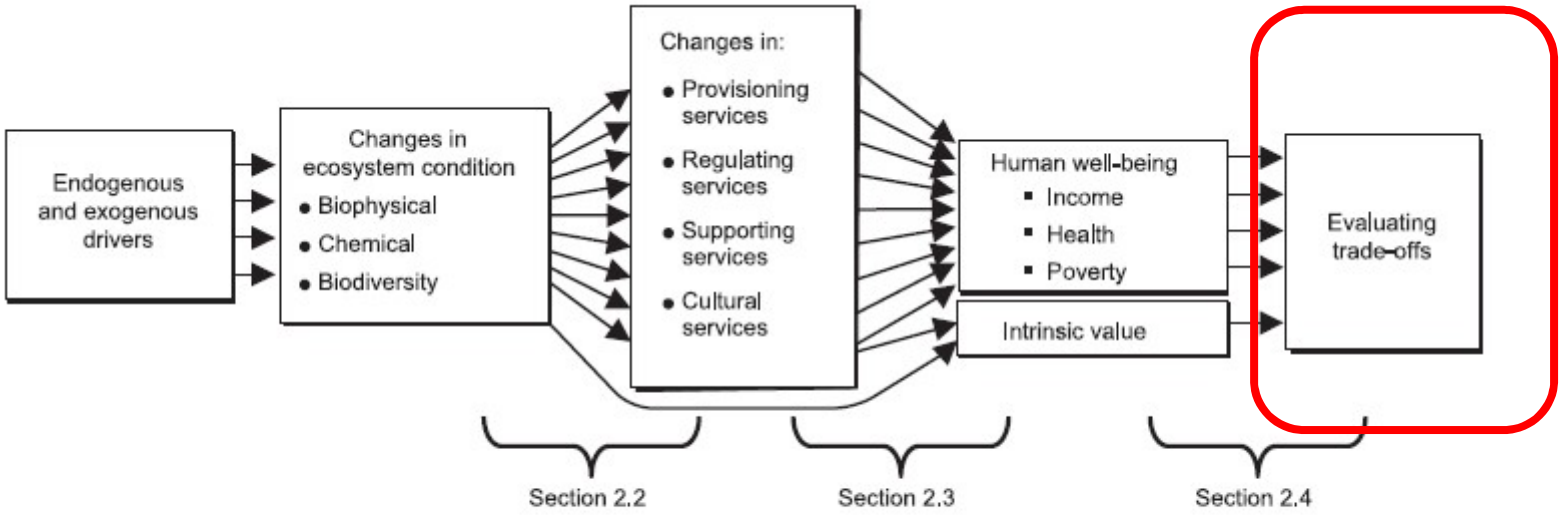
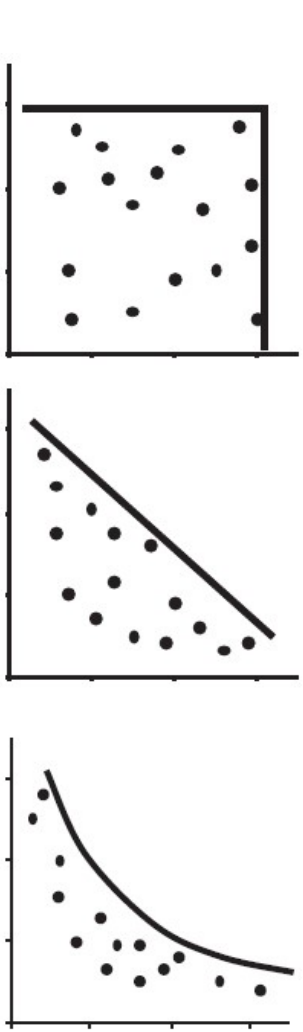
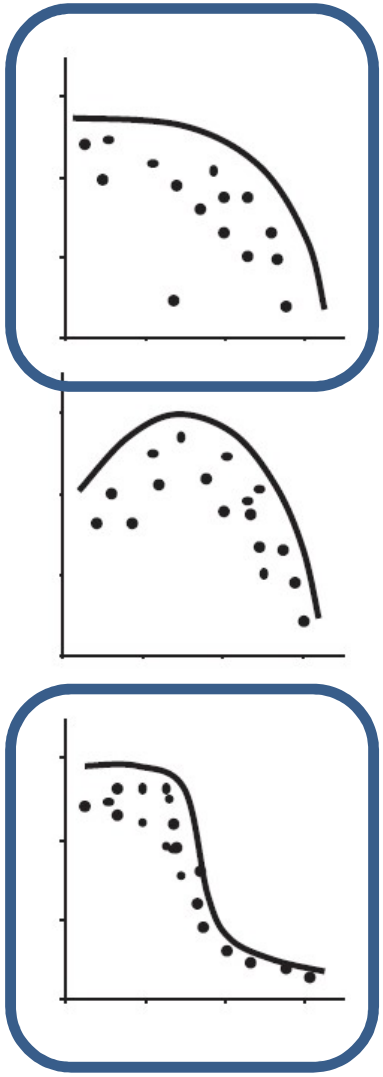


Figure 2.1. Linking Ecosystem Condition to Well-being Requires Assessing Ecosystem Condition and Its Effect on Services, the Impact on Human Well-being and Other Forms of Value, and Trade-offs among Objectives

MA, 2003, Ecosystems and Human Well-being: Current State and Trends, Ch. 2

Application of Ecosystem services Trade-off In MSP





MPA Vs. Fisheries

Marine Energy Vs. Fisheries

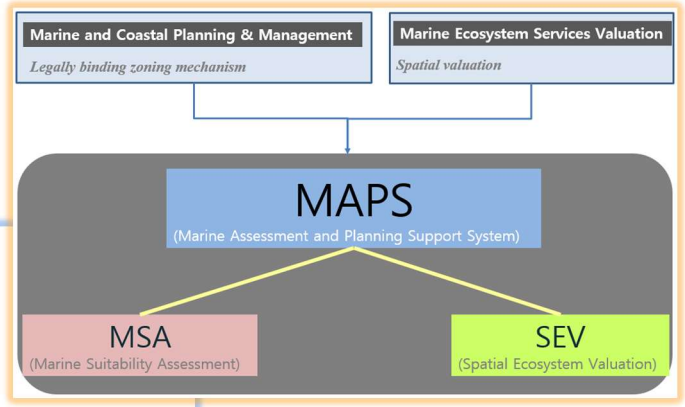
(Lester et al., 2012)

