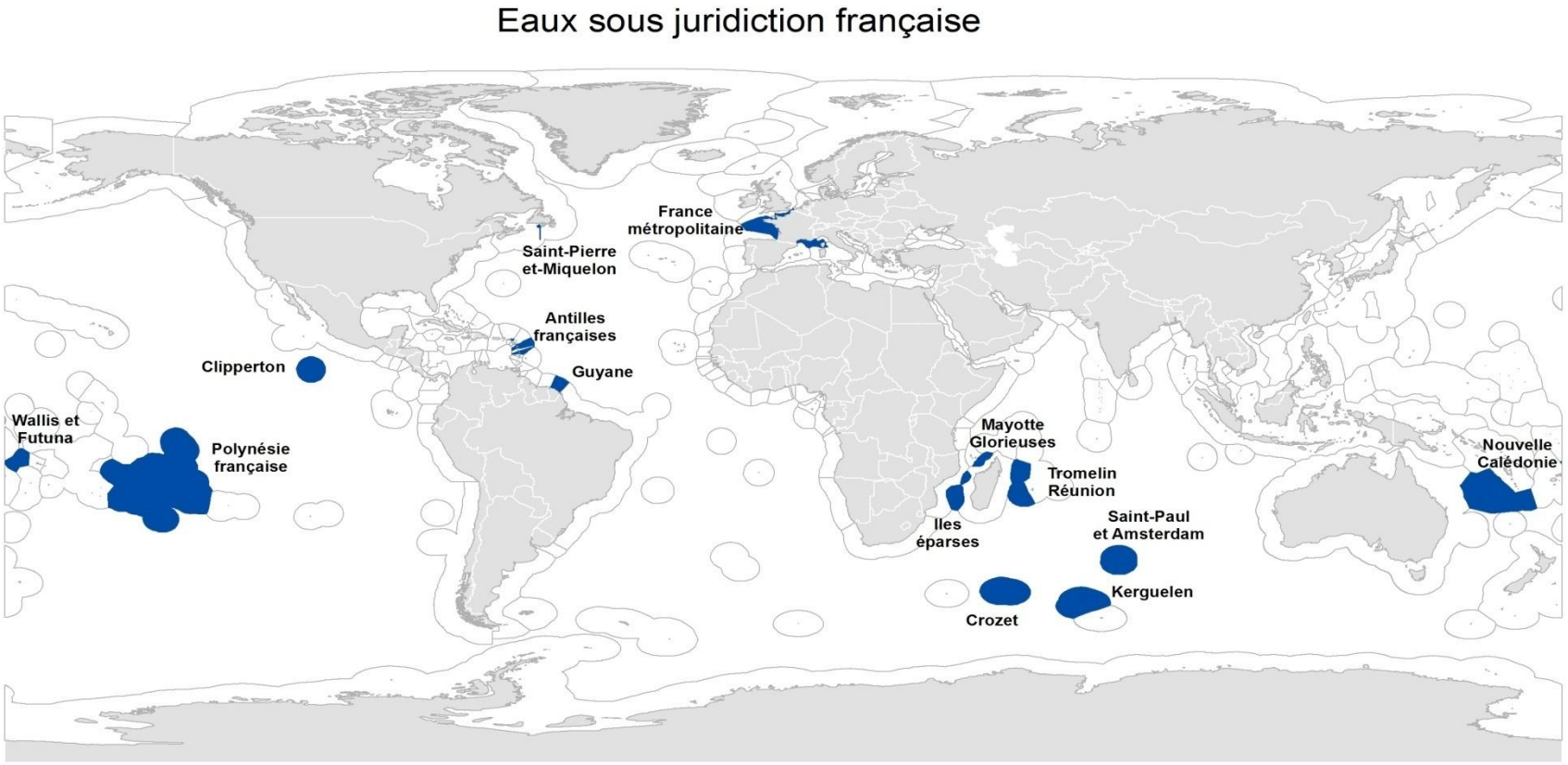
The working area of the French Marine Protected Areas Agency

2020 Target : 20 %













Marine and Coastal Biodiversity:

Risks and multiple stressors and opportunities for Conservation and Sustainable use

Patricio A. Bernal

GOBI Coordinator





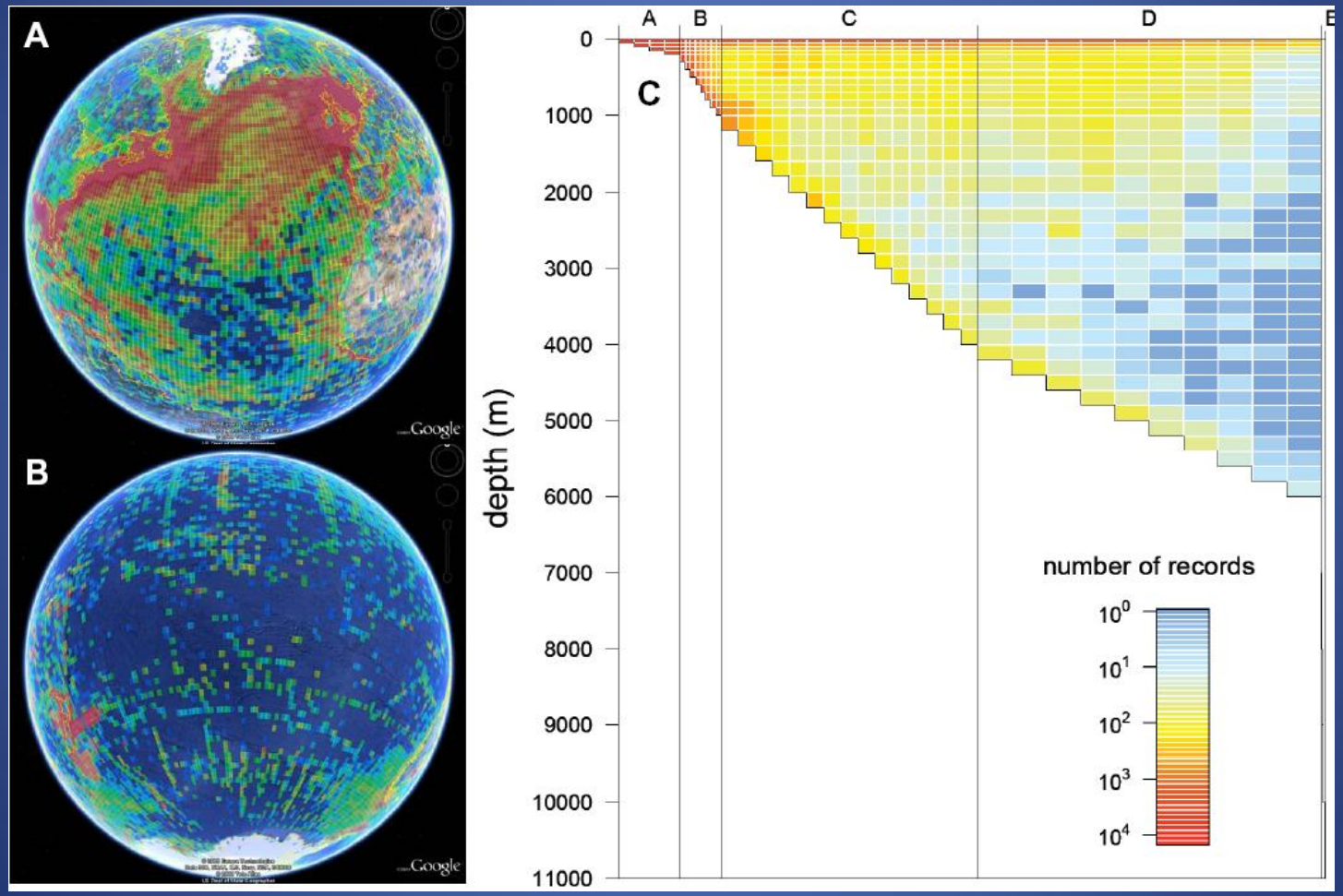






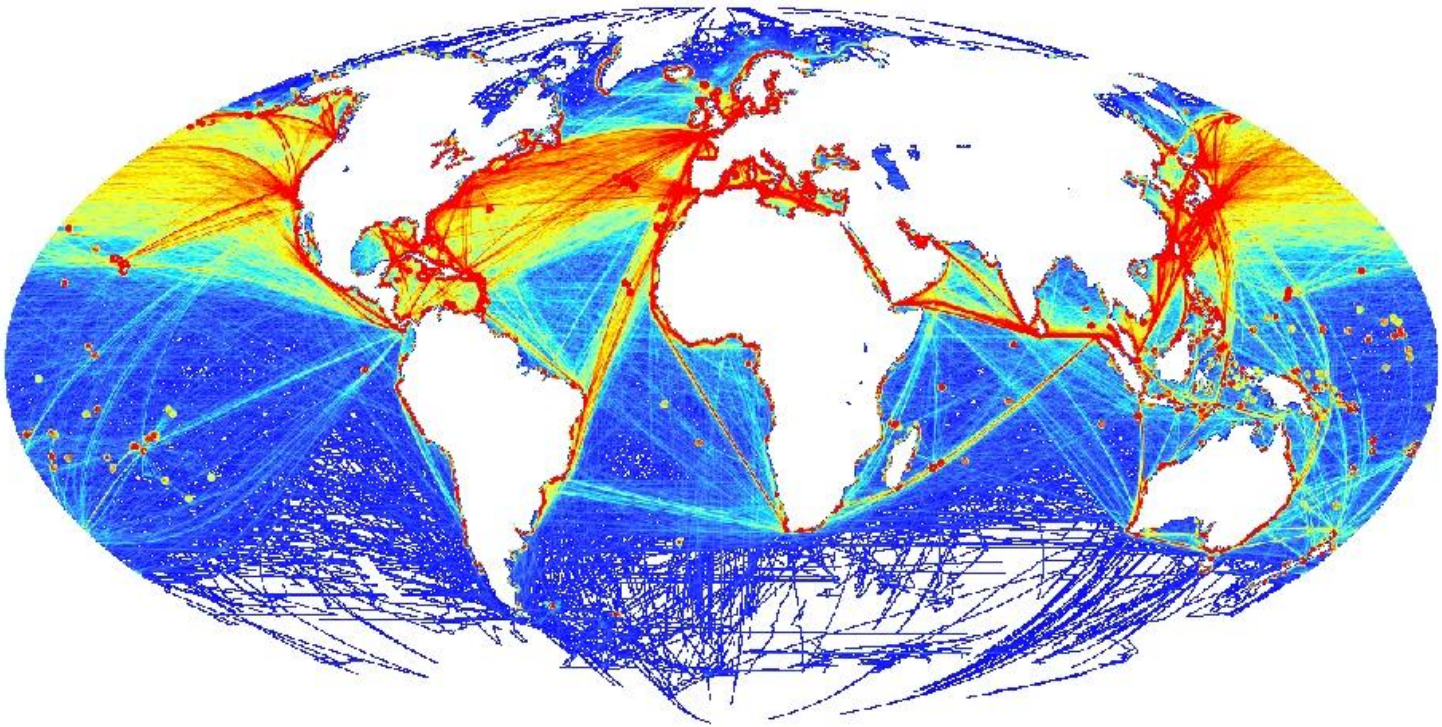


Nombre de registres des espèces dans le Ocean mondial:



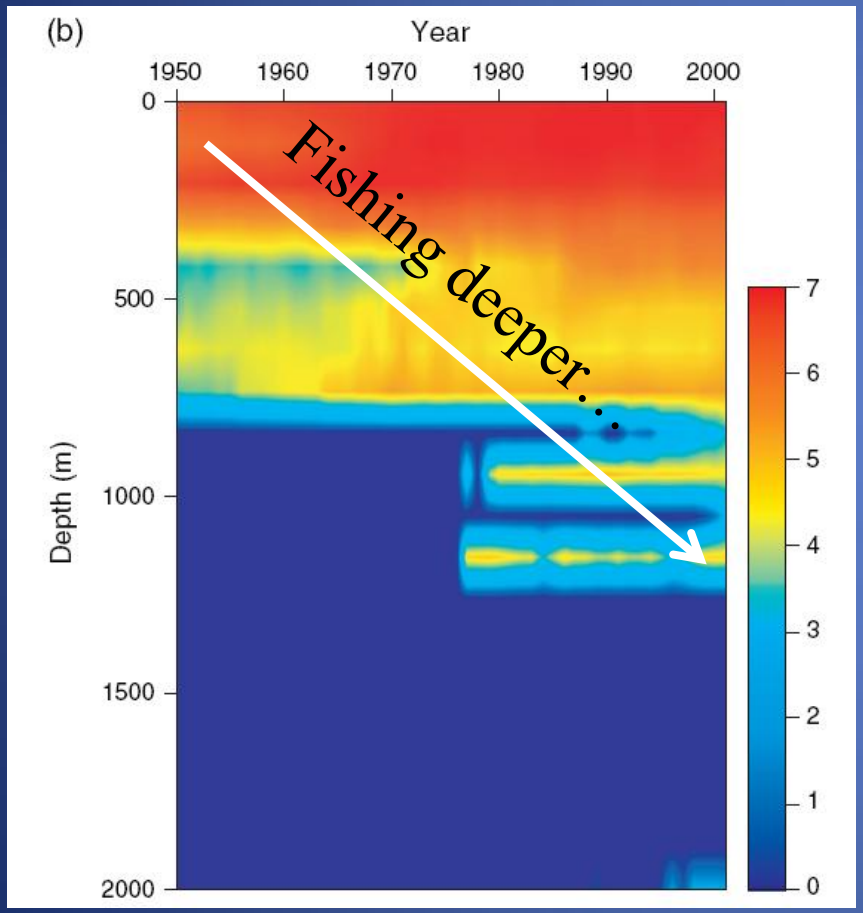
La majorité ils sont cotières (rouge) ,
superficielles (rouge) ou dans le fond(jaune)

Global shipping / ocean-based pollution



Source: NCEAS / Halpern et al, Science: 319, 2008

Fisheries moving deeper and further offshore







Time series of bottom fisheries catches by depth

(Morato et al. 2005. Fish & Fisheries 7: 24-34)

In 50 years:
Drastic, mostly invisible, changes

Size composition

Key West 1958

recreational fishing day boat

big groupers

Source: HMAP - McClenachan



In 50 years: 1958 - 2008:
Drastic, mostly invisible, changes

Size composition

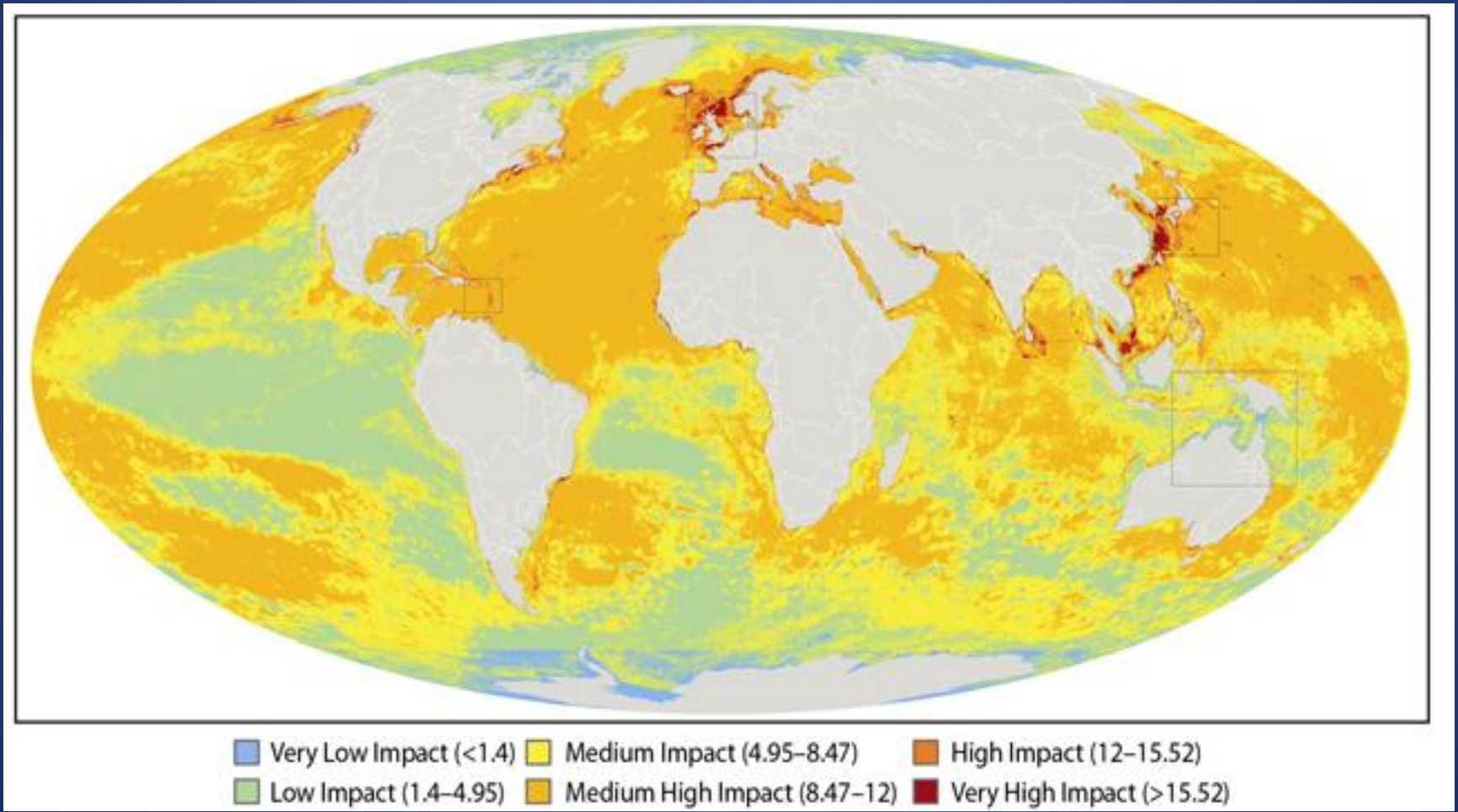
Key West 2008

recreational fishing day boat



Human Impact on the Ocean: 17 uses over 20 ecosystems ,combined.

41% of Ocean with medium to high impact.

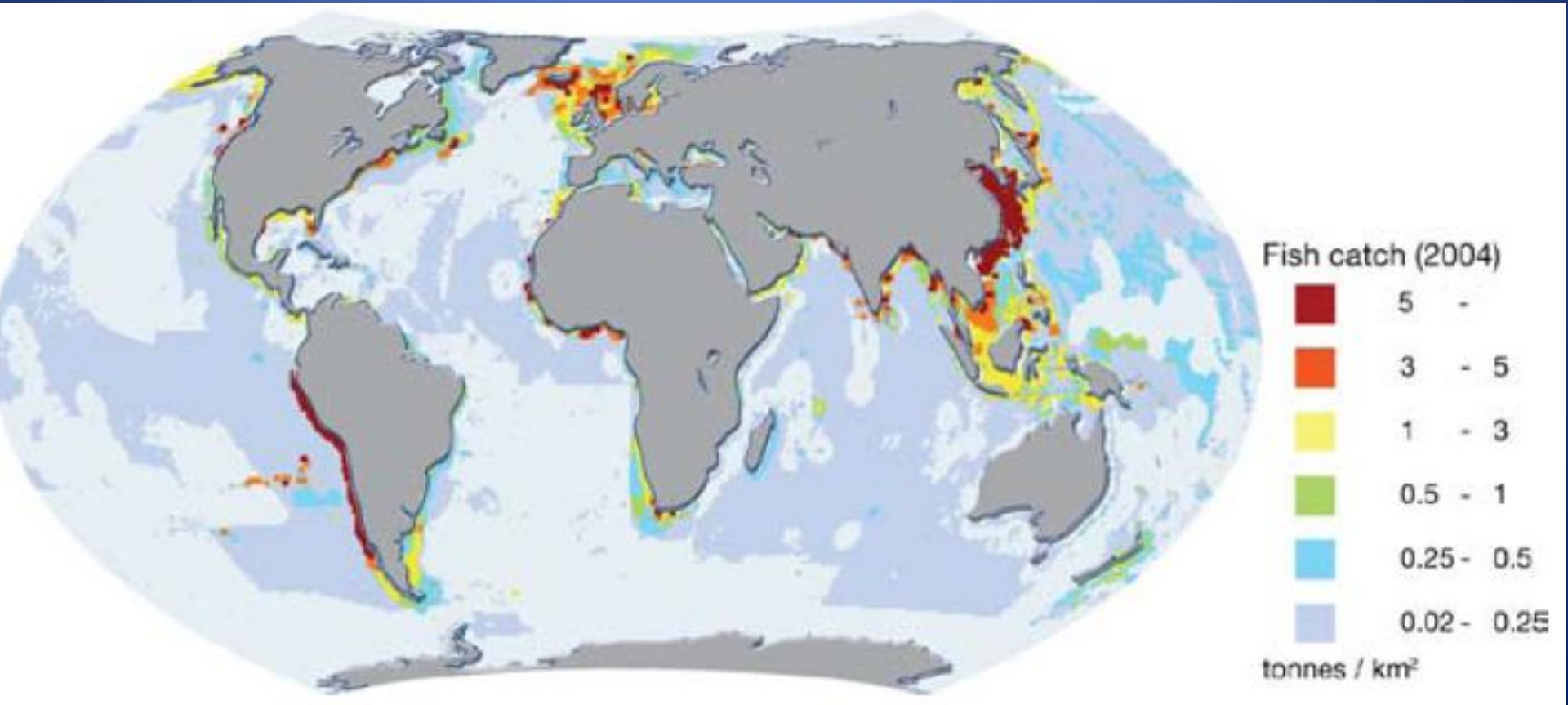


In 2010, the General Assembly of the United Nations established the first of a series of Integrated Ocean Assessments (« The Regular Process ») to be implemented between 2011-2014.