Incorporation of MES into MSP in Korea

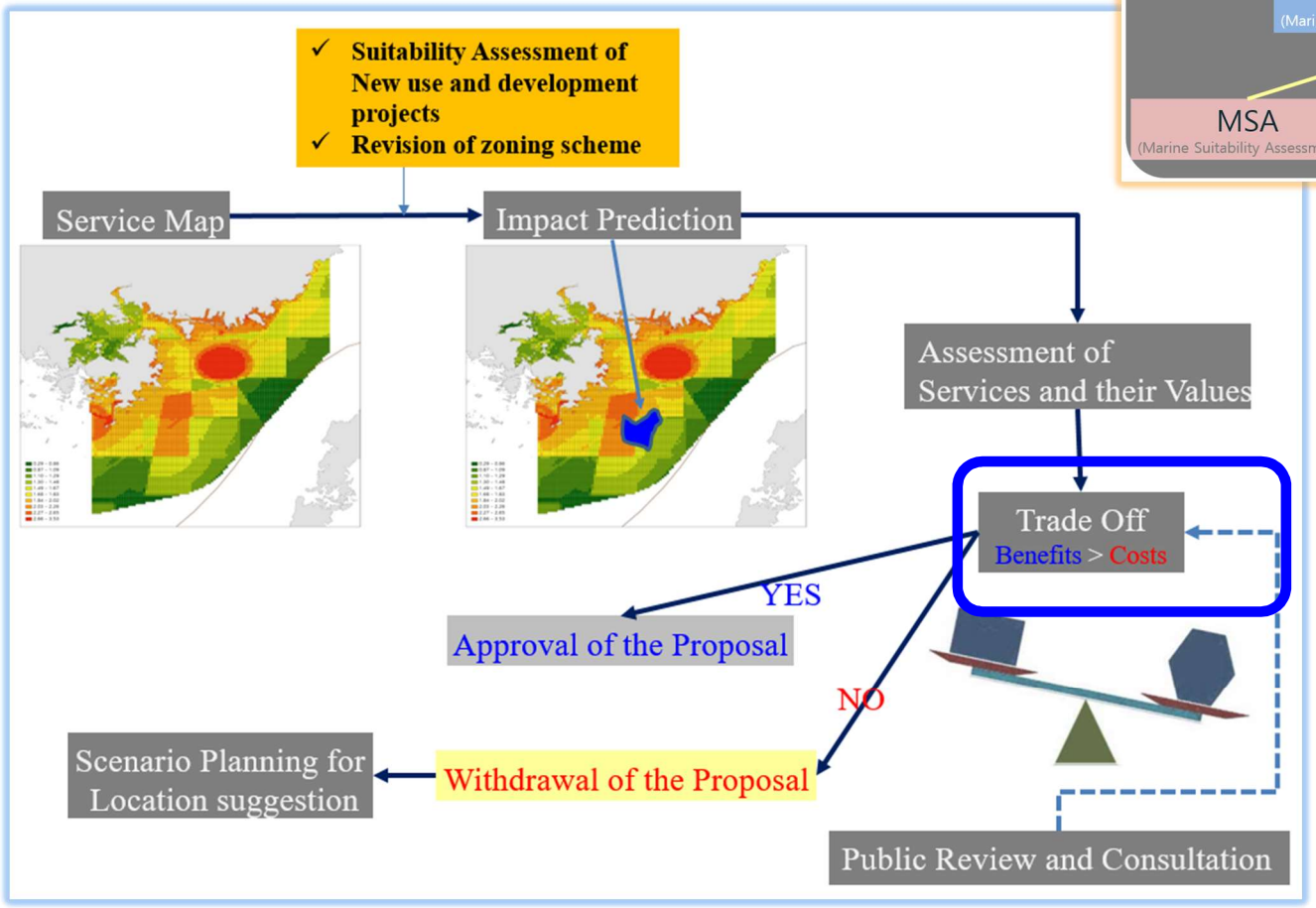
Passive
"On-demand"- based Revision

Proactive
Cumulative impacts

Revision of the Plan and its related Zoning Scheme



(Nam & Kang, 2014)

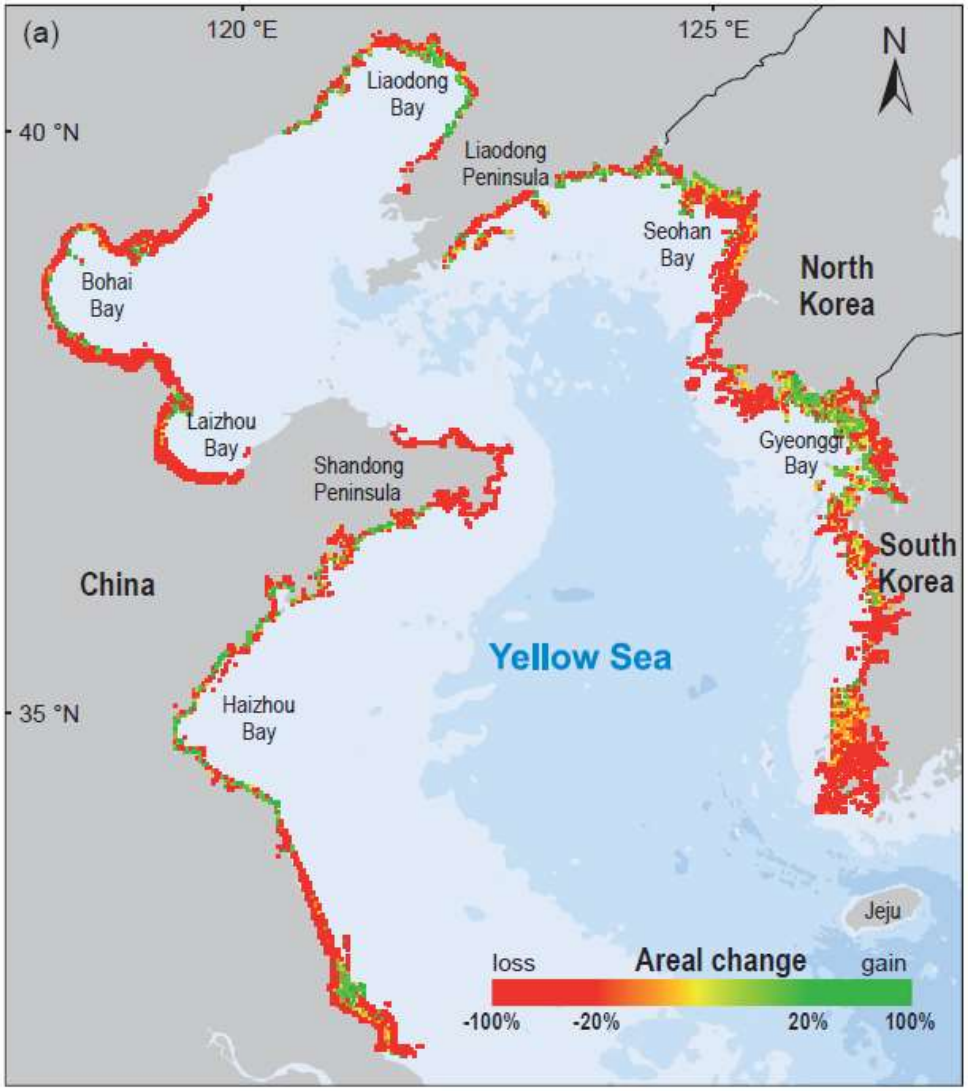


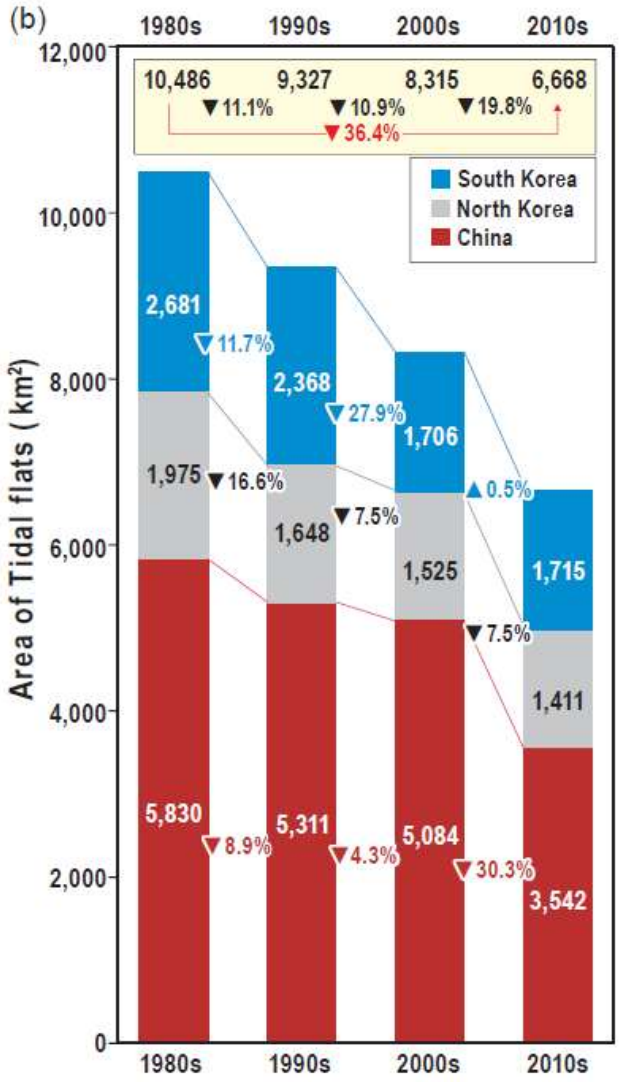
(Nam et al., 2016)