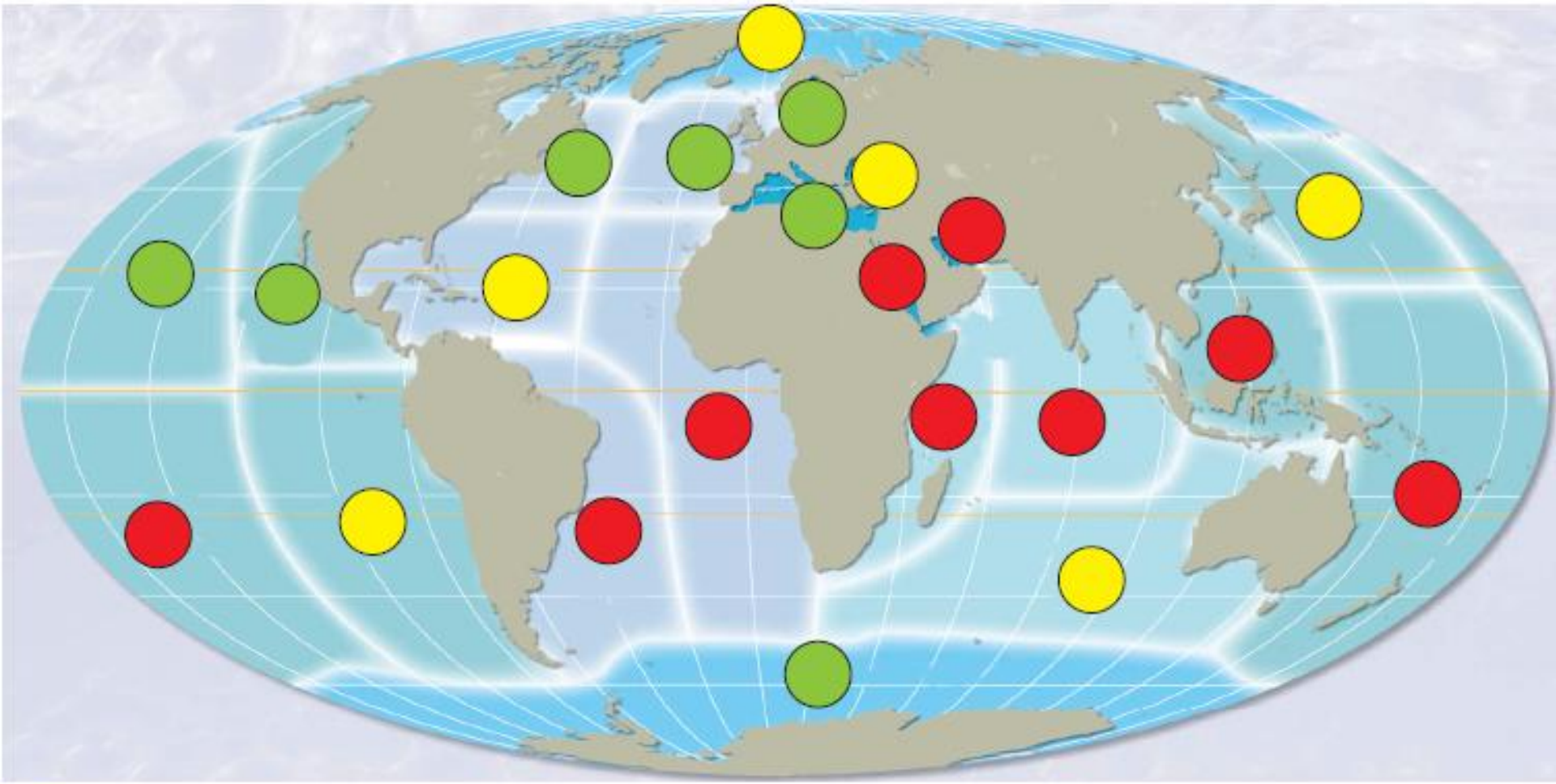
The analysis of existing assessments (over 410), conducted between 2006-2009, gives a first state of situation for marine ecosystems.

Fishery Resources

1. Commercial fishery data are the most complete – all regions have some level of data on fishing activities, the status of stocks and trends(FAO).



Living Marine Resources



Regular assessments of major and minor species and their interactions.

Assessments of most exploited species

Assessments of some exploited species

Gap analysis of ecosystem properties by Regions

Available assessment information

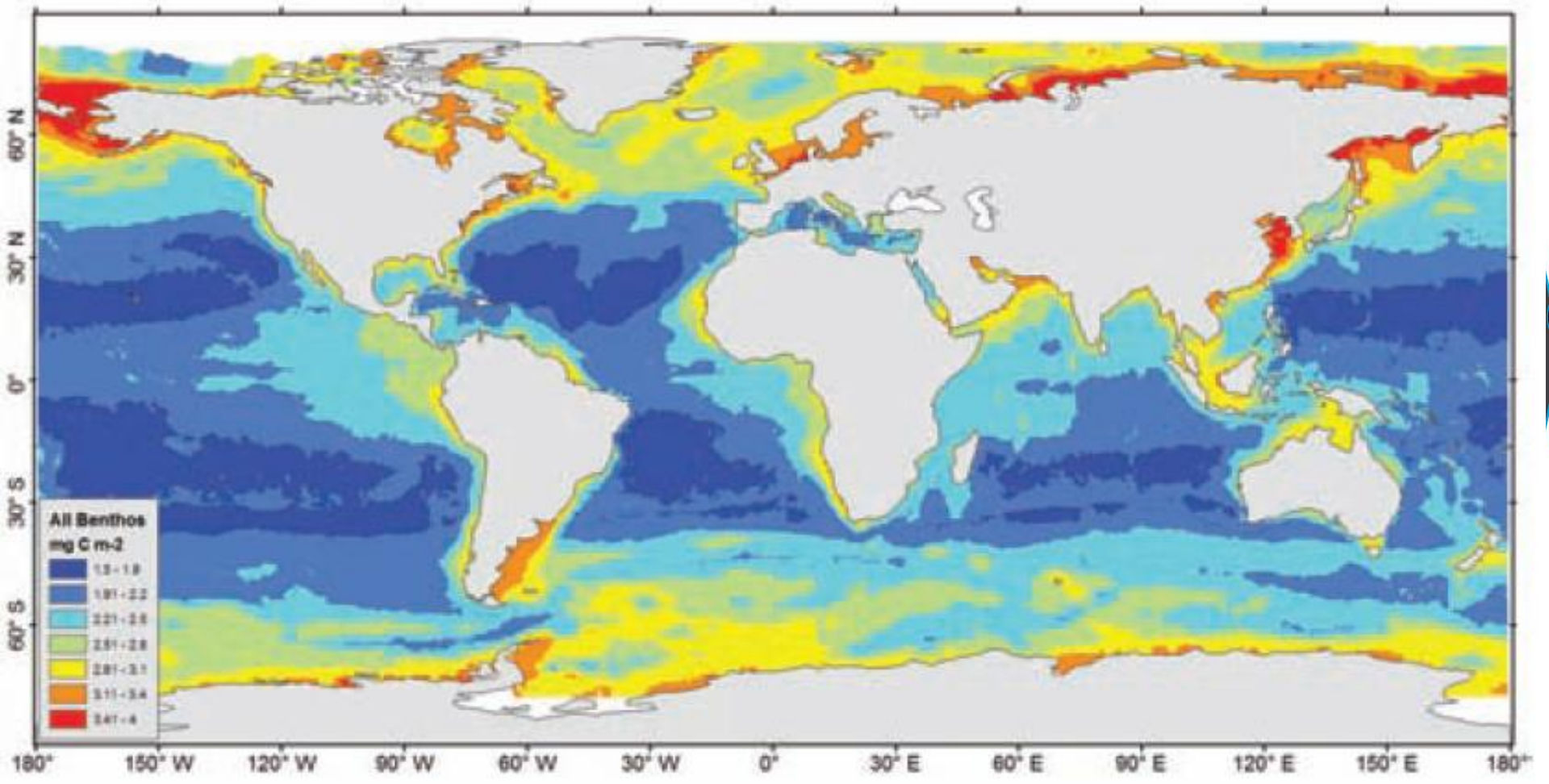
Mineral, oil and gas not included

Table 3.1a: **Gap analysis of the coverage of ecosystem properties in regional marine assessments**

	Water Quality	Living Marine Resources	Habitat Characterizations and Impacts	Lower Trophic levels in the Food Web	Protected Species	Social and Economic Conditions
Southern Ocean	some	extensive	some	extensive	extensive	some
Arctic Ocean	extensive	good	some	good	good	good
Baltic Sea	extensive	extensive	good	extensive	extensive	good
Black Sea	some	good	some	some	some	some
East Asian Seas	good	some	good	some	some	some
Eastern African Seas	some	some	some	some	some	some
Mediterranean Sea	extensive	extensive	good	good	good	some
North Central Pacific Ocean	some	extensive	extensive	good	good	good
North East Atlantic Ocean	extensive	extensive	good	extensive	extensive	good
North East Pacific Ocean	extensive	extensive	good	extensive	extensive	good
North West Atlantic Ocean	extensive	extensive	good	extensive	extensive	good
North West Pacific Ocean	good	good	good	some	good	some
Red Sea and Gulf of Aden	some	some	some	some	unknown	some
ROPME/RECOFI Area	good	some	some	some	some	some
South Asian Seas	some	some	some	good	good	some
South East Pacific Ocean	some	good	some	some	unknown	some
Southern Indian Ocean	some	good	good	good	good	good
Southern Pacific Ocean	some	some	good	none	some	some
South West Atlantic Ocean	some	some	some	some	good	good
Western African Seas	some	some	some	some	some	some
Wider Caribbean Region	good	good	good	some	good	good

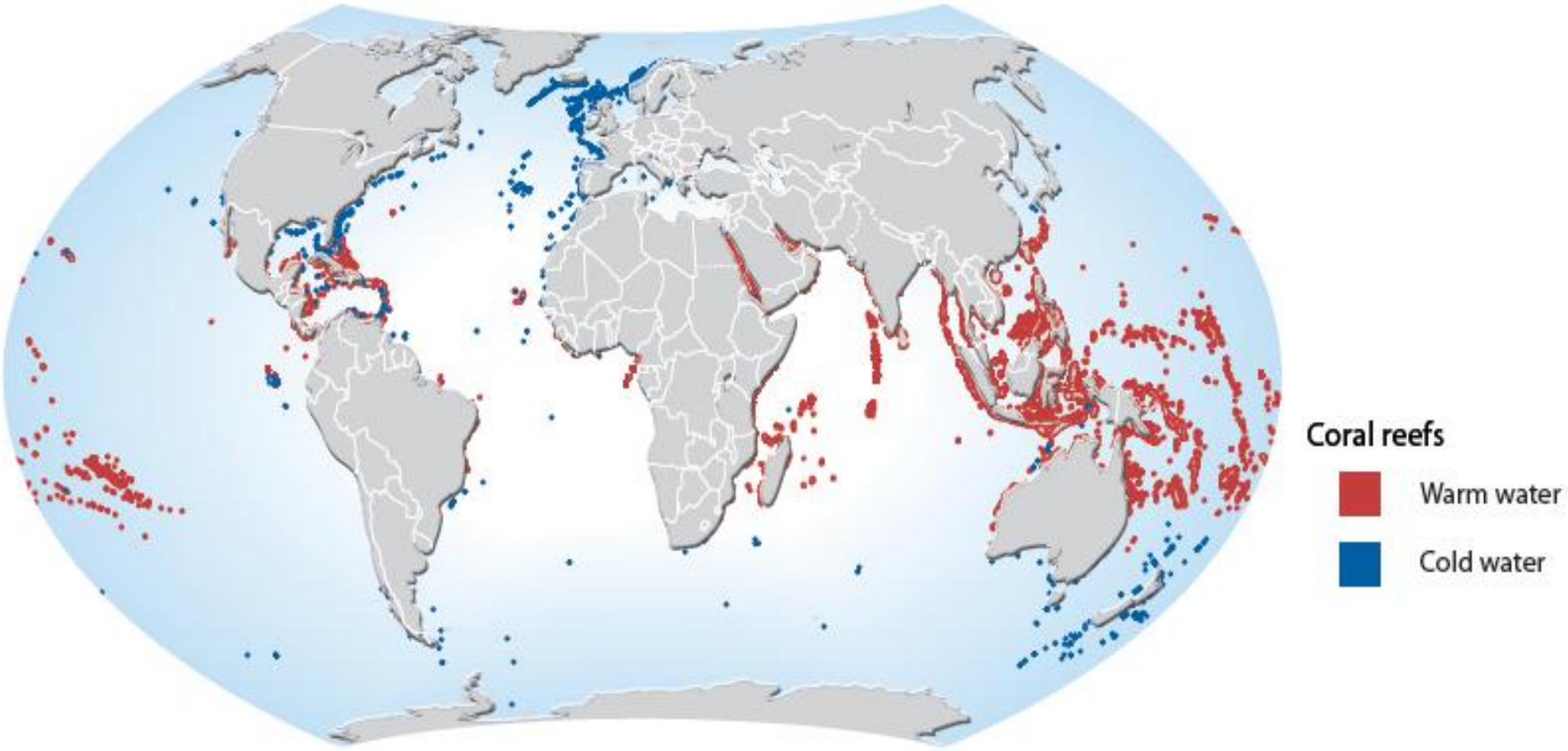
extensive; good; some; none; unknown

Estimated seafloor biomass



Global marine biodiversity – Census of Marine Life: http://www.coml.org/

Habitats spécials



In April 2012, the working group of the UN General Assembly
Approved the final structure of the report that contains 46 chapters.

For each region, group of experts nominated by states parties will write
Working Papers, review existing data and information and prepare the first
Series of draft chapters

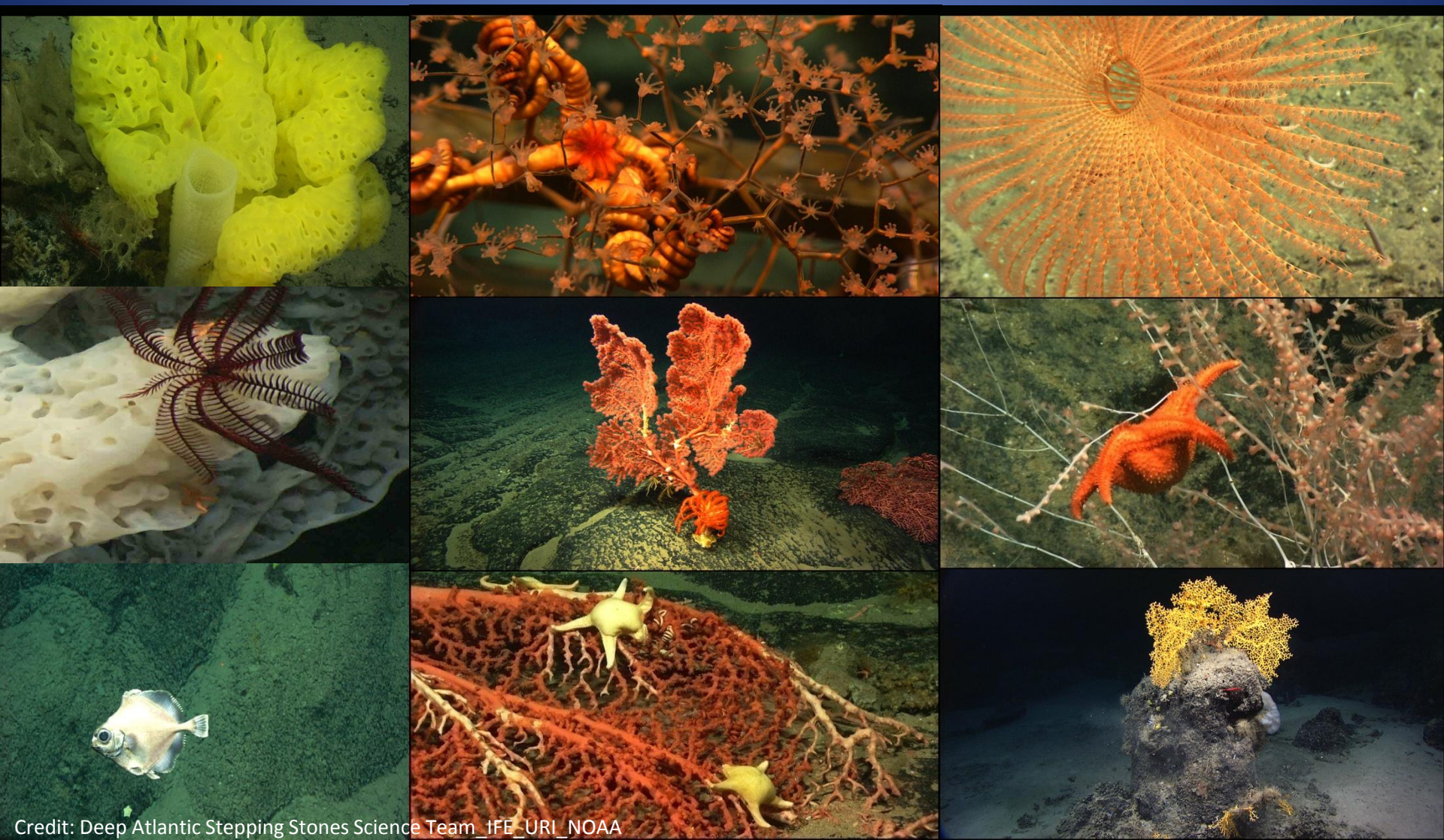
Intermediate Working Papers for each region and preliminary drafts will
be subject to independent peer review processes.

It is estimated that a total of 1200 to 1500 independent experts will be required
to address the different areas of the assessment and to conduct the peer reviews.

Nominations by countries of experts are open since January 2012 and a growing
roster of experts is being created.

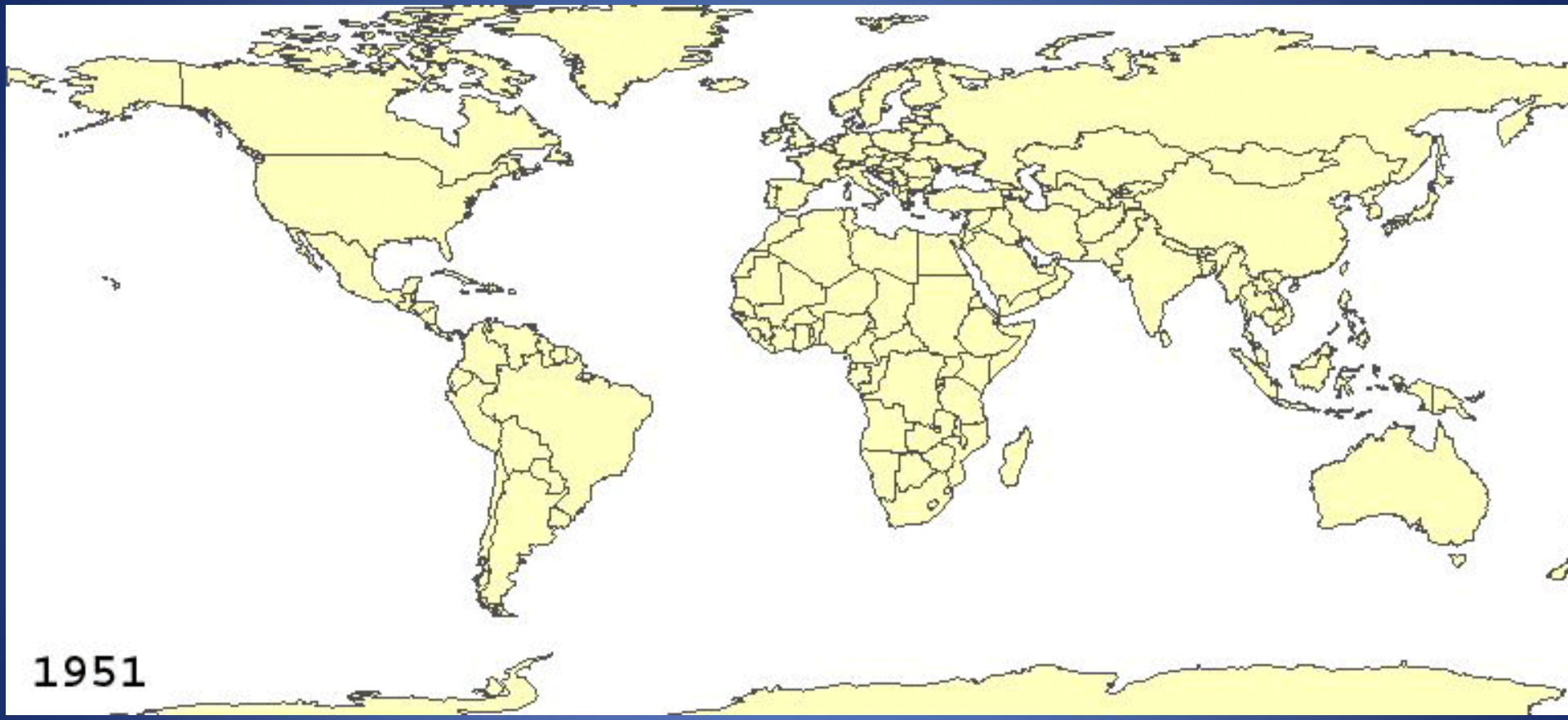
The compiled final draft report will be available at the end of 2014.

THANK YOU!