Transboundary MSP for Sustainable Yellow Sea

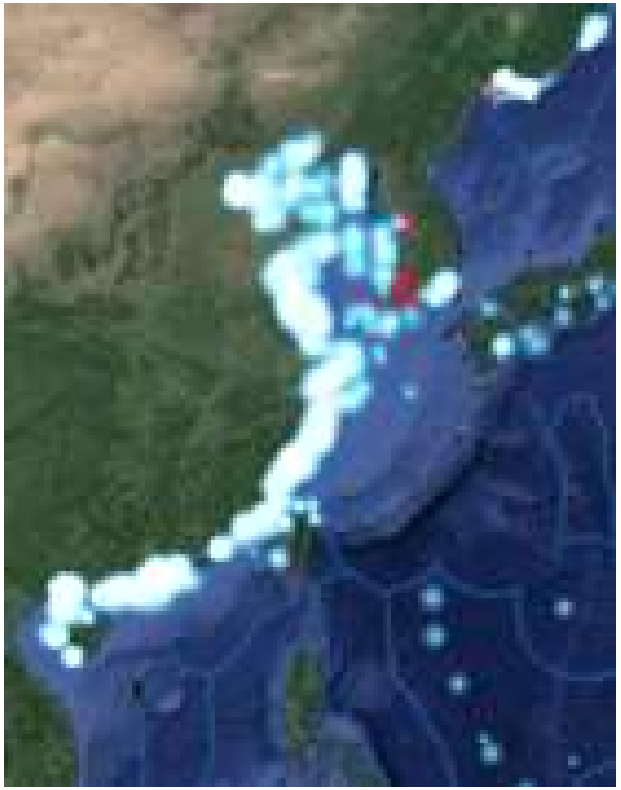
Witnessing Reality and Dynamics

Sacrificing Marine Ecosystem for Human's Satisfaction

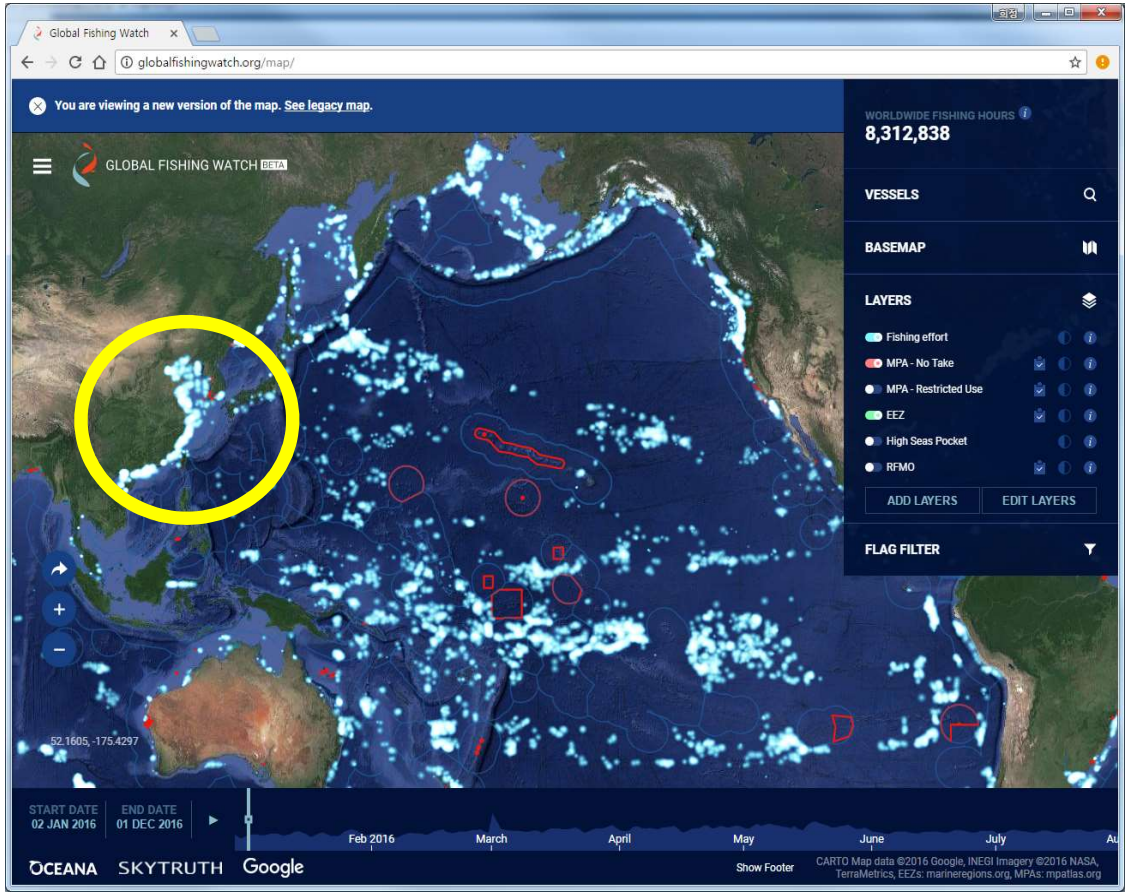




(Yim, Khim, Kwon Nam et al., 2018)



Most Intensive Fishing Activities



www.globalfishingwatch.org

Dynamics of Geopolitics and Its Impact on Sustainability of YS Ecosystem Service

27~28 Feb, 2019

11 April, 2019

20 June, 2019

30 June, 2019

DRP Korea, affirmative to International Cooperation

Ramsar

Contacts News Events Press Jobs EN FR ES

Search...

HOME ABOUT SITES & COUNTRIES ACTIVITIES RESOURCES DOCUMENTS

Home > The Democratic People's Republic of Korea to become the 170th Contracting Party to the Convention on Wetlands

Share

The Democratic People's Republic of Korea to become the 170th Contracting Party to the Convention on Wetlands

6 February 2018

Rason Migratory Bird Reserve

The Secretariat of the Ramsar Convention on Wetlands is pleased to welcome the Democratic People's Republic of Korea as the 170th and latest Contracting Party to the Convention. The Convention will come into force in the country on 16 May 2018.

At the time of joining the Convention, each Contracting Party must designate at least one wetland site within their territory for inclusion in the List of Wetlands of International Importance (the Ramsar List). The Democratic People's Republic of Korea has designated the **Mundok Migratory Bird Reserve** and the **Rason Migratory Bird Reserve** as its first two "Ramsar Sites".

The Mundok Migratory Bird Reserve is a nationally-protected area which lies at the mouth of the Chongchon River on the west coast of the country. Local people harvest crabs on the tidal flats, as well as fish and shells from the estuary and river. The surrounding coastal plain features small scattered villages and farmland such as rice paddies, cropland and orchards.

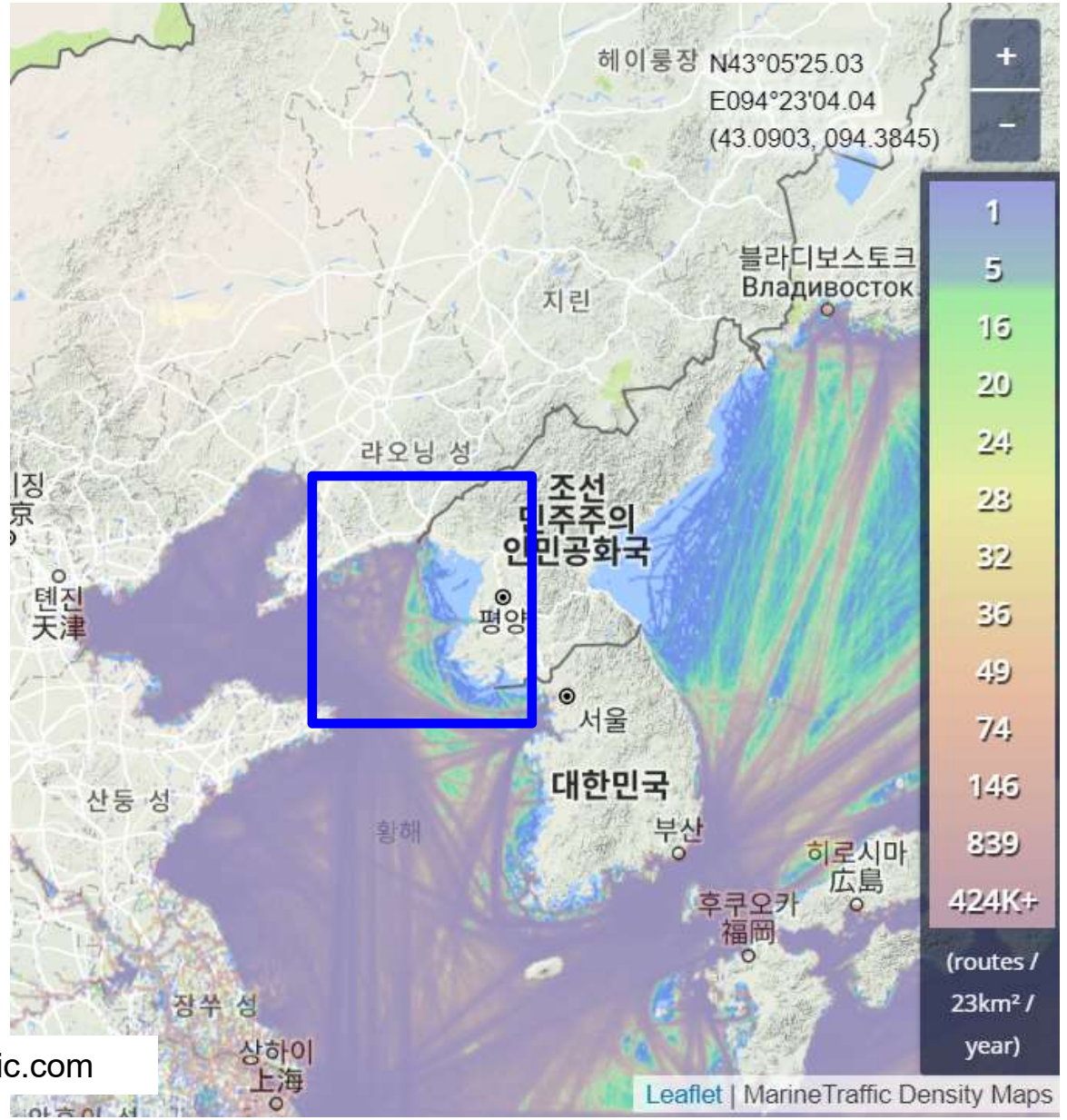
The Environment Is So Bad in North Korea, They'll Even Let Americans Help