Credit: Deep Atlantic Stepping Stones Science Team_IFE_URI_NOAA

The Spread of Fishing Activity…



Calculated Max. Fish Harvest (“the good old days”)

Pre-peak
Harvest peak
Post-peak

Source: Millennium Ecosystem Assessment and Seas Around Us Project

Australian Government

Department of Sustainability, Environment, Water, Population and Communities



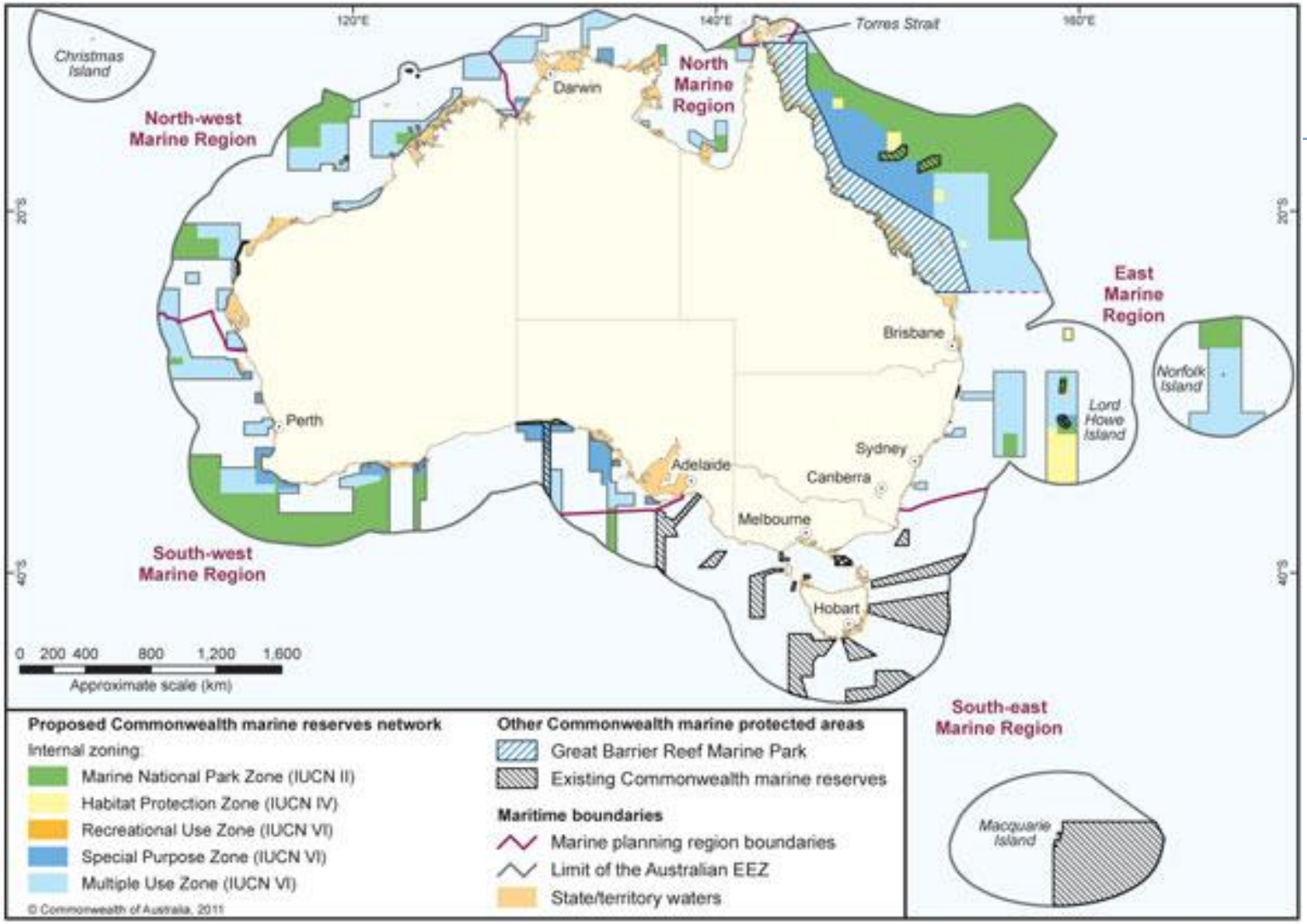


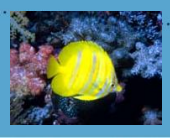



Marine Bioregional Planning & MPAs in Australia

Donna Petrachenko for the Sustainable Ocean Initiative

Nautilus (Dr M. Norman, Museum Victoria) Butterfly fish & Yellowback Fusiliers (R. Thorn) Soft Coral and diver (M. Ball) Tiger Anemone (L. Wiseman) Whale Shark (Paradise link)


Christmas Island
120°E
140°E
160°E
Torres Strait
North Marine Region
Darwin
North-west Marine Region
20°S
East Marine Region
Brisbane
Norfolk Island
Lord Howe Island
Perth
Sydney
Adelaide
Canberra
Melbourne
South-west Marine Region
40°S
Hobart
0 200 400 800 1,200 1,600
Approximate scale (km)
South-east Marine Region
Macquarie Island
Proposed Commonwealth marine reserves network
Internal zoning
Marine National Park Zone (IUCN II)
Habitat Protection Zone (IUCN IV)
Recreational Use Zone (IUCN VI)
Special Purpose Zone (IUCN VI)
Multiple Use Zone (IUCN VI)
Other Commonwealth marine protected areas
Great Barrier Reef Marine Park
Existing Commonwealth marine reserves
Maritime boundaries
Marine planning region boundaries
Limit of the Australian EEZ
State/territory waters
© Commonwealth of Australia, 2011



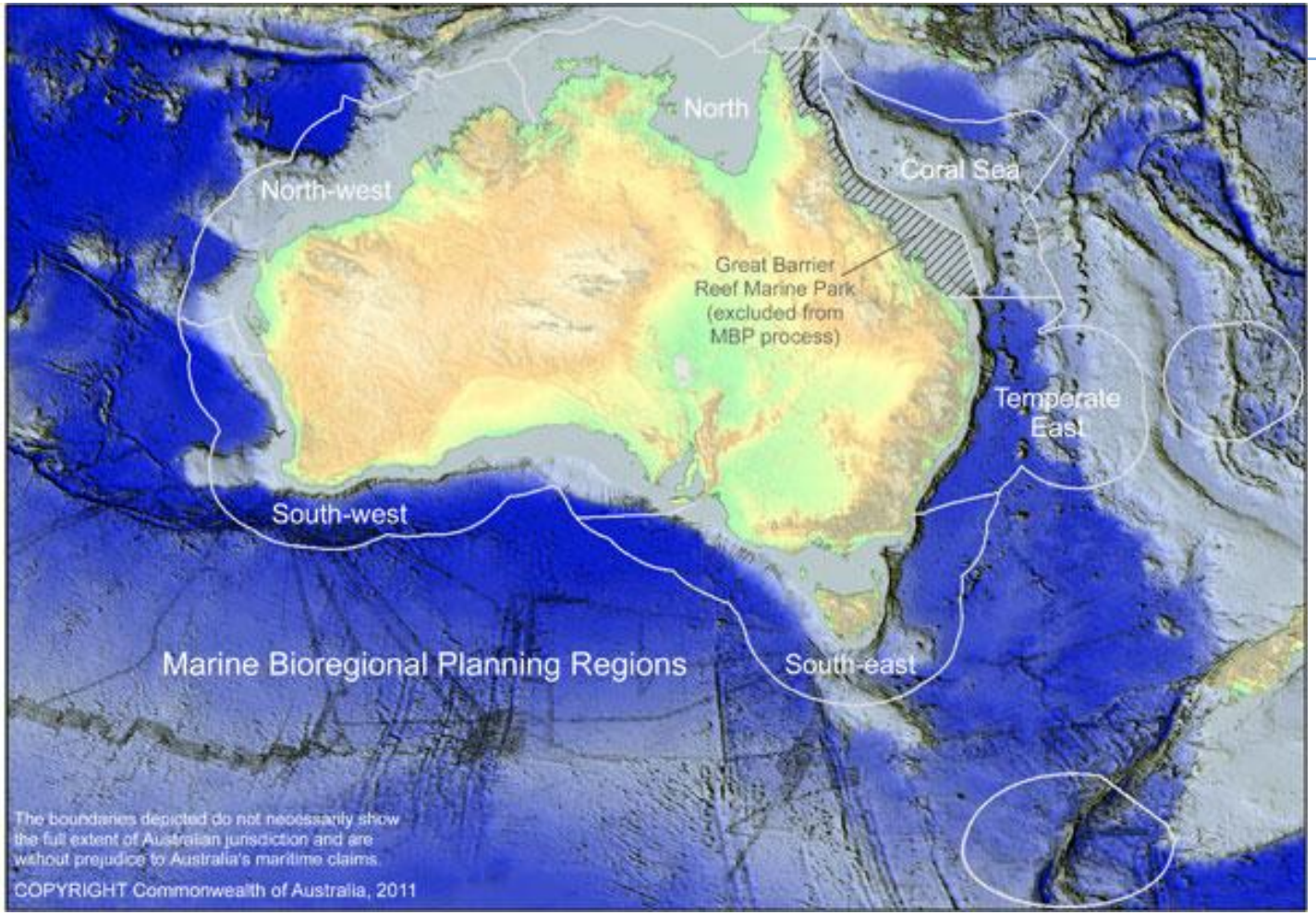


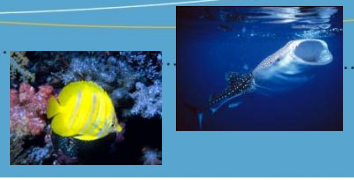
What is Marine Bioregional Planning?

- A basis for ecosystem-based management at a seascape scale
  - Across sectors and relevant spatial and temporal scales
- Focused on defining the “E” in ESD
  - Not centralised integrated planning and management
- Inform environmental regulation and programs
  - e.g. Marine protected areas, environmental impact assessment
- A guide to sectoral management
  - e.g. informing ecosystem-based fisheries management



The scale of the planning effort





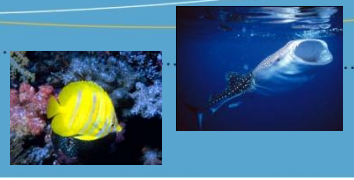
What does the planning involve?

- Describe the marine environment and conservation values of each marine region
- Identify regional priorities based on analysis of pressures to conservation values
- Outline strategies and actions to address regional priorities



Conservation values

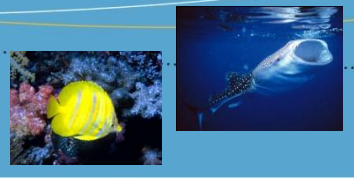
- Issues protected under federal environmental law
  - e.g. World Heritage Areas, threatened species
- Key Ecological Features
  - parts of the marine ecosystem that are important for biodiversity or ecosystem function and integrity
  - Analogous to EBSAs
- Biologically important areas
  - areas where a protected species displays biologically important behaviour such as breeding, foraging, resting and migration.



Pressure analysis

- Key issues that should inform decision-making about marine conservation, management, industry development and other human activities

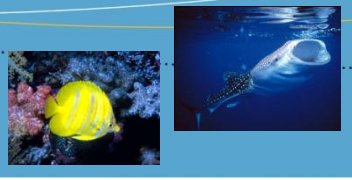
- A review of present and emerging pressures, their impact on conservation values, and the effectiveness management arrangements in place



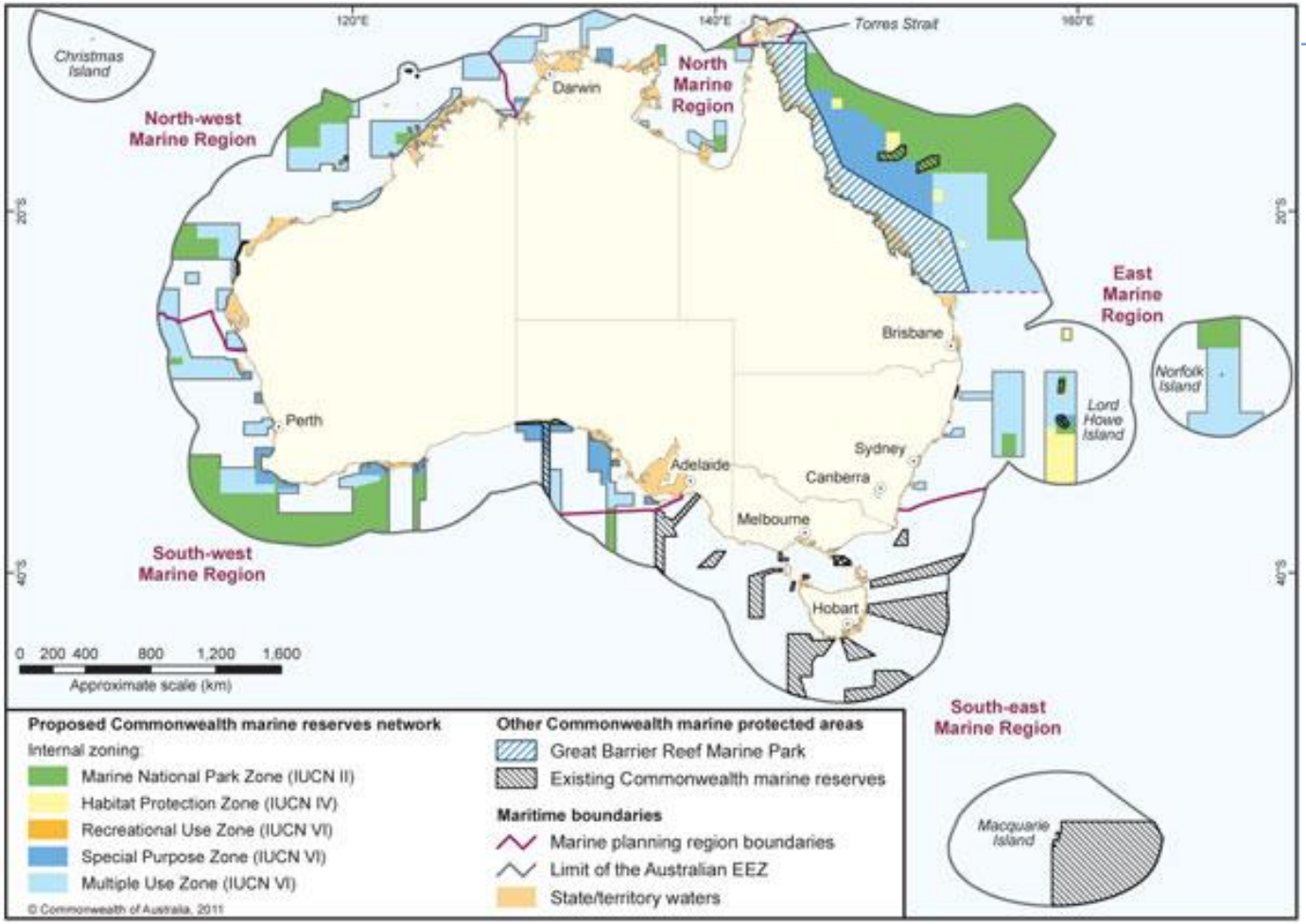
Strategies to address identified priorities

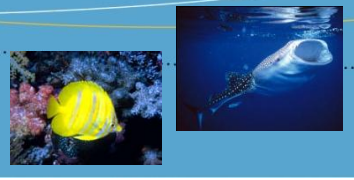
Include…

- Establish and manage representative marine protected areas
- Guidance on the application of environmental impact assessment requirements
- Priority issues for improved fisheries management
- Priorities for threatened species recovery actions
- Priorities for research and understanding



Marine protected areas





Lessons and observations

- Conservation and sustainable use is more effectively achieved through a seascape scale approach
  - Across sectors and relevant spatial and temporal scales
  - Utilising the right tools in the right places

- Understanding the “E” in ESD is the foundation for decision-making
  - A basis for conservation measures
  - A basis for coordinated efforts across sectoral managers
  - A basis for evaluation and accountability



Small Island Countries, Large Ocean Territories

Partnerships for Sustainable Oceans

Ronny Jumeau
Seychelles Ambassador for Climate Change and
Small Island Developing States Issues



Islands are heavily reliant on the ocean for survival



Fish makes up half the protein intake for many island communities and fisheries are a key source of jobs and economic development. This makes Aichi Biodiversity Target 6 central to the economic viability of island countries.



Marine-based tourism is often the main source of economic development and biggest supplier of jobs



Healthy coral reefs, the focus of Aichi Biodiversity Target 10, are critical to shoreline protection to prevent erosion as well as to tourism, fisheries and food security



Ocean’s provide an incredible array of biodiversity



Photo Kate Fuller GRID Arendal

Islands are already doing a great deal to:

- protect their marine and coastal environment
- meet the Aichi Biodiversity Targets including 6, 10 and 11
- ensure the sustainability of the oceans that surround them



But this is financially unsustainable especially in today's global economic crisis and in the face of climate change



Photo: Lawrence Hislop. Grid Arendal

The islands cannot do it alone.
We need to take action - together -
NOW!





GLOBAL ISLAND PARTNERSHIP

LEADERSHIP | COMMITMENT | COLLABORATION | ACTION





GLOBAL ISLAND PARTNERSHIP

OUR MISSION:

Promoting action for island conservation and sustainable livelihoods by:
Inspiring Leadership
Catalyzing Commitments
Facilitating Collaboration

OUR FOCUS:

All Islands
Island countries and countries with islands

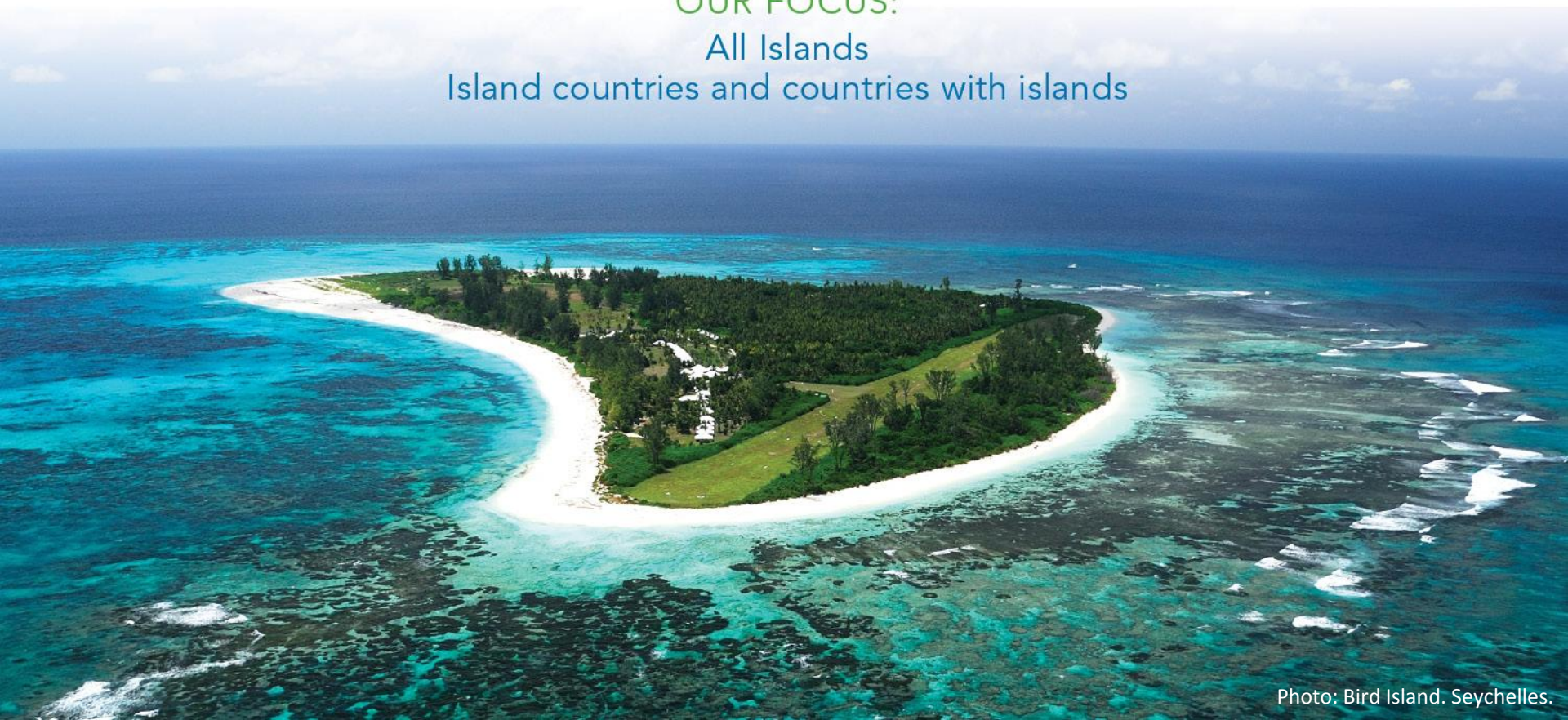


Photo: Bird Island. Seychelles.