The environmental degradation in North Korean has become so severe, North Korea invited a group of five Americans to Pyongyang last month to talk about restoration and food security.

https://www.theatlantic.com/international/archive/2012/04/environment-so-bad-north-korea-theyll-even-let-americans-help/329758/

And here is coverage of the report by the Institute for Far Eastern Studies (IFES):

> **Marine Development Projects Underway in North Korea**
> 2015-7-30
>
> North Korea's state-run Korean Central News Agency (KCNA) reported on July 24, 2015 that marine resource development projects, such as the establishment of an Advanced Marine Technology Development Zone, are currently being pursued in North Korea.
>
> While KCNA reports that the establishment of the Advanced Marine Technology Development Zone is moving along, Choson Marine Association head clerk Kwak Il Hwan adds, "Protecting and increasing marine resources while actively developing and using them is becoming one of the state's main policies."
>
> The news agency also revealed, "As a marine space resource, ports will be constructed, navigation channels will be developed, and there were will be tidelands and marine tourist spots; on the west coast it will become a tideland capable of development as well as a wealth of information." This statement indicates that the Advanced Marine Technology Development Zone will be designated on the west coast.
>
> "A training system for our country's experts and engineers in the marine sector is in place, and a technological foundation for the development and use of marine resources, including research bases in each field all over the country, has been secured," KCNA reported.

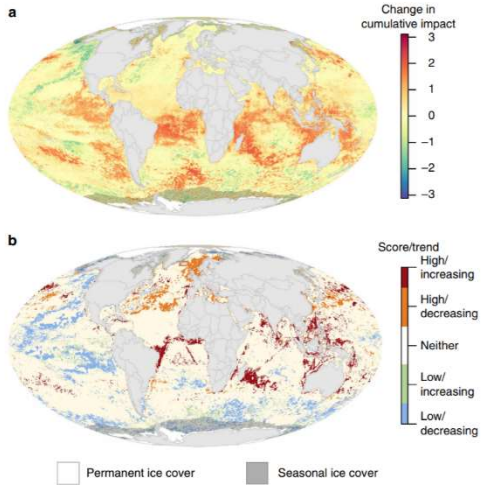


https://www.marinetraffic.com

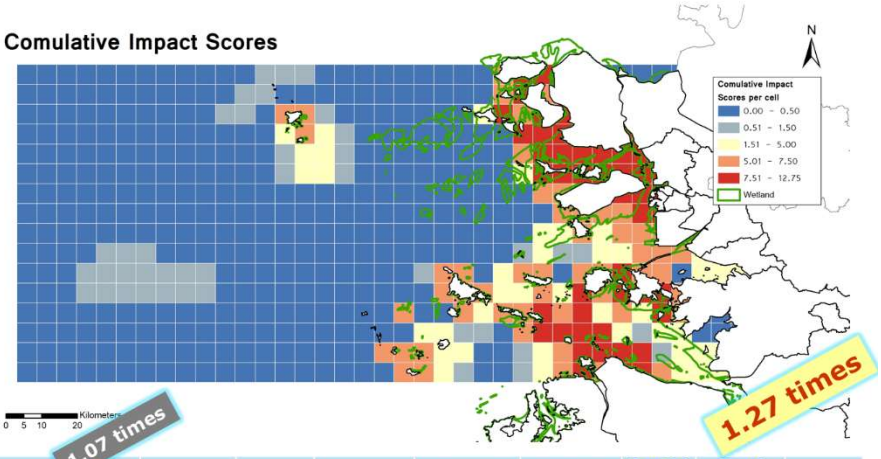
Acceleration of Cumulative Impact and Exacerbation of Health

without Yellow Sea Governance

Country	Impact score in 2013	Change over 5 years
DPR Korea	3.6102	-0.03106
RO Korea	4.8542	0.13060
China	5.1714	0.07045
Japan	4.2891	0.15299
Russia	2.3668	0.09861
U.S	3.5298	-0.11903