GLOBAL ISLAND PARTNERSHIP

Led by Island Leaders



H.E. Tillman Thomas
Prime Minister of Grenada



H.E. James A. Michel
President of the Republic of Seychelles



H.E. Johnson Toribiong
President of the Republic of Palau

GLOBAL ISLAND PARTNERSHIP

Strategy 2012 to 2015



There is growing evidence that nature-based adaptation measures may be among the most cost effective development solutions for many island. Photo: South Bimini, Bahamas. Matthew Potenski. UNEP Grid Arendal

GOALS:

- Support successful implementation of partner commitments
- Catalyze new commitments to address critical island issues
- Establish and maintain a flexible and efficient Partnership responsive to its partners' needs and aspirations

PRIORITIES:

- Successful implementation of partner commitments
- Strengthening ecosystem based adaptation, mitigation and invasive species
- Linking conservation and sustainable livelihoods to development and the green economy

GLOBAL ISLAND PARTNERSHIP

Impact

Inspired Leadership for Conservation & Sustainability

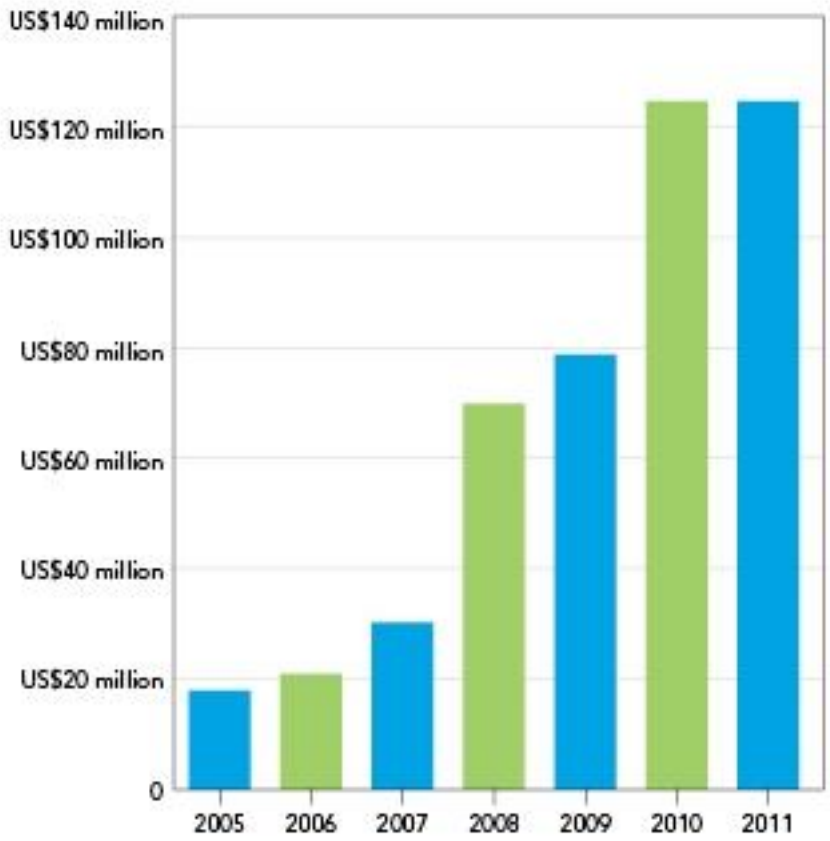
- Helped inspire, recognize and support leaders in Micronesia, the Caribbean, Indonesia and the Western Indian Ocean to work with their neighbors on visionary Challenges for conservation and sustainability

- Assisted island leaders to advocate for ecosystem-based adaptation to be recognized internationally, in particular under the UNFCCC



GLOBAL ISLAND PARTNERSHIP

Impact

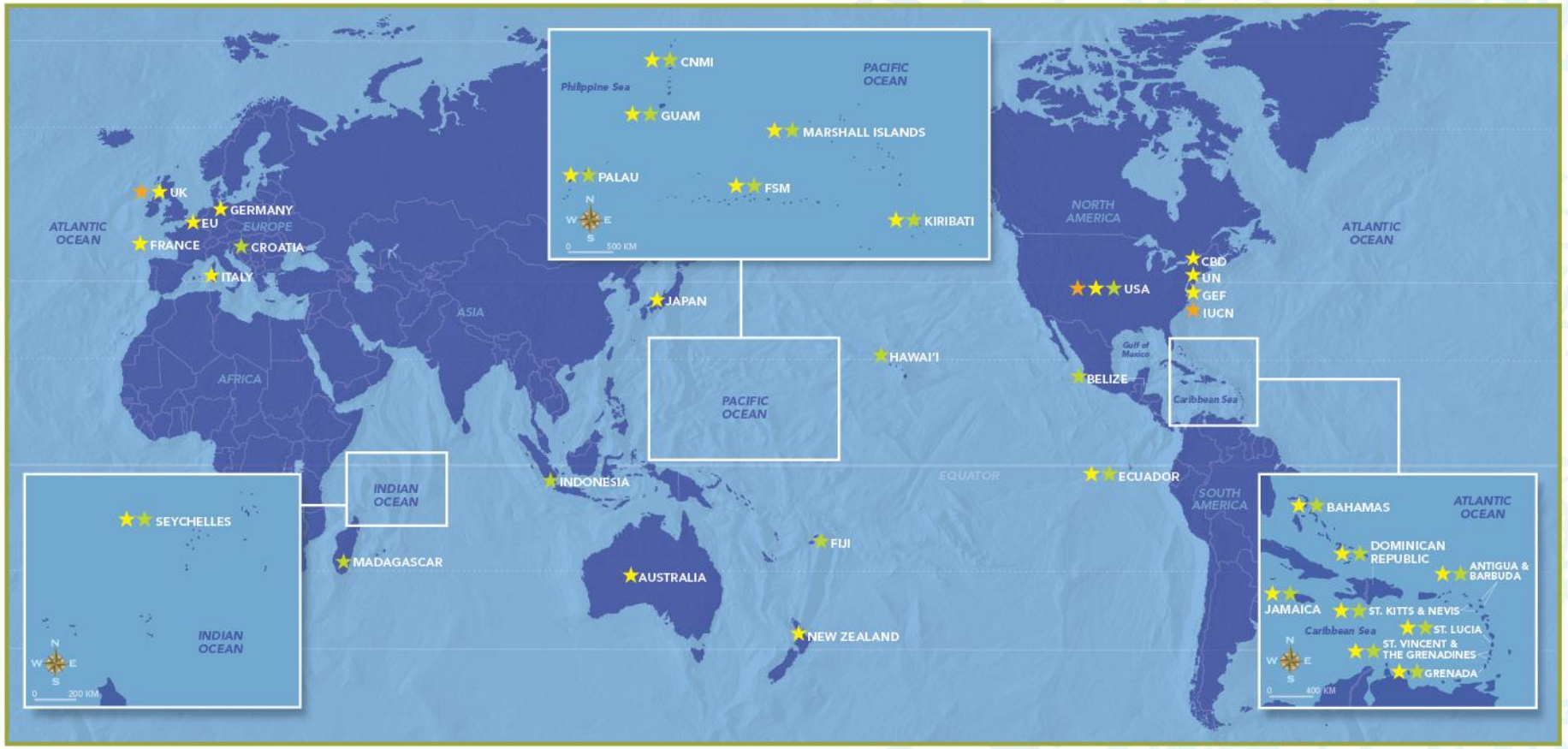


Catalyzed Commitments to Large-Scale Action and Funding

- Helped catalyze more than US$ 125 million in commitments for island actions
- Assisted more than 30 countries to launch or strengthen major island commitments focused on island conservation and sustainable management of marine, coastal and/or terrestrial habitats

GLOBAL ISLAND PARTNERSHIP

Commitments



Conservation Commitments

Public Funding Commitments

Private Funding Commitments

CBD Convention on Biological Diversity Secretariat
CNMI Commonwealth of the Northern Mariana Islands
EU European Union
FSM Federated States of Micronesia
GEF United Nations Development Program - Global Environment Facility
IUCN International Union for Conservaton of Nature
UK United Kingdom
UN United Nations
USA United States of America

GLOBAL ISLAND PARTNERSHIP

Impact



Facilitated Collaboration to Support Island Priorities

- Enhanced collaboration among political leaders, key government ministries and agencies, and non-governmental partners working on shared commitments through high level and strategic events at key global and regional meetings

- Recognized and promoted each island commitment as a beacon of inspiration and guidance to others

GLOBAL ISLAND PARTNERSHIP



Local catch from marine protected area in Pacific. Photo: Stacy Jupiter, Marine Photobank.

Global Island Partnership is Recognized as…

- having contributed to achieving the 2010 targets of the Convention on Biological Diversity and is recognized as a credible mechanism for advancing conservation of island biodiversity (Decision IX/21, CBD COP9)
- a best practice partnership by the UN Commission on Sustainable Development (UNCSD)
- a success factor in preparations for the 2012 UN Conference on Sustainable Development (Rio+20)

2011-2020

United Nations Decade on Biodiversity

Get Involved!

"We call on fellow leaders to come together under the Global Island Partnership to advance our common goal to halt global biodiversity loss, address the threat of climate change and ensure a sustainable future for our island people and the planet."

James A. Michel, President of the Republic of Seychelles and Co-Chair of GLISPA



2011 GLISPA Steering Committee

GLISPA is **voluntary** and **open** to any national or local government, agency, organization or individual that shares in its mission.

For more information go to:

www.glispa.org

Photos copyright: Tourism Seychelles



We must work together
or we will all fail

Biodiversity conservation and sustainable capture fisheries: a governance challenge

Serge M. Garcia
Chair IUCN/CEM/FEG



R.Tarr



J. Sunde-ICSF



Unknown

Objectives and constraints

For responsible fisheries:

- Objective: Maintain/increase contribution to livelihoods and food security
- Constraint: limit collateral impact on productivity and biodiversity

For sustainable use of biodiversity:

- Objective: maintain ecosystem biomass, diversity, structure and functioning
- Constraint: limit collateral impact on dependent human populations

The objective of fisheries is the constraint for biodiversity and vice versa

Relevant Aichi targets

01 : Raise awareness on **biodiversity value** and **sustainable use**

02 : Integrate these values in development & poverty reduction strategies

03 : Eliminate **subsidies**, **minimize impacts** and **provide incentives**

04 : Plan for **sustainable production** within **safe limits**

06 : **Sustainability; No IUU; No overfishing; Recovery; Impact reduction**

11: 10% coverage by MPA networks and **other area-based** measures

12 : Prevent **extinction**

18 : Integrate **traditional knowledge**. Full **participation**

All this is part of the Code of Conduct for Responsible Fisheries and related IPOAs.
No real conflict on principles
The Evil hides in practical implementation

Fisheries challenge

- Catches: around 90 million tonnes
- Livelihoods: 42 million direct fishery jobs & 500 million livelihoods[2]
- Food: 20% protein intake provided for over 2 billion people[3]
- BUT: 75% underperforming resources: Cost to society: 50 billion/year[4]
- Population: From 6.8 billion people to about 9 billion by 2050.
- Of which: 6 billion in coastal areas[1] by 2020
- Needs: 350 million tonnes more of dietary protein by 2050
- Needs from fisheries: 75 million tonnes more (+50%) by 2050 …

Context: growing poverty, indebtedness, pollution and contamination, coastal degradation, freshwater withdrawal… and climate change!!!

IUCN CEM FEG

1-UNEP 2007; 2-Worldfish 2009; 3-FAO 2009; 4-World Bank 2009

Biodiversity requirements

- To protect ecosystem processes, **reduce stress from fisheries**
- To increase resilience to climate change, **reduce stress from fisheries**
- To protect vulnerable ecosystems, **reduce fisheries even more** on reefs, mangroves, seamounts, etc.
- To improve coastal habitats, reduce LB pollution **and fisheries**
- For all of these objectives: **increase the coverage of MPA networks (i.e. reduce fishing space)**

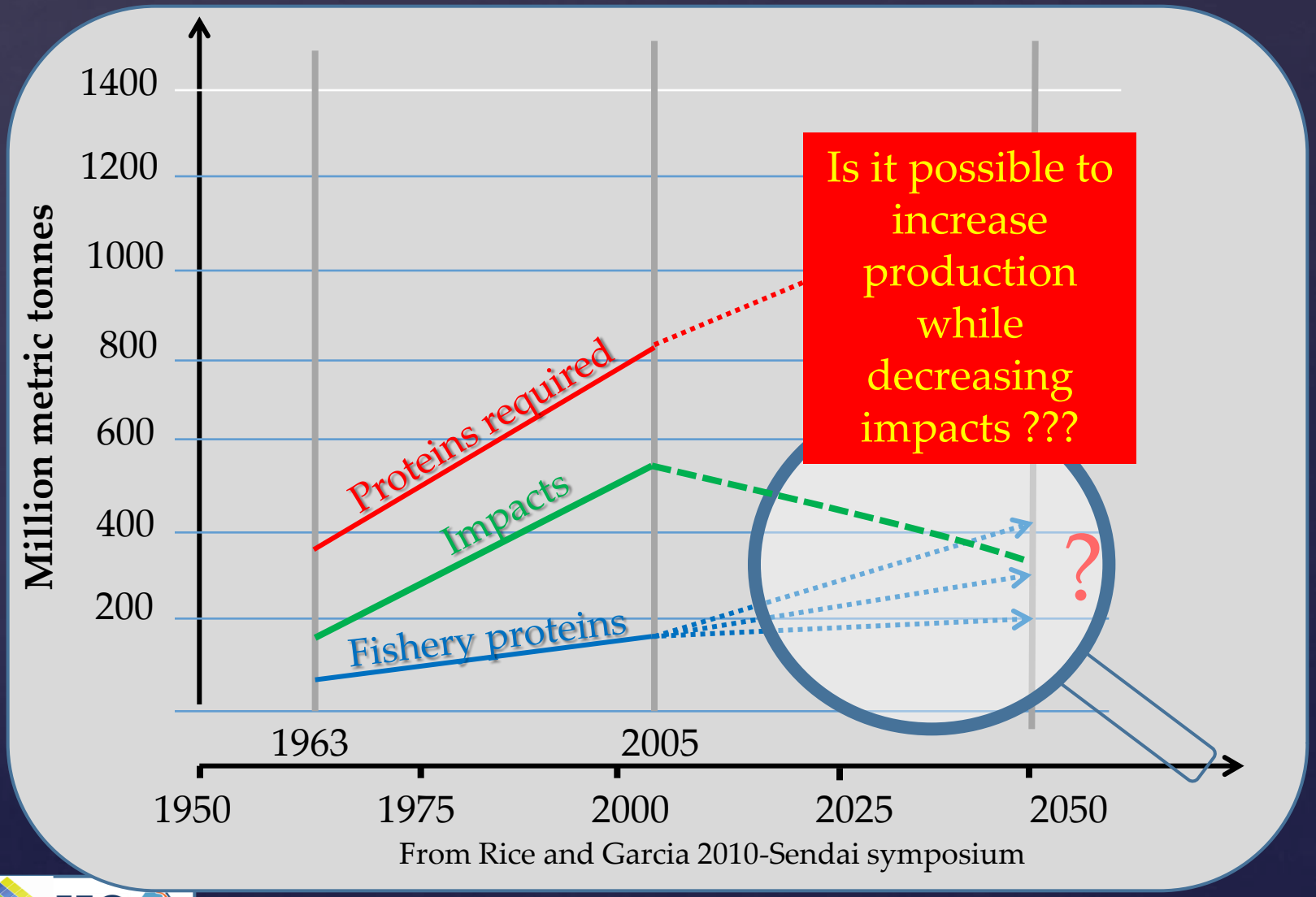
Pro-biodiversity measures call for reducing fisheries

Existing measures that protect biodiversity

- Fishing: capacity reduction (systemic measure) and regulation of gears and practices; fishery reserves (for habitats and life stages); fishing rights; lost gear recovery
- Trade: related to species/populations. Connect resources to markets and Flag States to Port States: traceability, Port State control of landings, national control and enforcement, capacity building
- Consumption: to use educated consumer preference: Ecolabelling. Need to deal with contamination

This is not well implemented and appears insufficient

Food security challenge



Some hard realities

Need to add 50% to the protein harvested from the sea, BUT:

- Catches on high trophic levels cannot be expanded: **overfishing!**
- Catches on deep ocean will not yield much more: **high risks!**
- Stocks rebuilding is likely to be slow and transition costs are high
- Stocks rebuilding may or not generate higher total yields[1]
- Total yield depends on how harvesting is distributed among trophic levels, sizes and species[3]
- Higher yields could come from lower trophic levels[2] : **forage food**!
- EA requires maintaining ecosystem diversity, structure and function
- **But past fishing regimes have changed the ecosystems**
- **Balanced Harvest[3] could comply better with EA** but is not easy to implement

1-Pitcher and Cochrane 2002; Okey and Wright 2004. 2- Pope et al. 2006; Genner et al. 2010) 3-Garcia et al. 2012

A difficult equation

- The relatively low ecological footprint of fisheries can be further reduced
- But these actions reduce fishery contribution to food security
- And may counter biodiversity conservation objectives
- **BUT,** Food security & biodiversity conservation are both highly ethical:

Can we reduce/avoid conflict? Develop synergy? Spatial planning?

But technical adjustments are unlikely to resolve fundamental issues

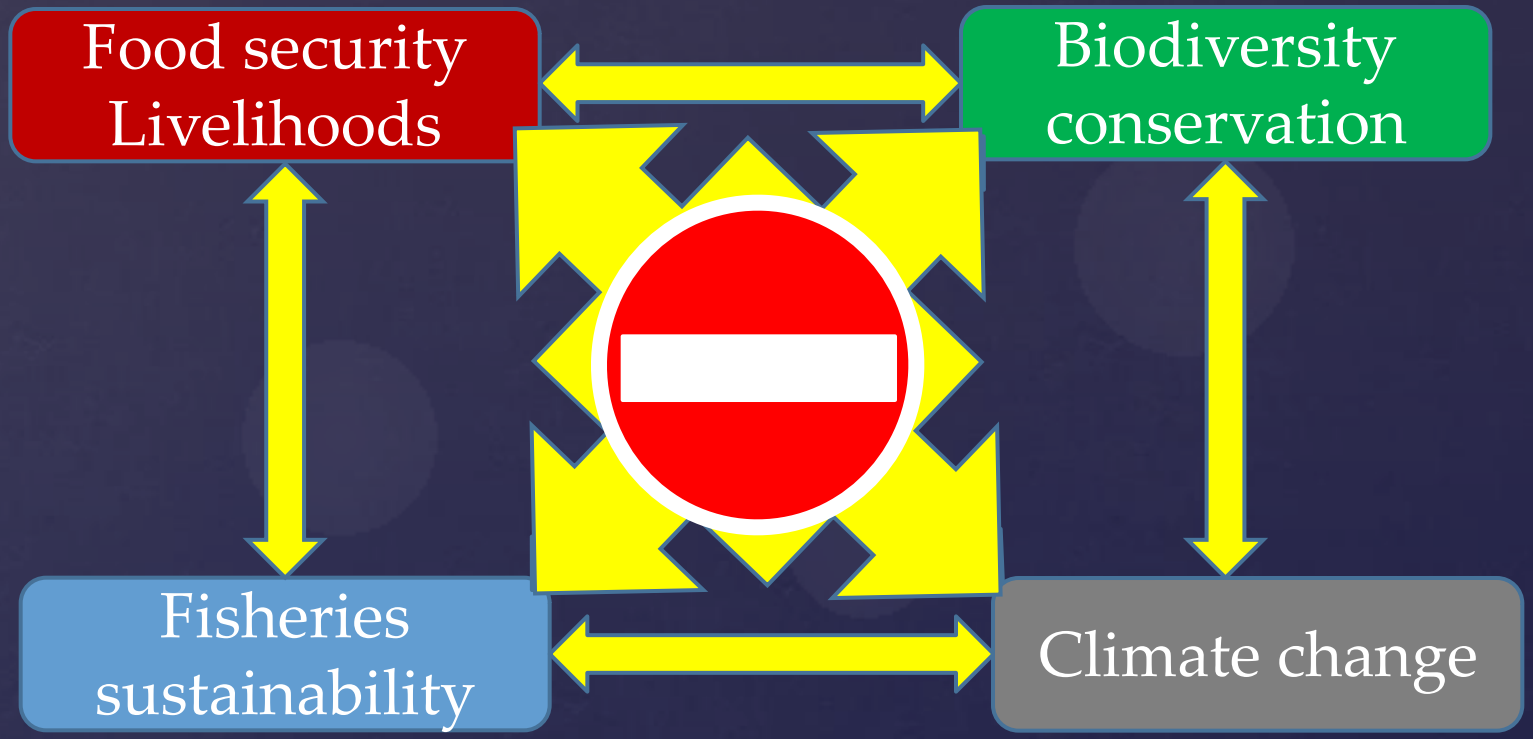
- **Win-win solutions** are very scarce
- **Hard choices** will be needed requiring efficiency and equity
- **Joint exploration is needed** to find plausible future scenarios and robust strategic policies and tactical measures **to sustain fisheries AND conserve biodiversity** in a changing world.

This needs to be discussed seriously looking for coherent responses but this is not yet the case

IUCN CEM FEG

Rice and Garcia, 2010-Sendai)

Fragmented governance



Because there are no fully integrated discussions, solutions to some problems in one setting are considered problems in others

Contradictions

ACTIVITY	FOOD SECURITY	BIODIVERSITY
Harvest rate	Increase to MSY	Reduce present pressure
Lower trophic level	Fish more	Fish less (forage)
High productivity areas	Should produce more	Need extra protection
Mariculture	Diversify & increase	Reduce (fish meal)
Freshwater culture	Increase diversify More new strains	Only local al species Reduce new strains

Conclusions …

- We do not have yet an agreement on the "right" society choices
- Policy dialogues are insufficiently comprehensive and their outcomes are not sufficiently coherent
- There are tensions between fortress conservation and sustainable use, responsible fishing and IUU, Long- and short term costs and benefits
- What part of society decides on the compromise needed?
- Who will assess and balance the risks? Who will explicitly allocate costs and benefits?
- The uncertainty creates suspicion and limits buy-in of the actors
- Without a merger of these policy discussions, the likely outcome is **failure on most governance pathways**

It is time to move to more integrated governance

Thanks you for your attention



R.Tarr

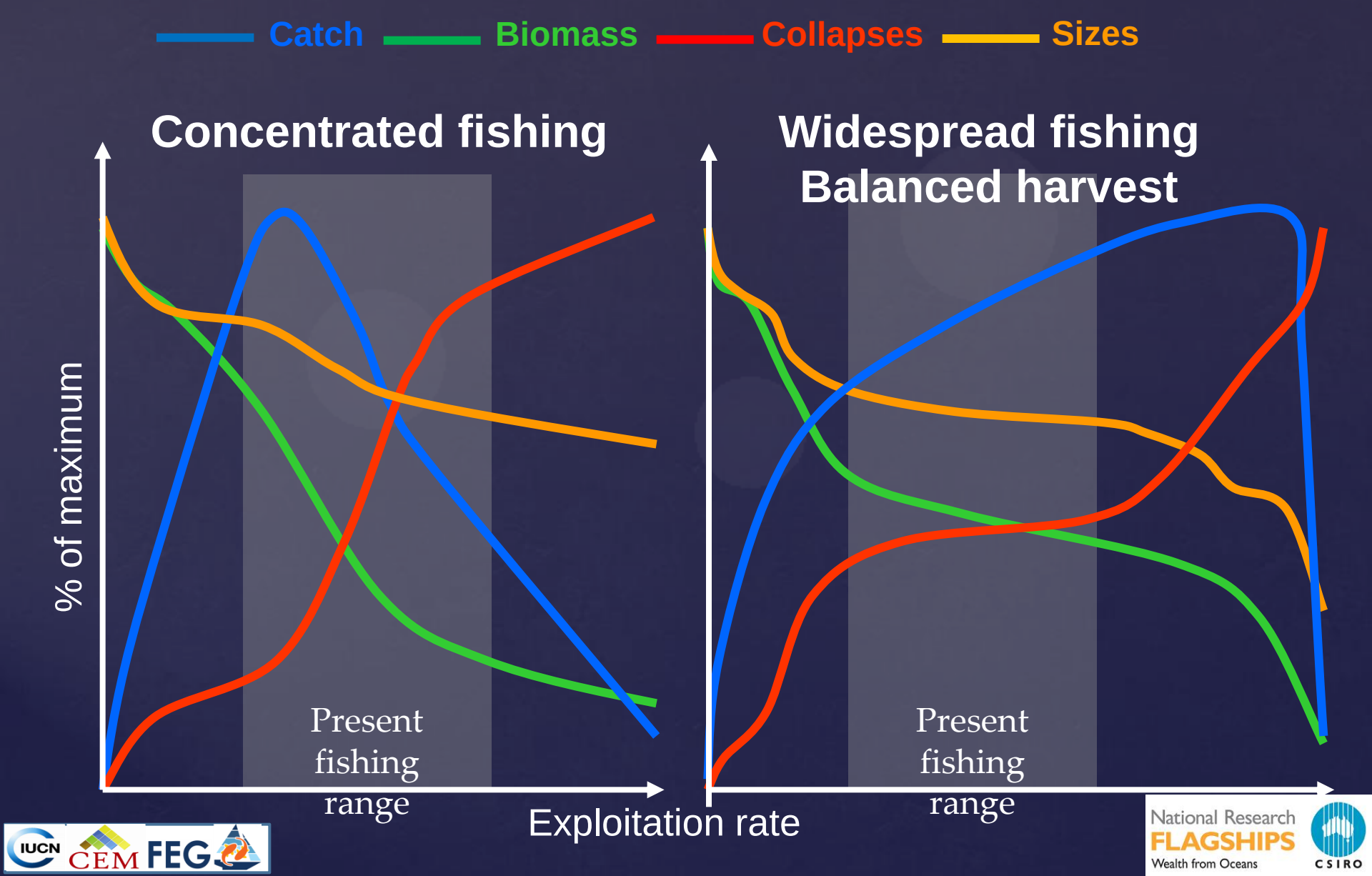
Serge M. Garcia
Chair IUCN/CEM/FEG



Unknown

Sustainable Ocean Initiative 2, Yeosu, June 2012

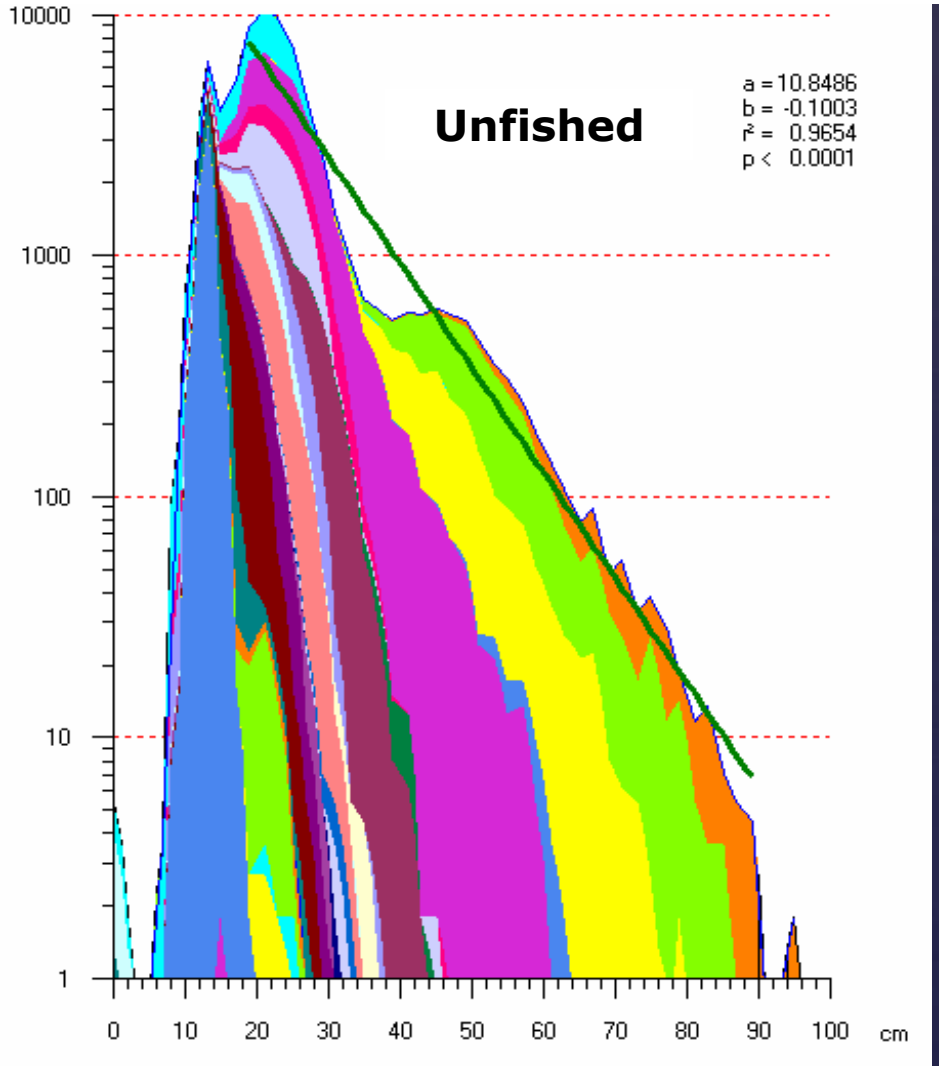
Balanced Harvest models

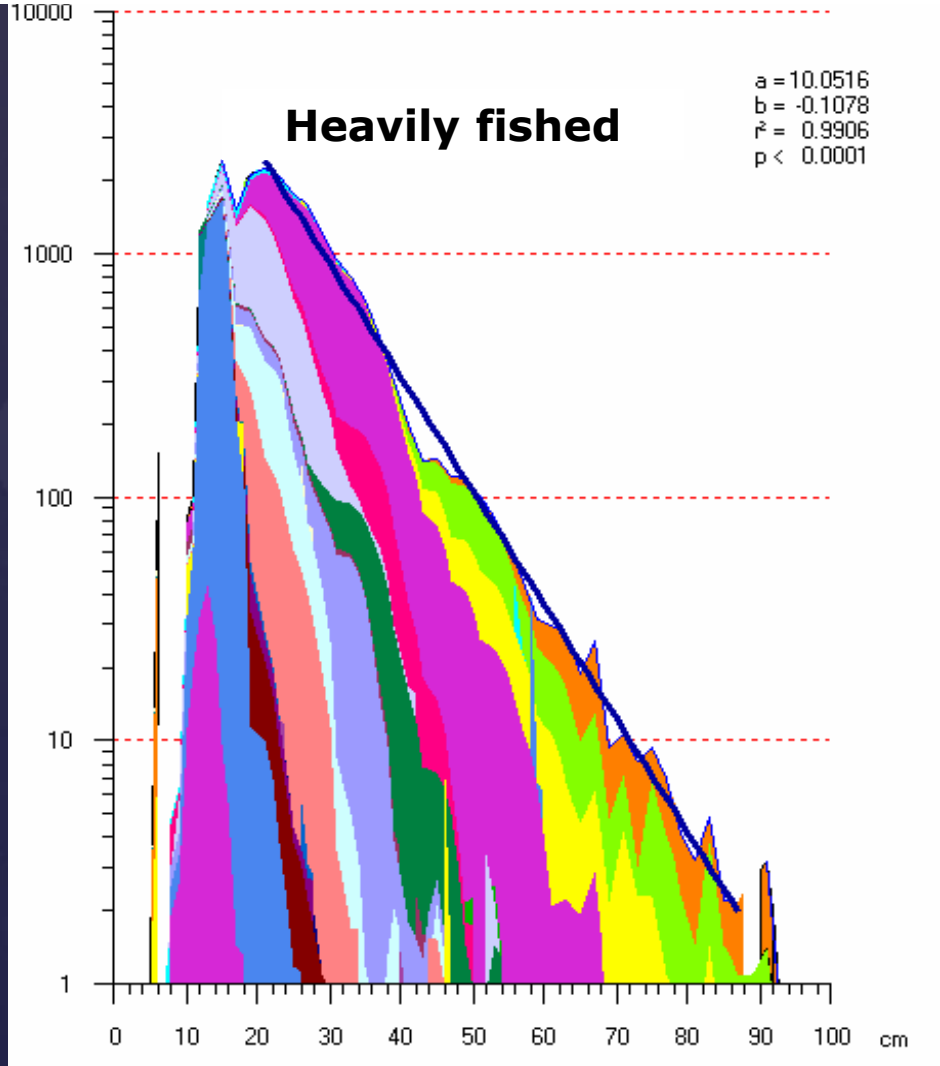


IUCN CEM FEG
National Research FLAGSHIPS Wealth from Oceans
CSIRO

Balanced Harvest evidence ?

Lake Kariba ecosystem structure: 1980-1994





… Conclusions

- There is an urgent need to have a fora and institutions in which fisheries, food security, biodiversity conservation and environmental degradation (including climate change) are discussed together to find joint responses to questions such as:
  - How to meet (or change?) present and future food security needs?
  - How to maintain a dynamic/productive ecosystem to that end?
  - What objectives and strategies will best address these two questions?
  - What does "conservation" means if past states are uncertain and "irrelevant" for the future and the baselines move from past to future?

Korean Experiences of Implementation of MPAs and ICM Policies

‘12.06.05/ Yeosu, Korea

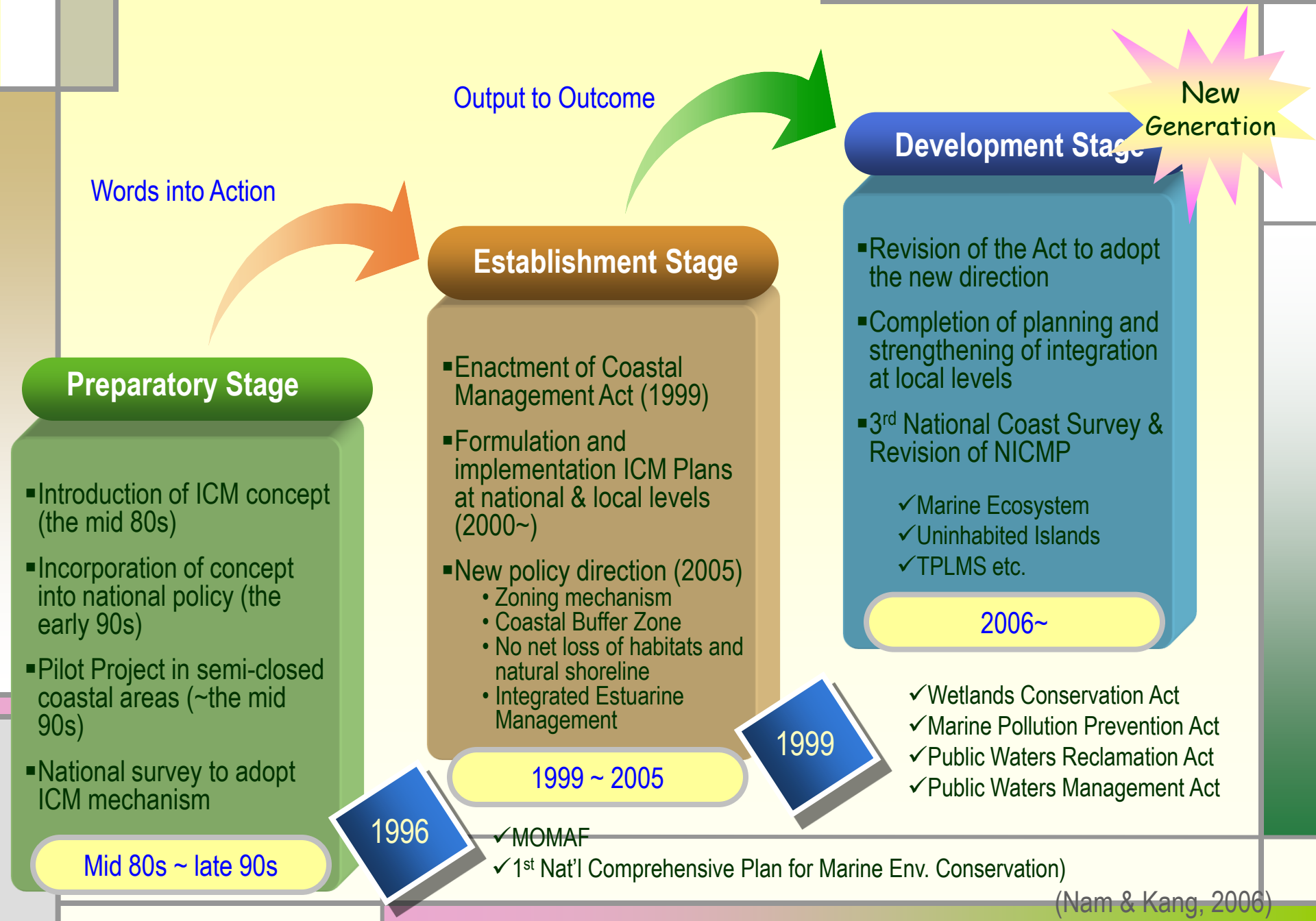
CHANG, W.K., J.S. YOON, J. NAM
Korea Maritime Institute

Contents

I. Backgrounds and current Status
II. Issues and Challenges
III. Key factors for better policy making

I. Backgrounds and current Status

Institutional Development of ICM Policies in Korea



(Nam & Kang, 2006)

Summary of New Generation : 2nd National ICM Plan

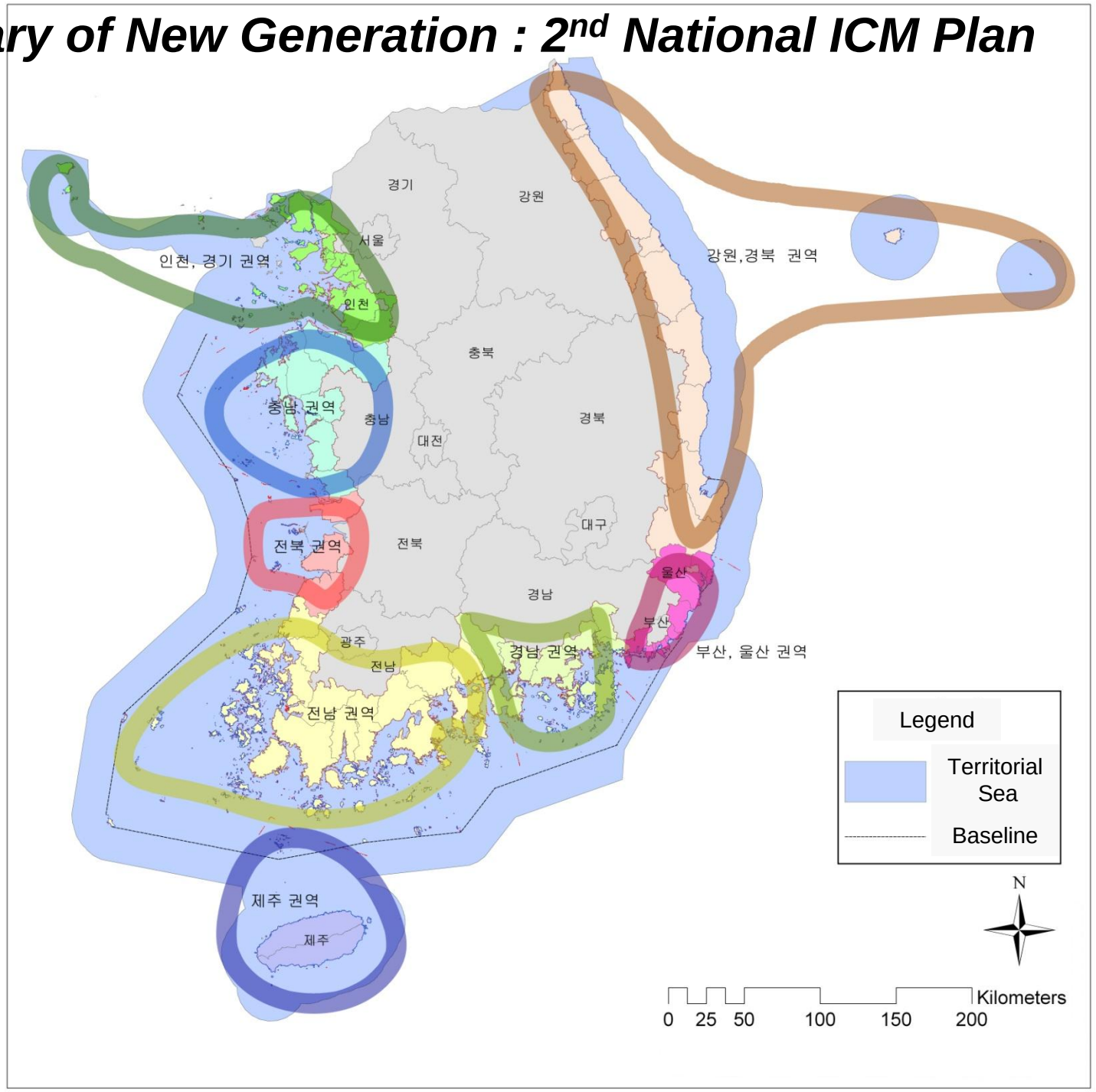
Goals

- ECHO : will be ecologically coexisted-, harmonized- ocean region

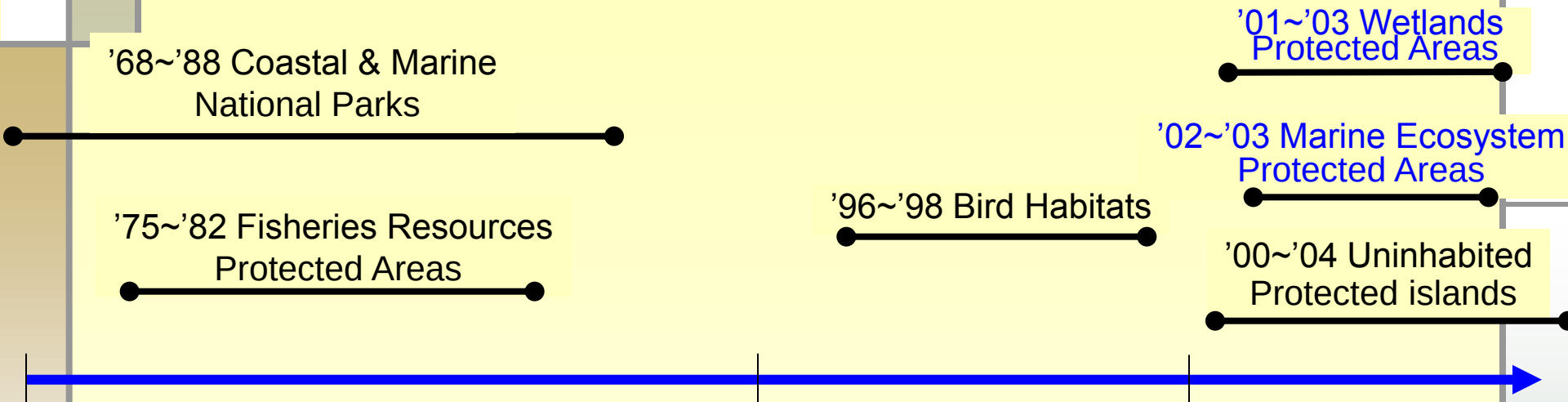
Objectives

- Integrated Coast
  - Implementation of Marine Spatial Planning, No-Net Loss of Natural Coasts' policies
- Ecologically vibrant Coast
  - by 2020, 20% increase of MPA s, No destruction of wetlands, etc.
- Attractive Coast
  - by 2020, increase of GNP of rural coasts to 90% of national average (80% in 2007)
- Co-managed Coast

Summary of New Generation : 2nd National ICM Plan



History of overall MPA policies in Korea



1968 **Establishment of institutional mechanism**

- Lack of follow-up actions afterward desig.
- Land-based approach (extension of land NP)