Halpern et al., 2015

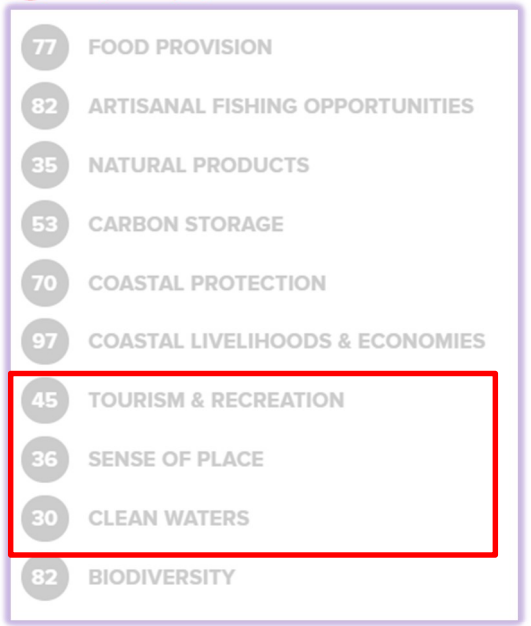


	Population	Fish catch	Mariculture	Shipping & Transport	Artificial coastline	Spatial uses	Sand extraction	Total
2005	2,848,711	21,326	1,714	42,463	344	85	4,924	
Cumulative impact score	101	101	71	82	302	2	160	821
2015	3,057,325	21,352	4,078	37,560	374	379	7,010	
Cumulative impact score	108	101	170	73	329	11	248	1,040

Nam & Choi, 2017

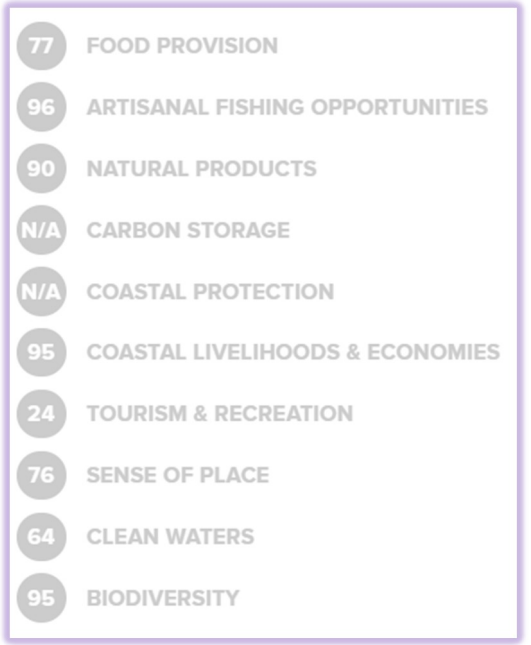
Ocean Health Index as Ocean Development Potential,
Going down far Lower than Global Average (70)

China : global ranking 168 / 221



RO Korea : global ranking 34 / 221

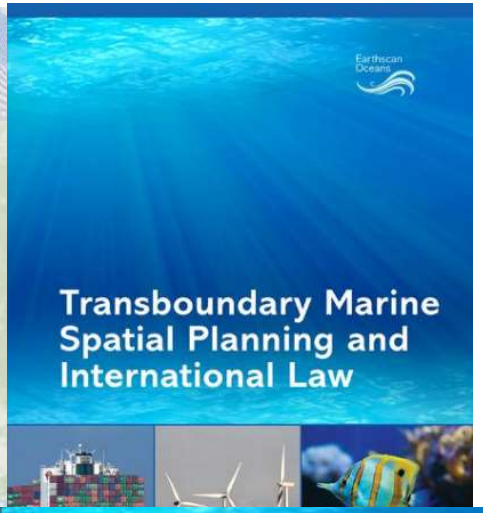
DPR Korea : global ranking 186 / 221

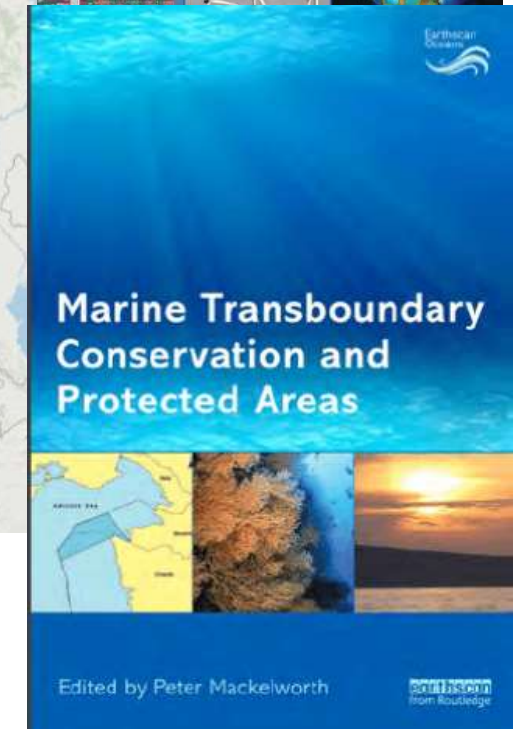


http://www.oceanhealthindex.org

Transboundary MSP, as a Vehicle for New Governance

Transboundary Cooperation for More Benefits and Sustainability





Re-interpretation of *Mare Liberum*
with vs. without stewardship

Spatial Competition and Conflicts

NJ → ABNJ?

MSP, One of Instruments for BBNJ

Fisheries & Aquaculture

Reclamation

Conservation

Shipping

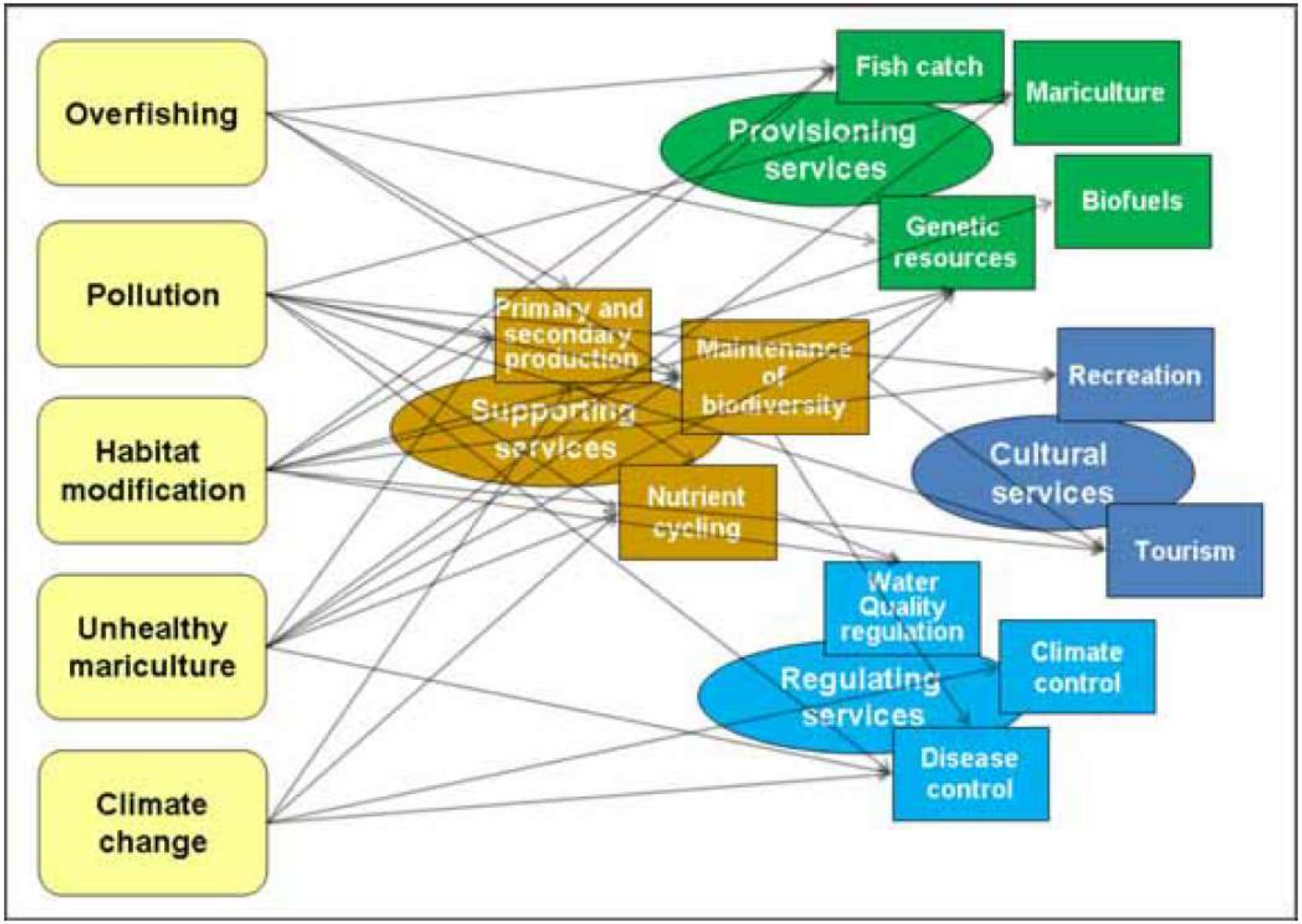
Tourism & Recreation

Marine sand extraction

Wind energy

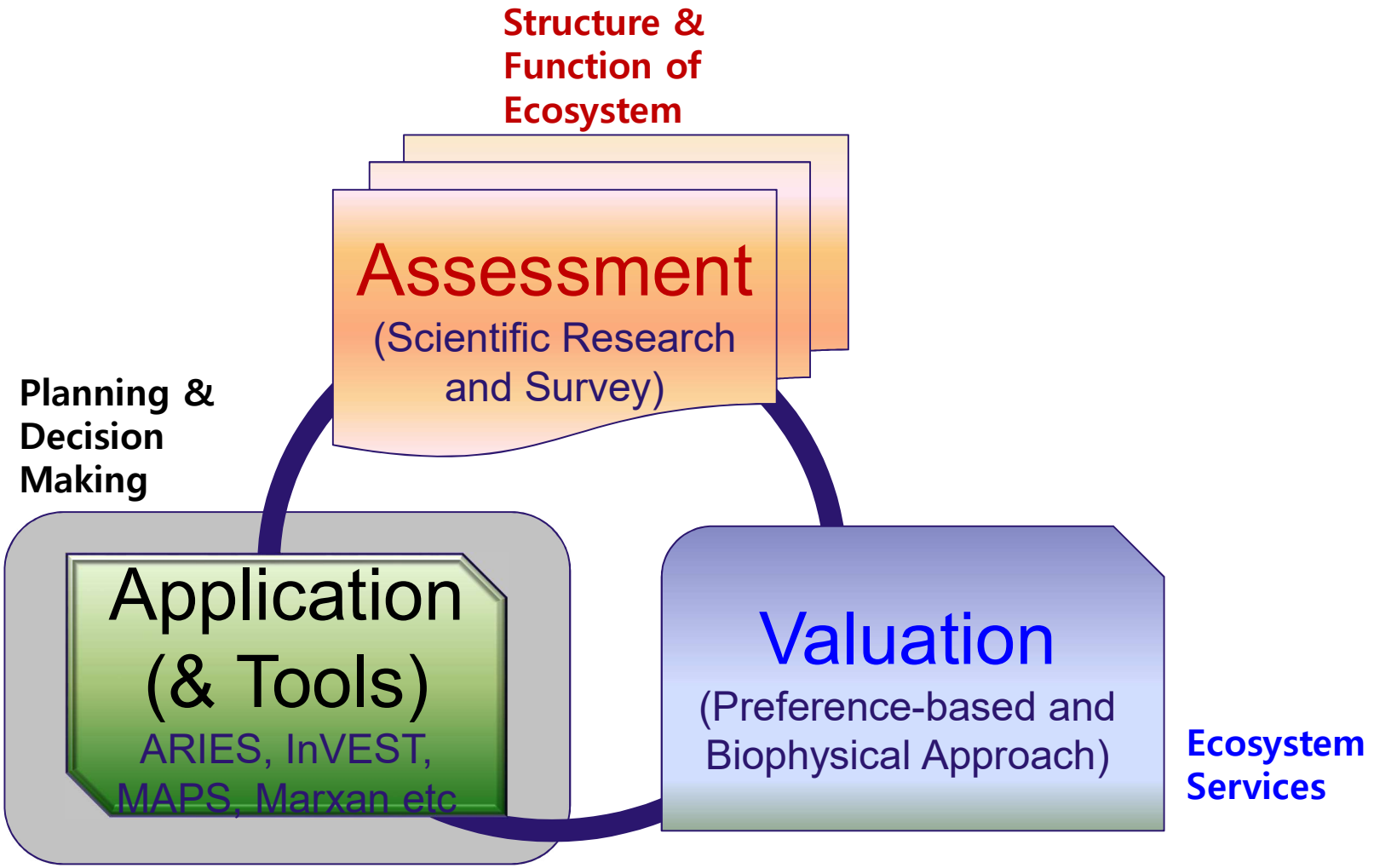
Tidal energy

MSP, a Leverage for Achieving ES-based Targets of YSLME SAP



(UNDP/GEF/YSLME, 2009)