1996 **Broadening of policy scope**

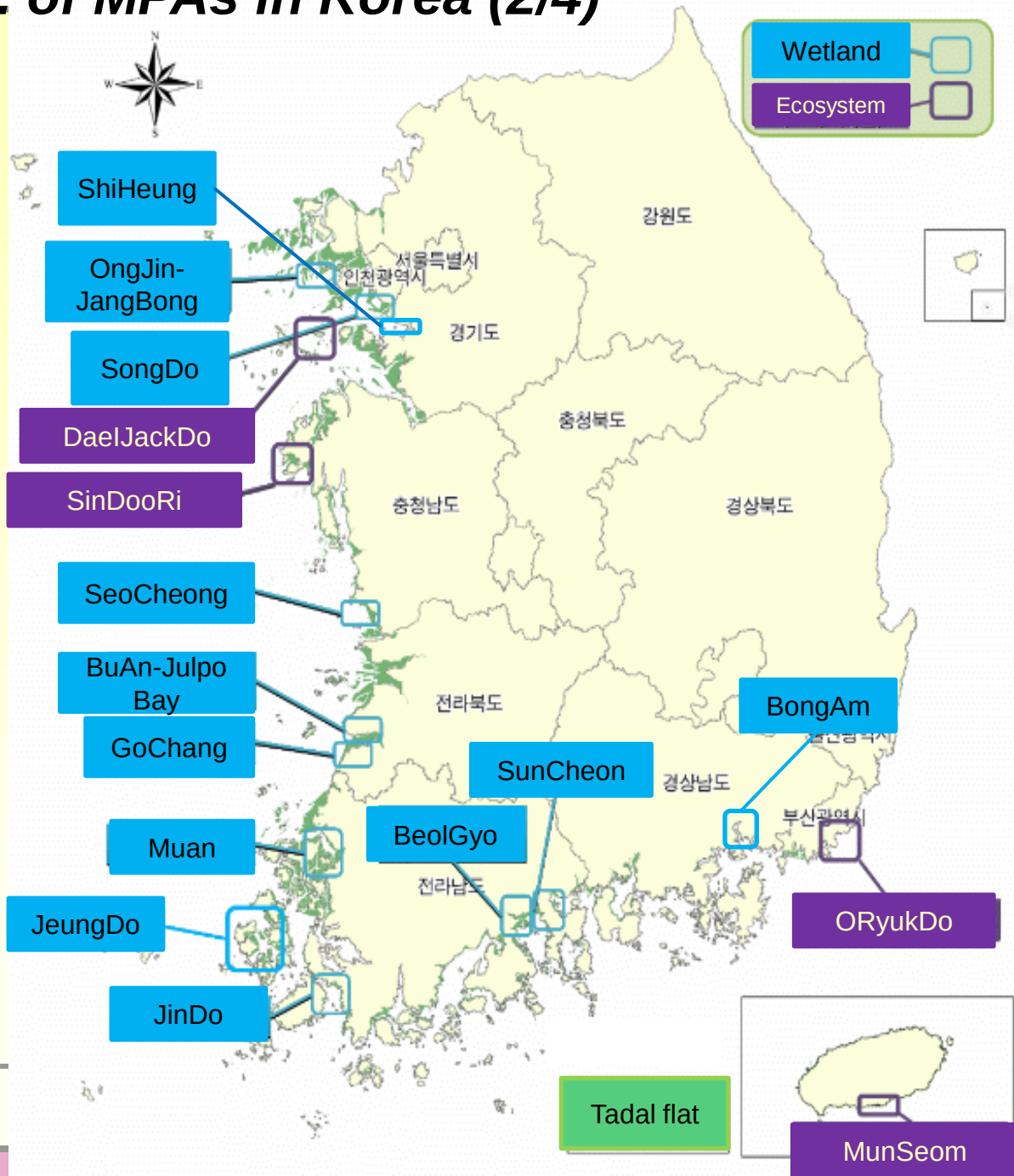
- Introduction of a comprehensive ocean management system
- Revision of legal & institutional mechanism for C/MPAs
- National Plans & Policies

2000 **Ecosystem-based Approach Introduced**

- Expansion of MPAs' areas
- Episodic Implementation
- Surveys to support decision-making
- Public awareness on coastal wetland protection

Current Status of Dsgn. of MPAs in Korea (2/4)

- Dsgn. of MPAs
  - Marine Ecosystem Protected Areas : 4 sites
  - Wetland Protected Areas : 12

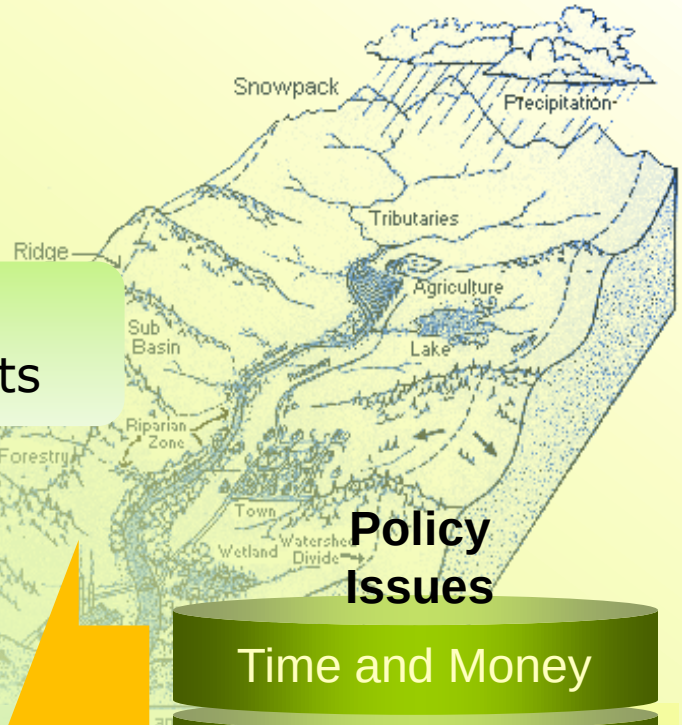


II. Issues and Challenges

Key Issue : Conflicts resolution

Policy

Site-specific
Issues and Constraints



Science Issues

- Uncertainty
- Too elaborate, Too diverse
- Bunch of Baseline data

Conflicts

↓

Risk

Policy Issues

- Time and Money
- Simple Guidelines
- Plans & Tools

Risk *minimized* Action

Conflict resolution is a Core process of ICM and MPA policy setting

- **Multi-sectoral**
- **Spatial**
- **Temporal**



Future Generations

Development

Land

Conflict

Sea

Environment

Economy

Ecosystem
Fishery

Conflict

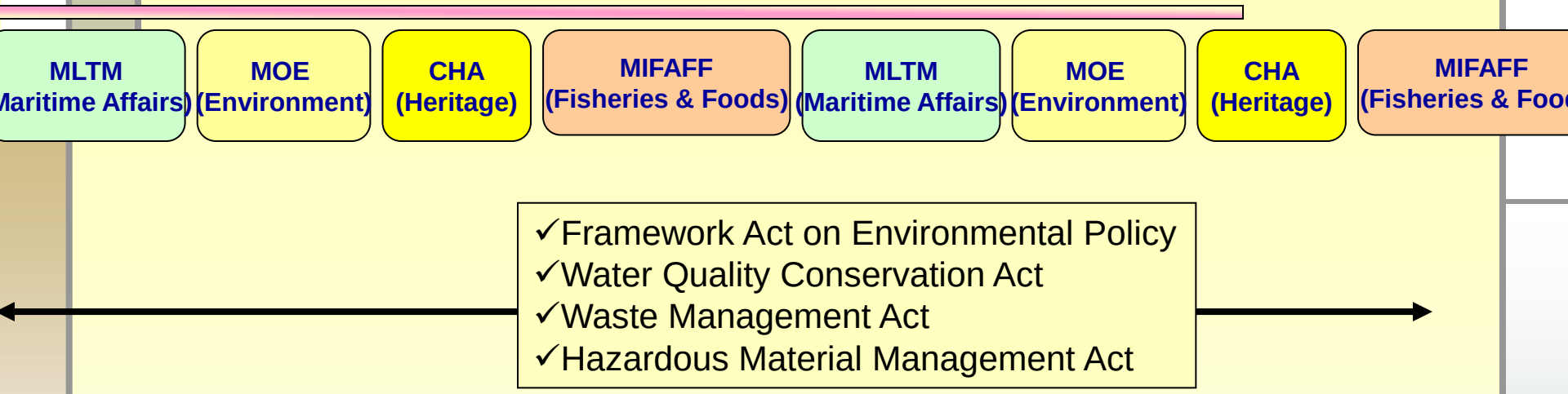
Industry

Conflict



Source : Kang & Nam (2002)

Complex Jurisdictional boundaries of MPAs



✓Framework Act on Environmental Policy
✓Water Quality Conservation Act
✓Waste Management Act
✓Hazardous Material Management Act

Sewage Treatment Act
Special Act for Four River basins

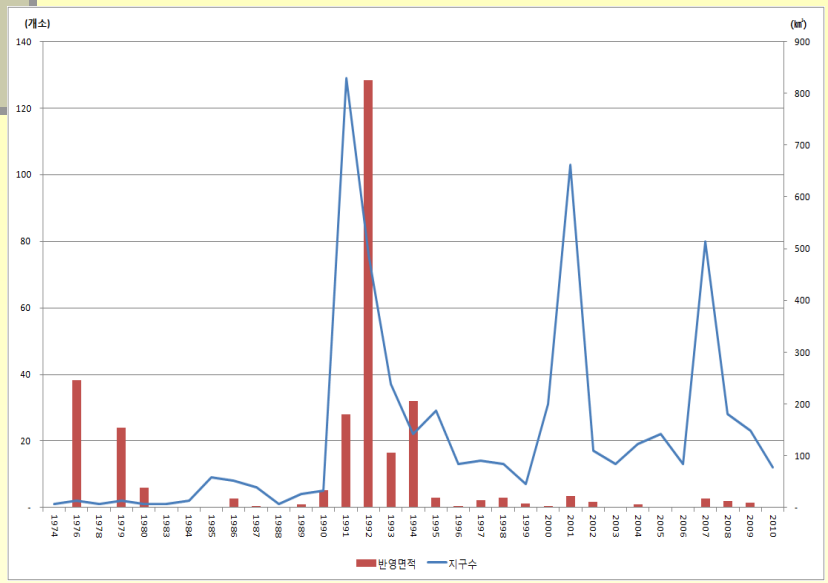
Marine Environmental Management Act
Law on Marine Ecosystem Conservation

Land

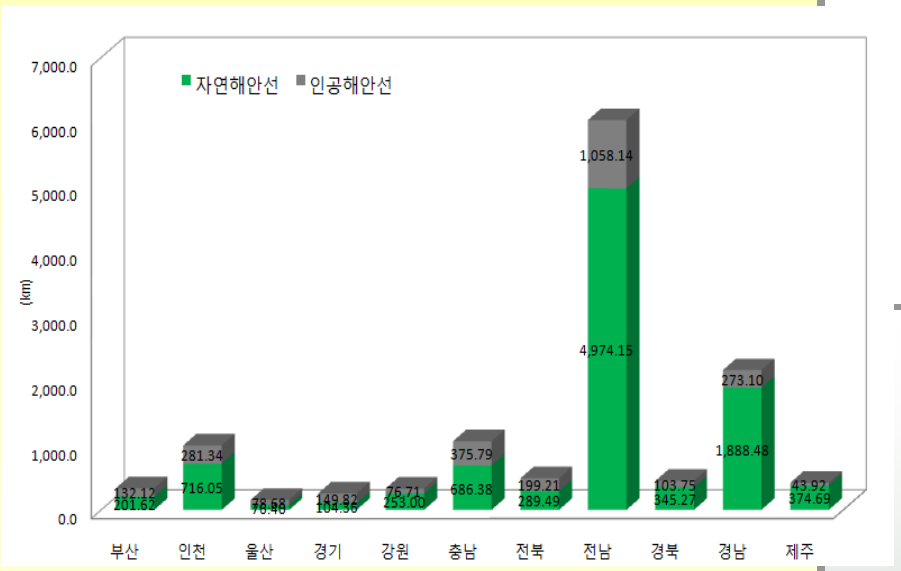
Coast/Ocean

Wetlands Conservation Act
Natural Monument Protection Act
Natural Environment Conservation Act
Public Waters Reclamation Act
Wildlife Protection Act

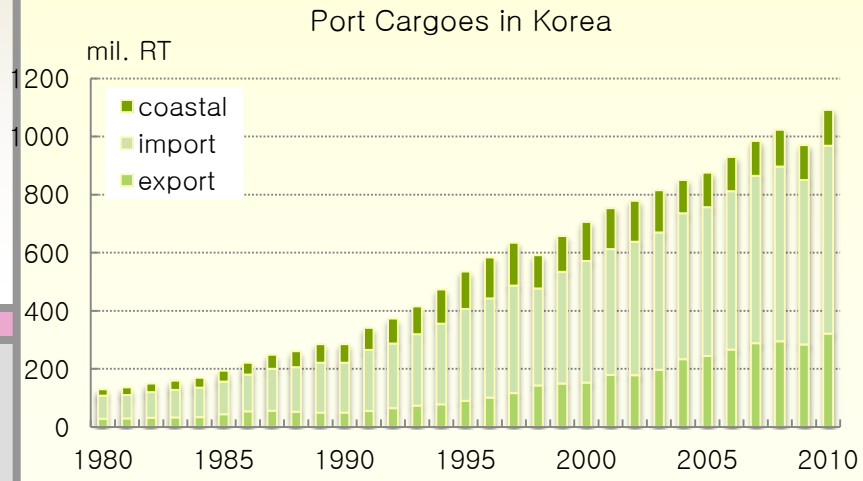
Strong Demand for Development of Coast



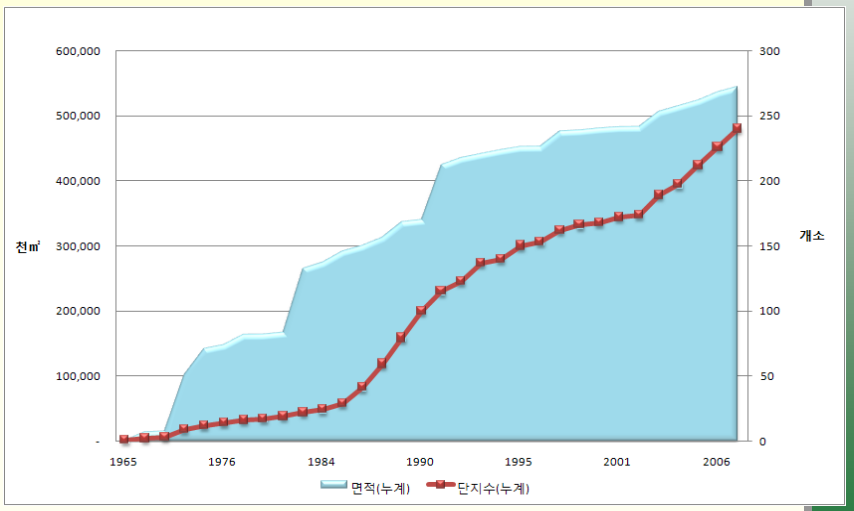
Reclamations



Natural Coastal line

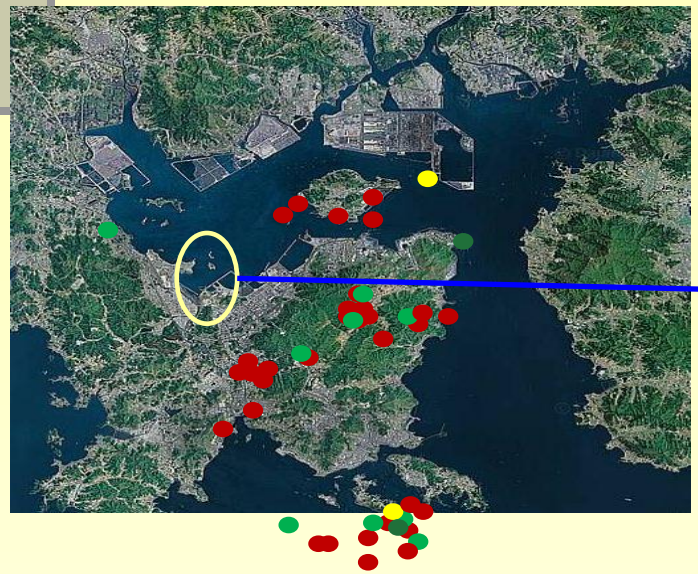


Port Cargo Operation



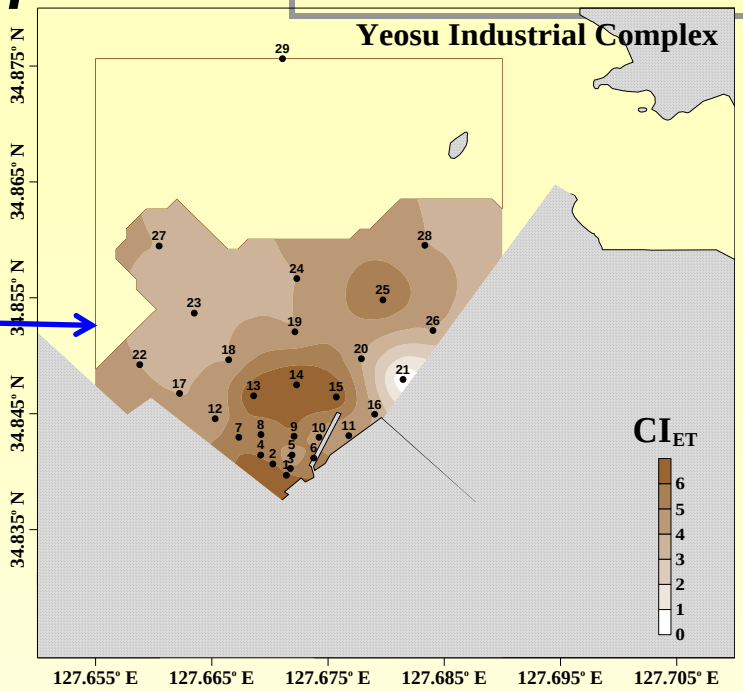
Status of Industrial Complex

By-Product of Coastal Developments

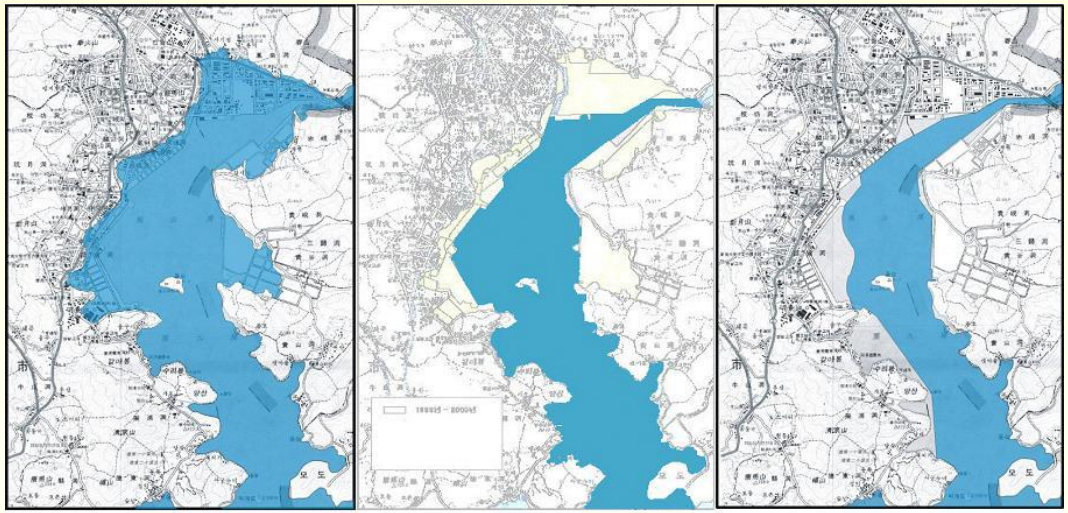


● : Oil Storages and Operations

● : Ship Repair & Constructions







1899 2003 2011

Masan Bay

Sources: "The History of the Reclamation in Masan Bay", Jung, 2003 & Masan KFEM

III. Key factors for better policy making

1. Strong and Early Participation : Masan TPLMS

- Watershed : 263.98 sq. kilometers
- Watershed population : *ca.* 1 M people
- Population density : 3,167 individuals/km2 (national : 460)

History of Environmental Management of the Bay

Port of Masan : 0.4 km^2 (~'50s)

Han-Il Fiber : 0.23 km^2 (~'66)

Han-Kuk Steel : 0.17 km^2 (~'67)

Free Trade Zone (~'70)

('75) Gapo beach closure

('79) Public Ban for gathering Clam and Mussel

Chanwon Ind. Complex ('80)

Massive HAB occurrence ('81)

('82) SMA designated

('90~) Polluted sediment dredged

('93) Sewage treatment plant constructed

('00) SMA re designated including watershed

('02) Jin hae SWP constructed

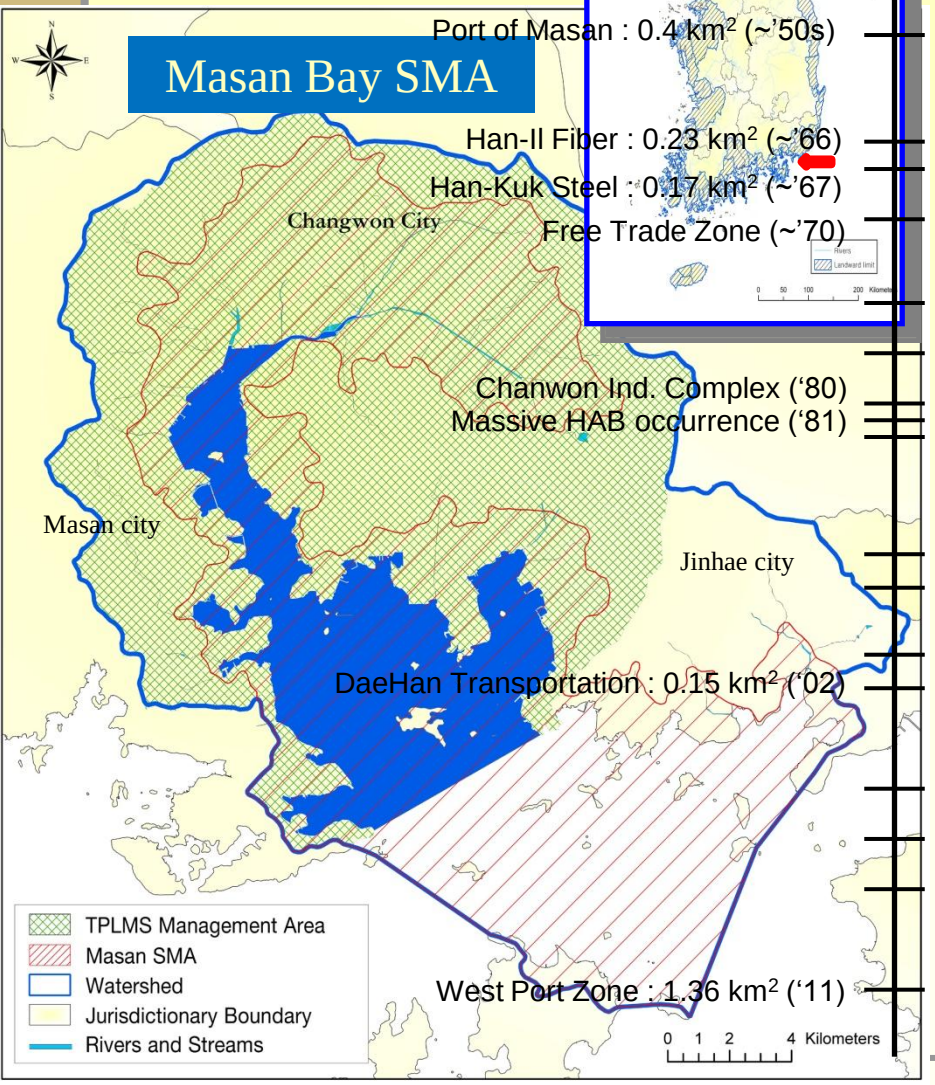
DaeHan Transportation : 0.15 km^2 ('02)

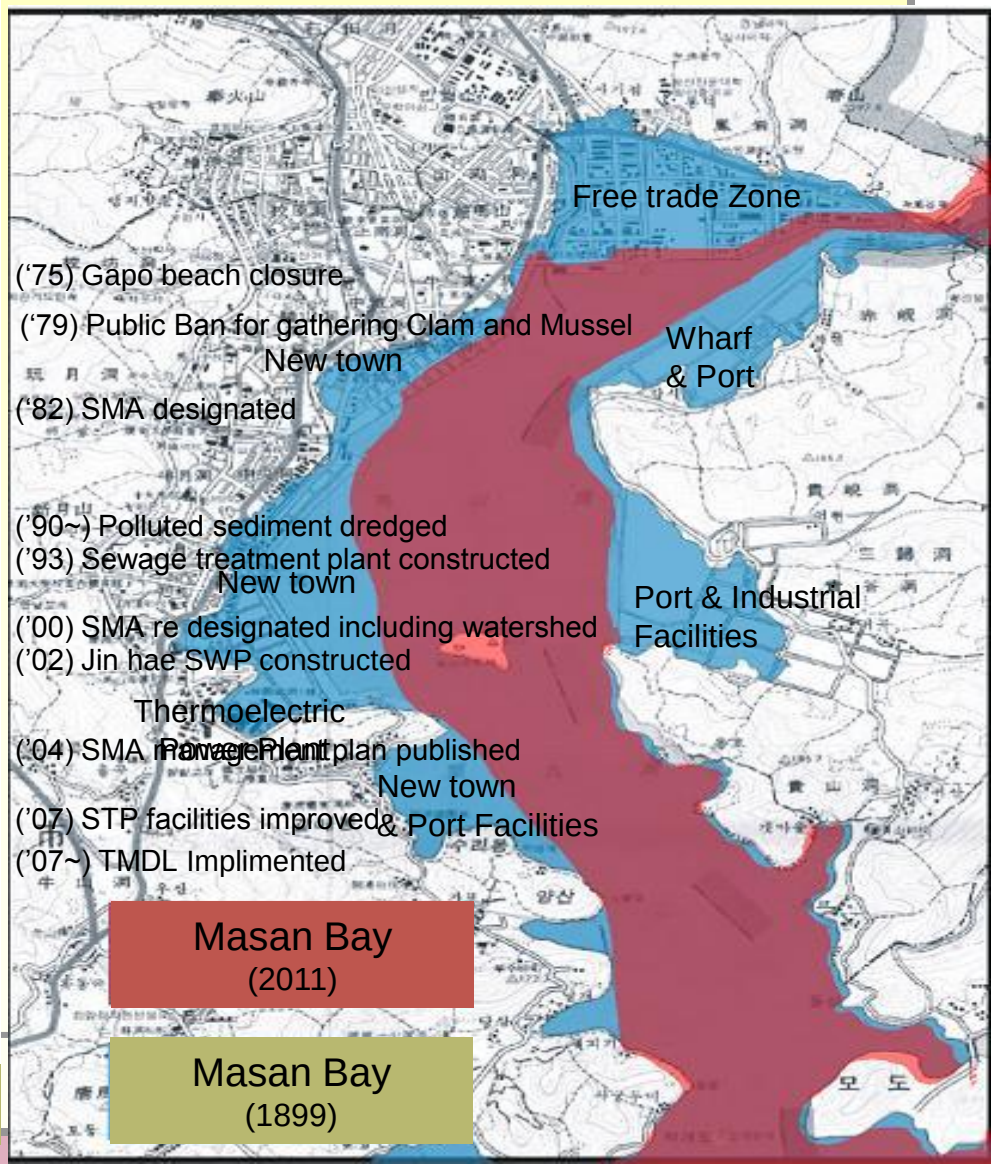
('04) SMA management plan published

('07) STP facilities improved

('07~) TMDL Implimented

West Port Zone : 1.36 km^2 ('11)

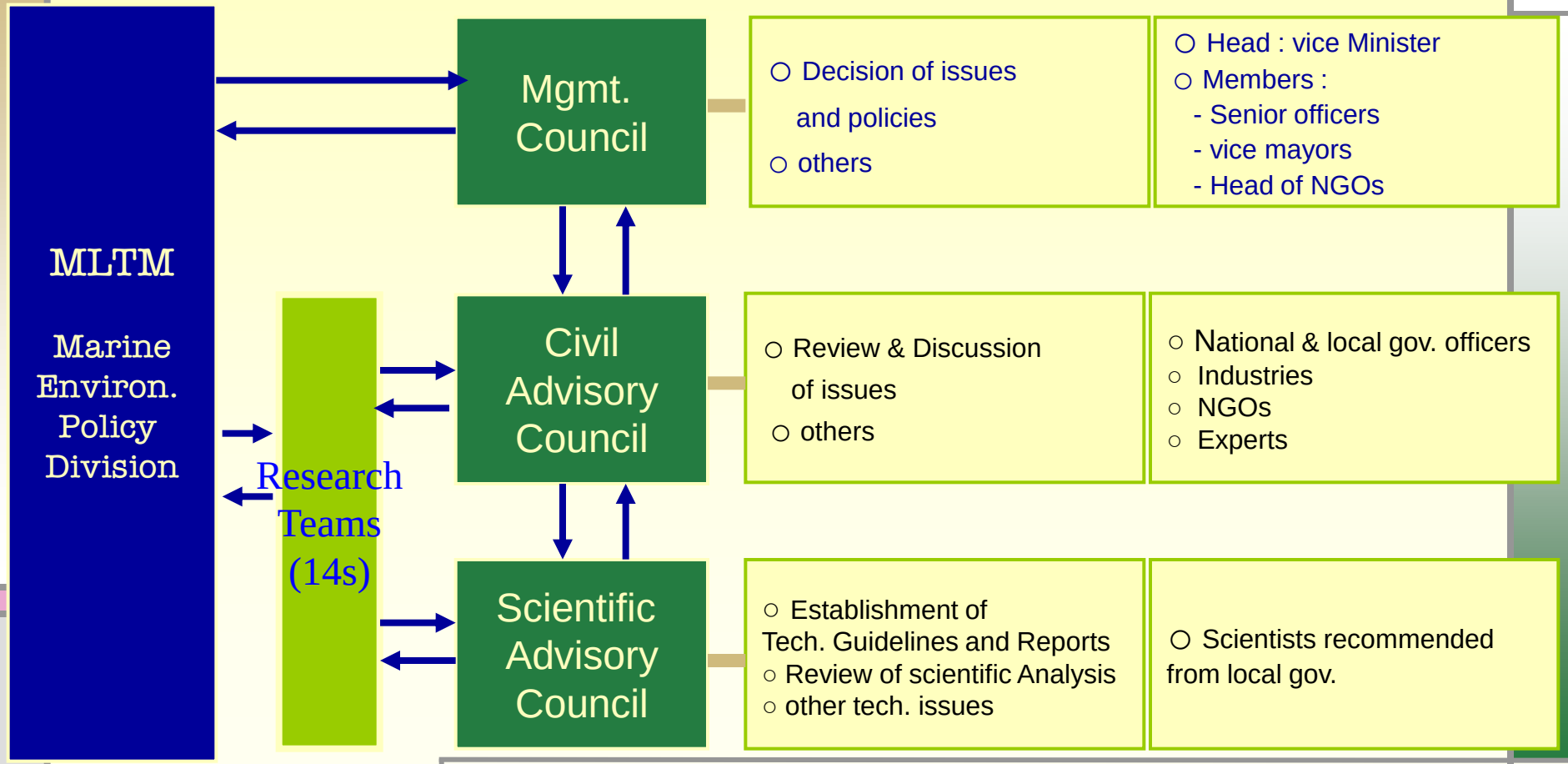




- Length: ca. 10km, Width of mouth : ca. 5.0km
- Average depth: 10~15m

1. Strong and Early Participation : Masan TPLMS

- SAC *Reviews*, CAC *Decides*, and Mgmt. Council *Approves* the TPLMS of Masan Bay.
- More than 32 official meeting and/or public hearings was held during the introduction of TPLMS for 18 months.



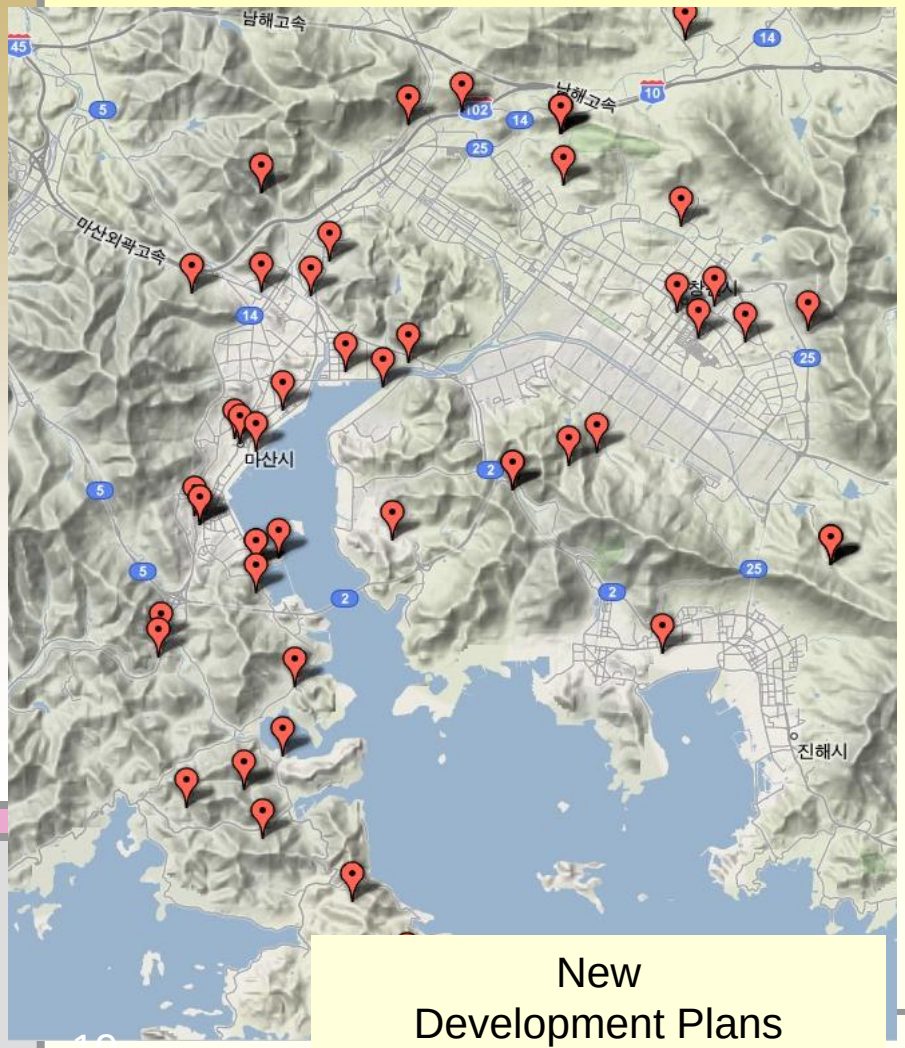
1. Strong and Early Participation : Masan TPLMS

- Developing Guidelines based on "*Needs*" from Stakeholders such as local gov., industries, and NGOs, etc.

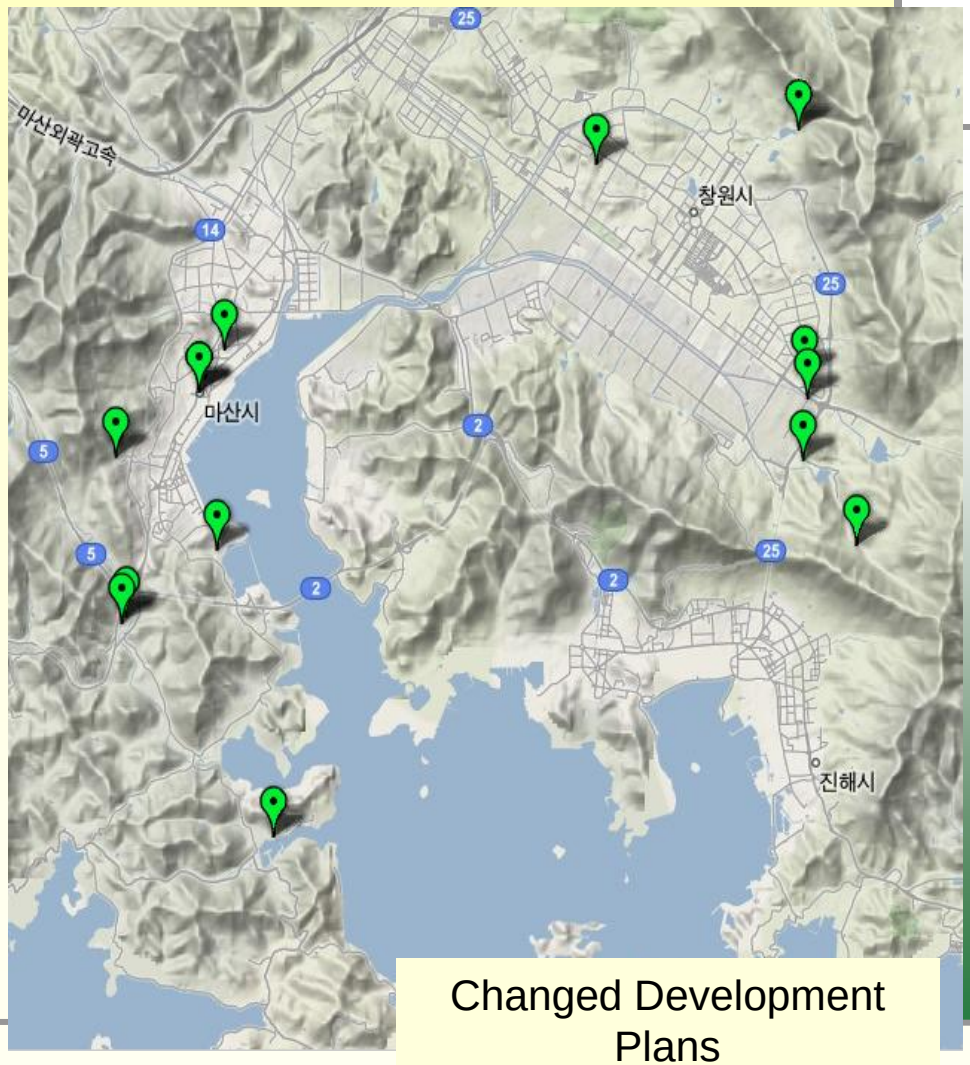
year	Name of Plans, Guidelines, and Regulations	Note
2004	Masan Bay Special Management Area Management Plan	
2005	Guidelines of Policy Direction in developing 1st TPLMS Regulation of Mgmt. Council Regulation of Operation of CAS	Amended(MLTM P/N 401, '09.8.24) Amended(MLTM P/N 8, '09.6.2)
2006	Public Notice to apply scientific Knowledge in developing TPLMS Master Plan	Under Amendment
2007		
2008	Masan Bay 1st TPLMS Master Plan Masan Bay Implementation Plans Initiation of Technical Review for new Developments	2010.2 2010.10 2010.7~
2009	Public Notice of Annual Review of TPLMS Plans Guidelines for managing connected tasks btwn. TPLMS and other plans	 Publicly Announced in Jan. 2009 Amended (MLTM P/N 403, 2009.8.24)
2010 ~ 2012	Regulation of Operation of SAC Unifying 3 Implementation Plans into 1 Plan - new Changwon City Development Master Plan - New Sewage Management Plan 2010 Annual Review of TPLMS Plan Policy Direction for applying TPLMS into 4 other SMAs Shiwha('13), Busan('15) etc. Guidelines of Policy Direction in developing 2nd TPLMS Guideline for Optimally Operating Deokdong STP Masan Bay 2nd TPLMS Master Plan	Late Nov. 2010 Late Nov. 2010 Early 2011 Late 2010(amended in 2013) Late 2010 Late Nov. 2010 Late Dec. 2012 To be announced in EAS Congress

1. Strong and Early Participation : Masan TPLMS

- After establishment of 1st Masan Bay TPLMS, more than 100 new and changed development plans was reviewed by public.