Three Technical Pillars of ES-based Planning and Decision-Making

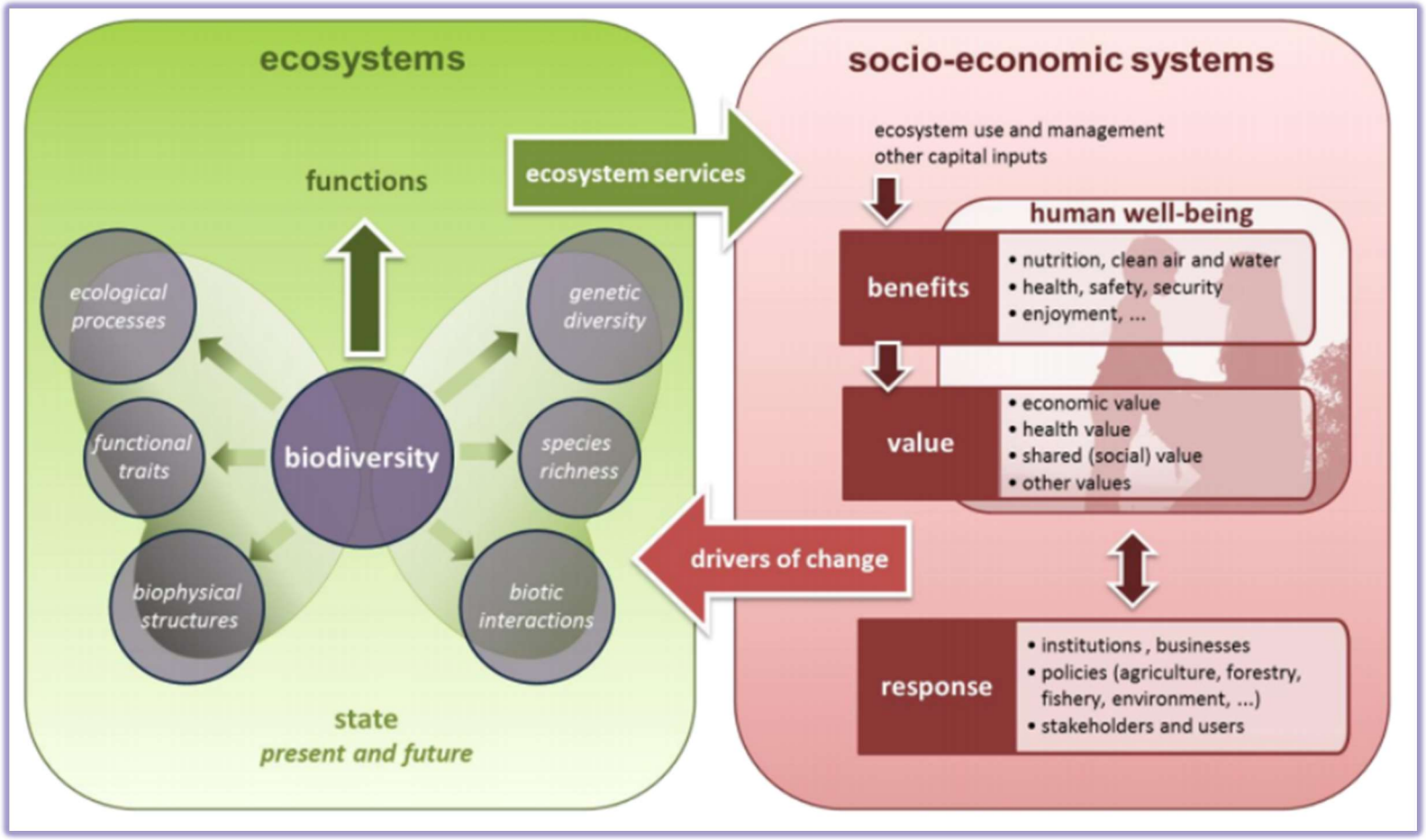


Modified from Nam, 2014

Planning Tools are PANACEA like a Crystal Ball?

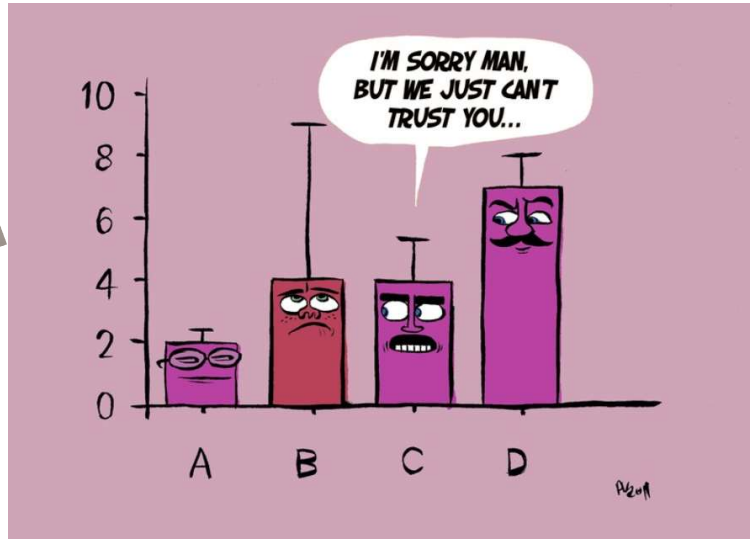
Irrational Decision-making without Sound and Concrete SCIENCE

Valuation supported by Assessment



www.biodiversity.europa.eu

More Uncertainty & Less Connectivity → Mare Clausum → Far From SDGs Without Governance and Science



Challenging Step to establish YS MSP Platform

- **Transboundary MSP WG**
- **MES-oriented Science WG**
- **Co-visioning WG**

  with Potential Partner, DPR Korea

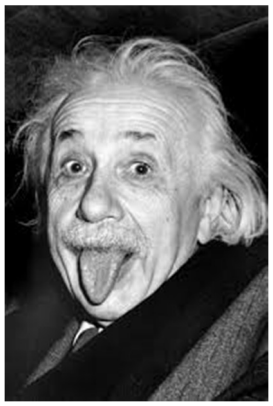
MSP

in nature, **Marine Spatial Politics**

as a solution, **Marine Spatial Partnership**

Politics is more difficult than Physics

-Albert Einstein



Thank you for Listening