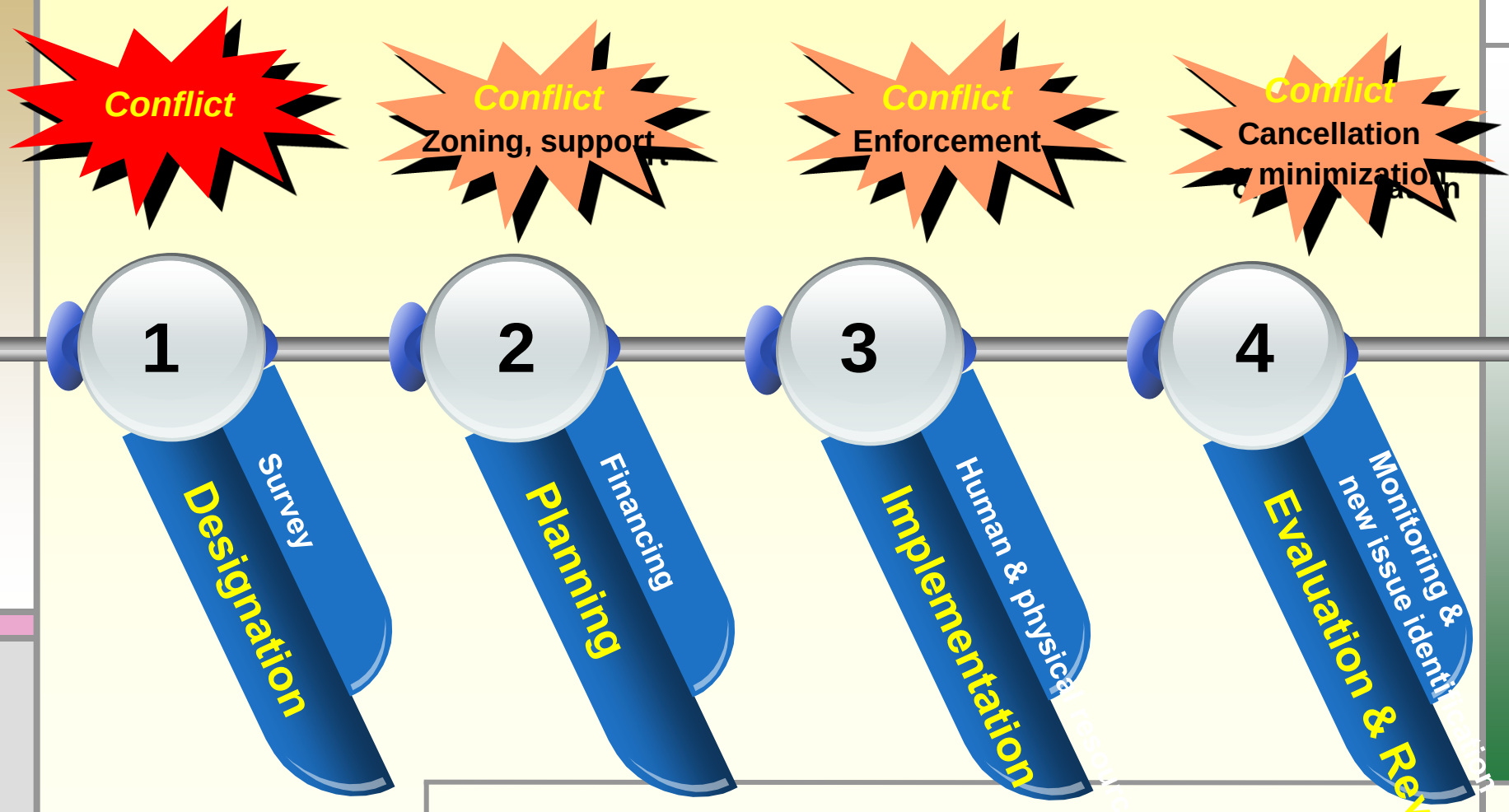
New
Development Plans



Changed Development
Plans

2. Sound and good Science : MPA

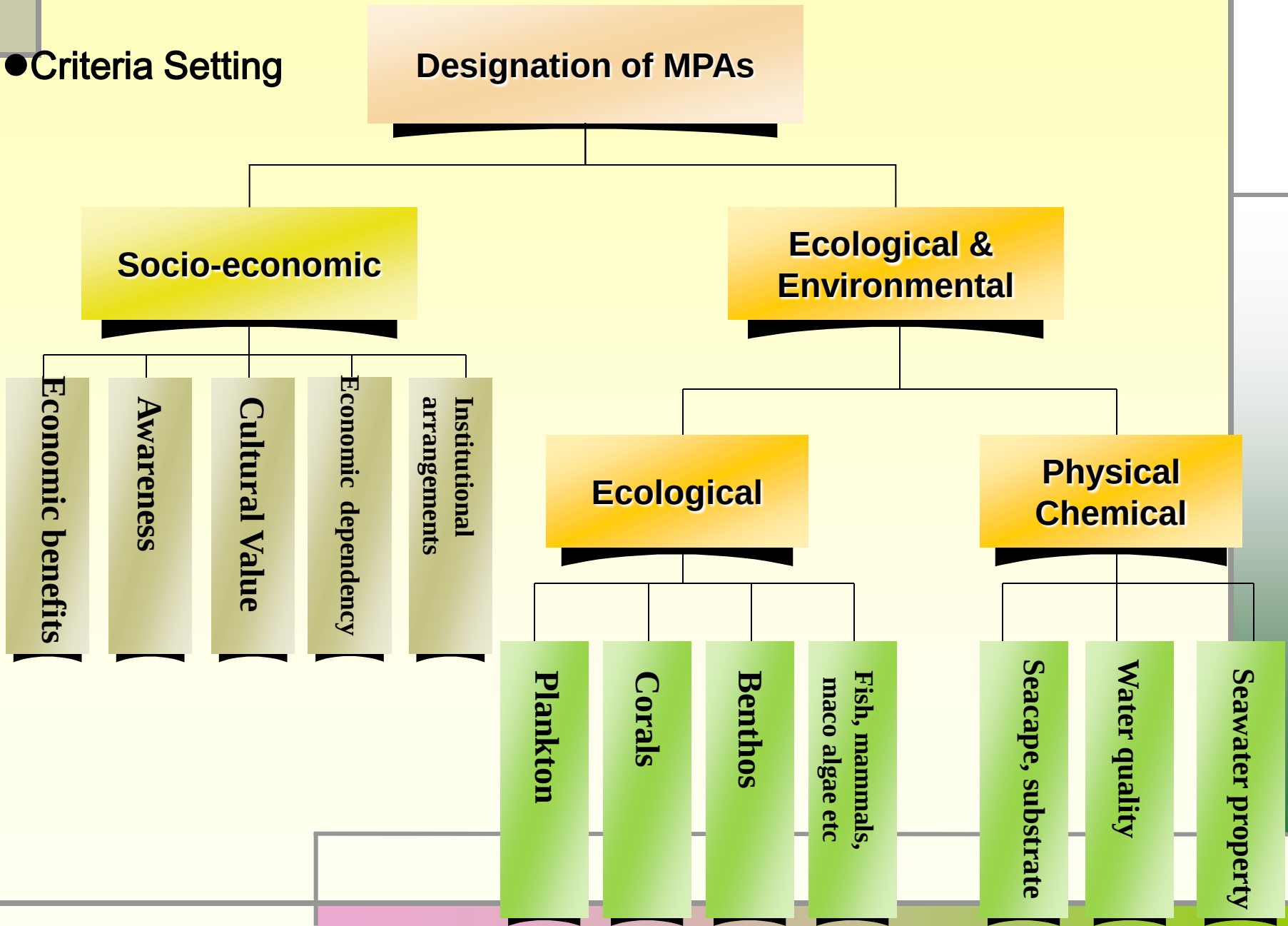
- Every single step of policy-development requires proper scientific information



(Nam, 2006)

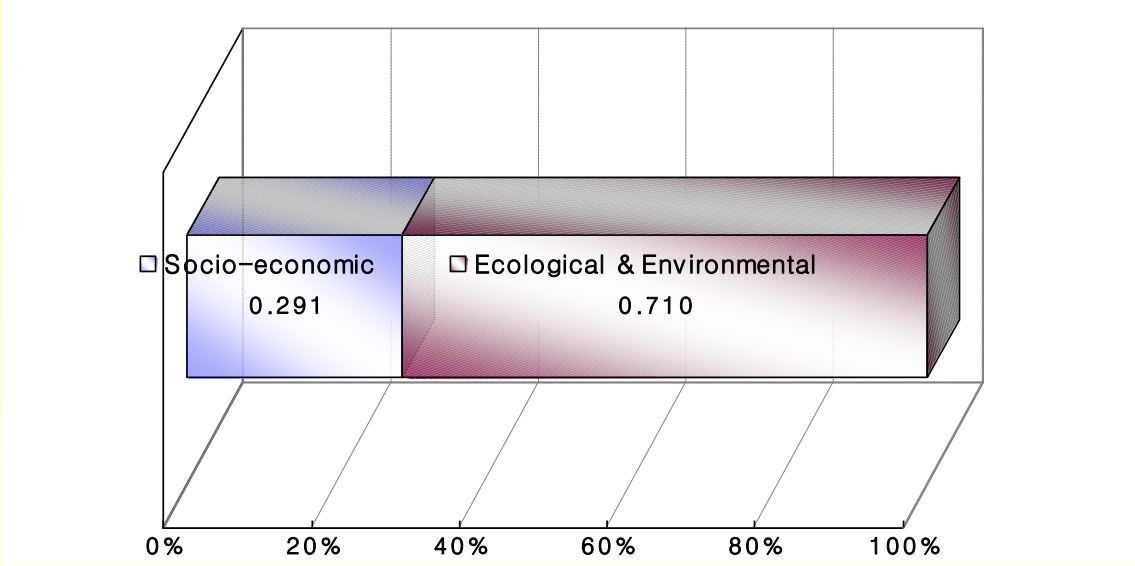
2. Sound and good Science : MPA

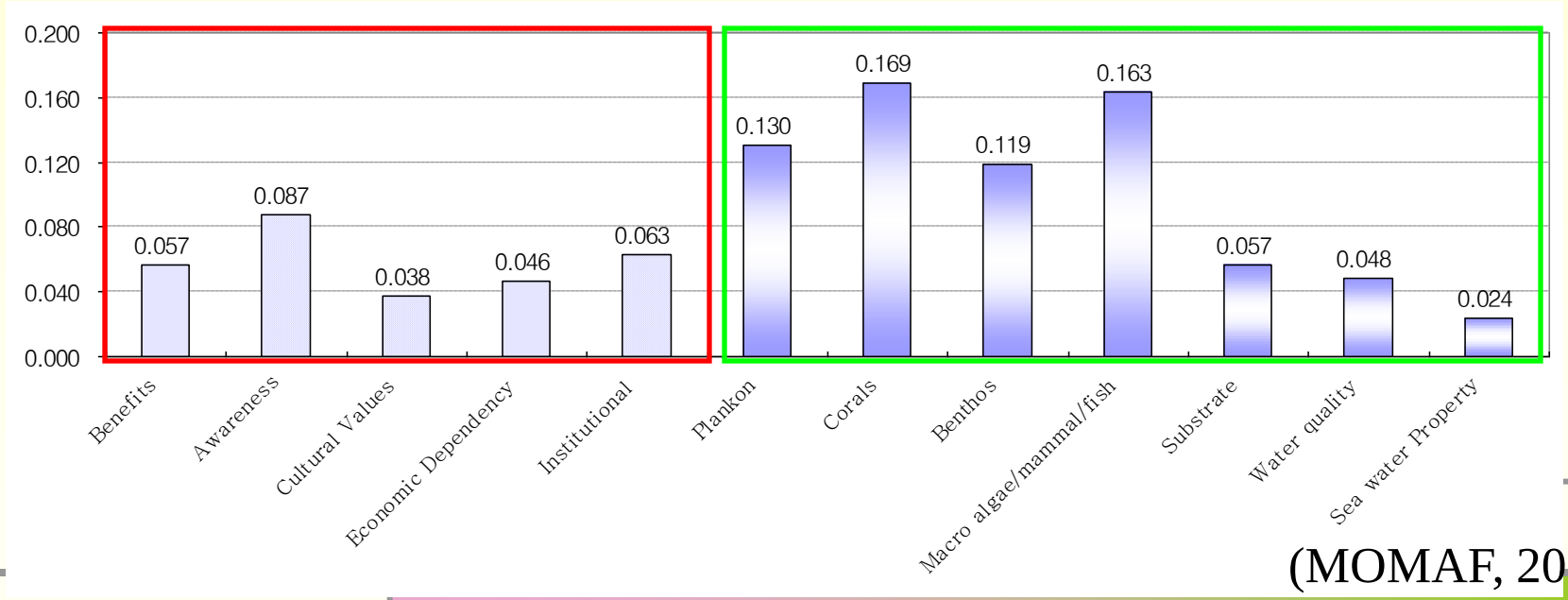
- Criteria Setting



2. Sound and good Science : MPA

●Criteria Setting

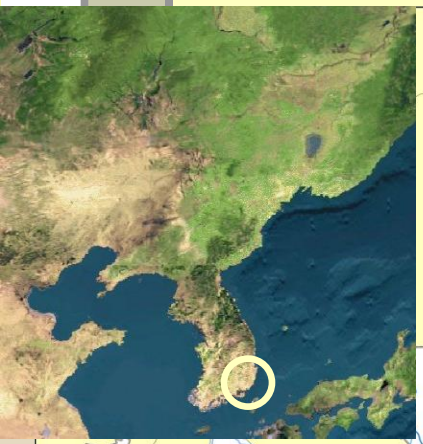


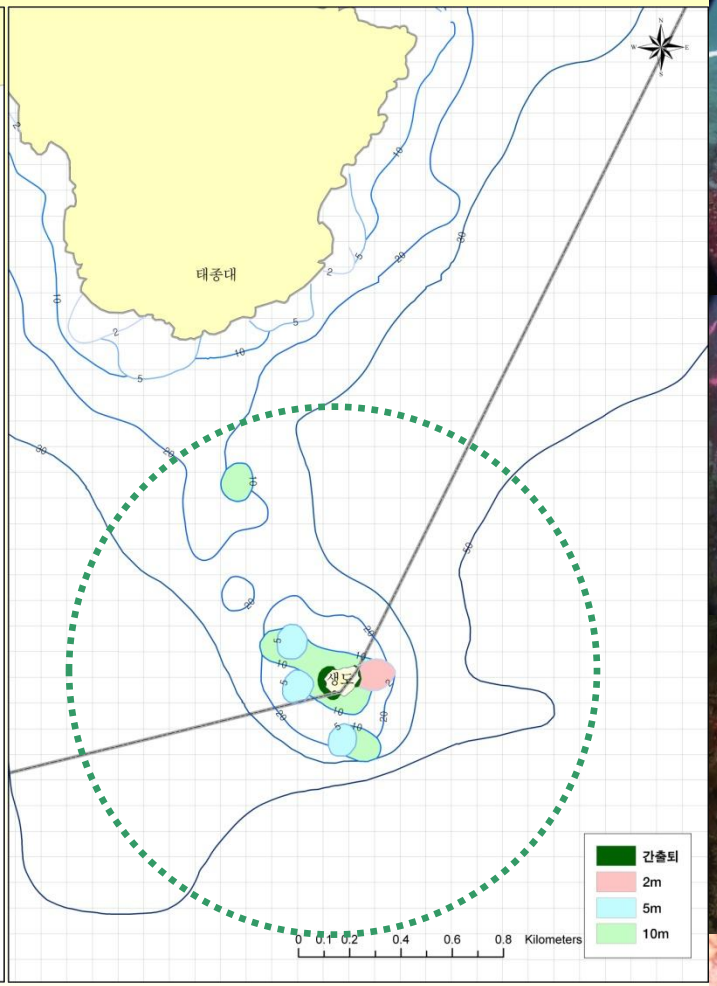


(MOMAF, 2005)

2. Sound and good Science : MPA

●Valuation of Ecosystem Services (Chang *et al.*, 2006)













Unit: 100K $(USD)/yr

Valuation Range	CVM	Emergy*	Market
< 300 m	-		< 18.6
< 1 km	32	3.2~4.5	< 33.6

Biodiversity Conservation, *do not Manage* it directly,

but ***do*** **Socio-economic Activities of Humans**

Thank you for listening!

Convention on Biological Diversity

22 May 2012
INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY
Marine Biodiversity

Sustainable Ocean Initiative High-level Meeting (5 June 2012, Yeosu, Korea)

Aichi Biodiversity Targets on Marine and Coastal Biodiversity and the Need for Capacity Development

Atsuhiro Yoshinaka

(Japan Biodiversity Fund/CBD Secretariat)

October 2010: Nagoya Biodiversity Summit

Life in harmony, into the future
いのちの共生を、未来へ
COP10 / MOP 5

***18 650 accredited participants**

***427 side events**



Aichi-Nagoya Outcomes
(COP-10 / MOP-5)



Life in harmony,
into the future

47 decisions of COP-10, including:

- Nagoya Protocol on ABS
- Strategic Plan and Aichi Targets
- Strategy for Resource Mobilization

17 decisions of MOP, including:

- Nagoya-KL Protocol on Liability & Redress
- Strategic Plan for Biosafety Protocol

Plus declarations of parallel meetings on Local Authorities & Cities, Parliamentarians, Biodiversity and Development

United Nations Decade on Biodiversity

Strategic Plan for Biodiversity 2011-2020

Framework for all Conventions and stakeholders**.**

Vision: *Living in harmony with nature*. By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

Mission Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication

20 Aichi Biodiversity Targets

Implementation mechanisms

United Nations Decade on Biodiversity

Aichi Nagoya Targets

Strategic goal A. Address the underlying causes of biodiversity loss

Target 1: By 2020, People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target 2: By 2020, biodiversity values are integrated into national and local development and poverty reduction strategies and planning processes and national accounts …

Target 3: By 2020, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed …….

Target 4: By 2020, Governments, business and stakeholders have plans for sustainable production and consumption and keep the impacts resource use within safe ecological limits.

Strategic goal B. Reduce the direct pressures on biodiversity and promote sustainable use

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 6: By 2020 all stocks managed and harvested sustainably, so that overfishing is avoided …….

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Strategic goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas are conserved through systems of protected areas……

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives is maintained,

Strategic goal D: Enhance the benefits to all from biodiversity and ecosystem services

Target 14: By 2020, ecosystems that provide essential services, including services are restored and safeguarded,

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems,

Target 16: By 2015, the Nagoya Protocol on Access and Benefits Sharing is in force and operational

Strategic goal E. Enhance implementation through participatory planning, knowledge management and capacity building

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated NBSAP.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities and their customary use, are respected.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Target 20: By 2020, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources,, should increase substantially .

Strategic goal A. Address the underlying causes of biodiversity loss

Target 1: By 2020, … People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target 2: By 2020, … biodiversity values are integrated into national and local development and poverty reduction strategies and planning processes and national accounts …

Target 3: By 2020, … incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, .

Target 4: By 2020, … Governments, business and stakeholders have plans for sustainable production and consumption and keep the impacts resource use within safe ecological limits.

United Nations Decade on Biodiversity

Strategic goal B. Reduce the direct pressures on biodiversity and promote sustainable use

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Strategic goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Target 11: By 2020, at least 17 per cent of terrestrial and inland water areas, 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 landscapes and seascapes

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives is maintained,

United Nations Decade on Biodiversity

Strategic goal D: Enhance the benefits to all from biodiversity and ecosystem services

Target 14: By 2020, ecosystems that provide essential services, including services are restored and safeguarded,

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems,

Target 16: By 2015, the Nagoya Protocol on Access and Benefits Sharing is in force and operational

United Nations Decade on Biodiversity

Strategic goal E. Enhance implementation through participatory planning, knowledge management and capacity building

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated NBSAP.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities and their customary use, are respected.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Target 20: By 2020, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources,, should increase substantially .

United Nations Decade on Biodiversity

Setting national targets

- ✓ Adapt the global framework of goals and targets to the national level
- ✓ Does not necessarily mean national targets for every one of the 20 global targets -- not, all of the global targets will be relevant
- ✓ Targets must be appropriate for each country and its unique circumstances (which can include specific types of biodiversity, in varying states of health and under differing pressures, management regimes, and socio-economic and financial situations).
- ✓ If national targets already exist, a first step could be to examine these in relation to the 20 global targets.

United Nations Decade on Biodiversity

Examples of National Targets

- By 2015, modernize agriculture to an ecologically acceptable level (**Benin**)
- Number of community-based fisheries increased from 264 in 2000 to 589 in 2015 (**Cambodia**)
- By 2012, **Costa Rica** has 1% EEZ (17% territorial waters) in management categories, increasing to 2% by 2015
- Quebec committed to protecting 12% of its territory by 2015 (**Canada**)
- 10 million Europeans actively engaged in biodiversity conservation by 2010 and 15 million by 2015 (**EC**)
- By 2012, 50% of endangered species will be conserved (**Japan**)
- The number of community-based fisheries will be increased from 264 in 2000 to 589 in 2015 (**Cambodia**, National Development Strategy)

Key needs and activities required to meet Aichi Marine Targets

- Ecosystem Approach for management – incorporating all activities, stakeholders and indigenous and local communities
- Greater collaboration with the fishing and other sectors to deliver sustainable management of oceans and coasts
- Increased awareness of the need for an Ecosystem Approach by all stakeholders and the role they play within it

Key needs – target-based examples

Target 6 - Fisheries

Improved management of industrial, artisanal and subsistence fisheries especially in developing countries

Target 10 - Coral Reefs

Rapid scaling up of effective management of coral reefs to reduce anthropogenic pressures by 2015

Target 11 – MPAs

Increased management effectiveness of MPAs to prevent ‘paper parks’

Challenges and capacity building needs

- Despite local success stories, biodiversity in oceans and coastal areas globally continues to decline
- Need investment in improved management, and new and creative solutions balancing conservation and sustainable use



Some challenges

- Knowledge gaps and lack of information/data
- Lack of political commitment
- Legal, policy and institutional weaknesses and poor sectoral coordination
- Insufficient human resources and capacity for implementation
- Limited financial resources
- Low awareness about importance of marine biodiversity
- Limited involvement of Indigenous and local communities and stakeholders
- Lack of economic and other incentives

Capacity building needs

- Developing and strengthening stakeholder partnerships and networks
- Facilitating participation of communities and other stakeholders – increasing capacity for participation
- Building human capacity for management (ecosystem approach)
- Scientific/management training and partnerships, learning exchanges
- Exchange of scientific, technical and socio-economic information and data, as well as traditional knowledge
- Facilitating collaboration between fisheries and conservation
- Scaling up demonstration projects

Capacity building needs

- Vary from region to region, country to country
- Capacity building should be targeted to the specific needs of the recipient
- Undertaken as part of implementation
- Hear more about specific needs and experiences from the panelists

The Japan Biodiversity Fund

Established by the Government of Japan, the Presidency of the tenth Conference of the Parties (COP 10), in support of the implementation of the Nagoya Biodiversity Outcomes with the objective of supporting developing countries to:

- Implement Strategic Plan for Biodiversity 2011 – 2020 and the Aichi Biodiversity Targets;
- Revise their National Biodiversity Strategy and Action Plans (NBSAPs) in accordance with the Strategic Plan;
- Strengthen their capacity to implement the Convention

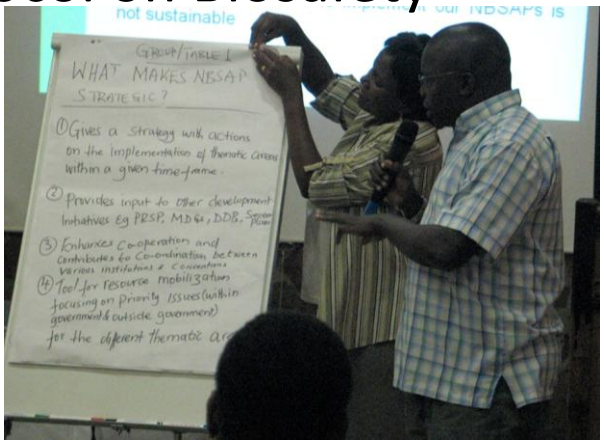
United Nations Decade on Biodiversity

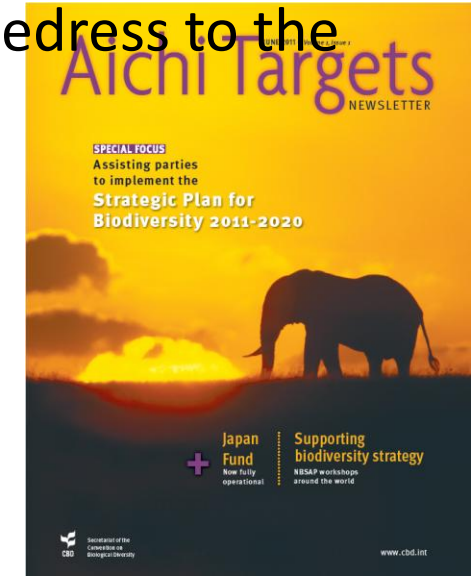
NBSAP Capacity Building Workshops

- ✓ Facilitate national implementation of Strategic Plan by assisting Parties to develop national biodiversity targets
- ✓ Assist in reviewing, updating, revising and implementing NBSAPs, to serve especially as an effective tool for mainstreaming biodiversity into broader national policies
- ✓ To stimulate early actions to implement other Aichi-Nagoya outcomes, in particular, the Nagoya Protocol on Access and Benefit Sharing and the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety

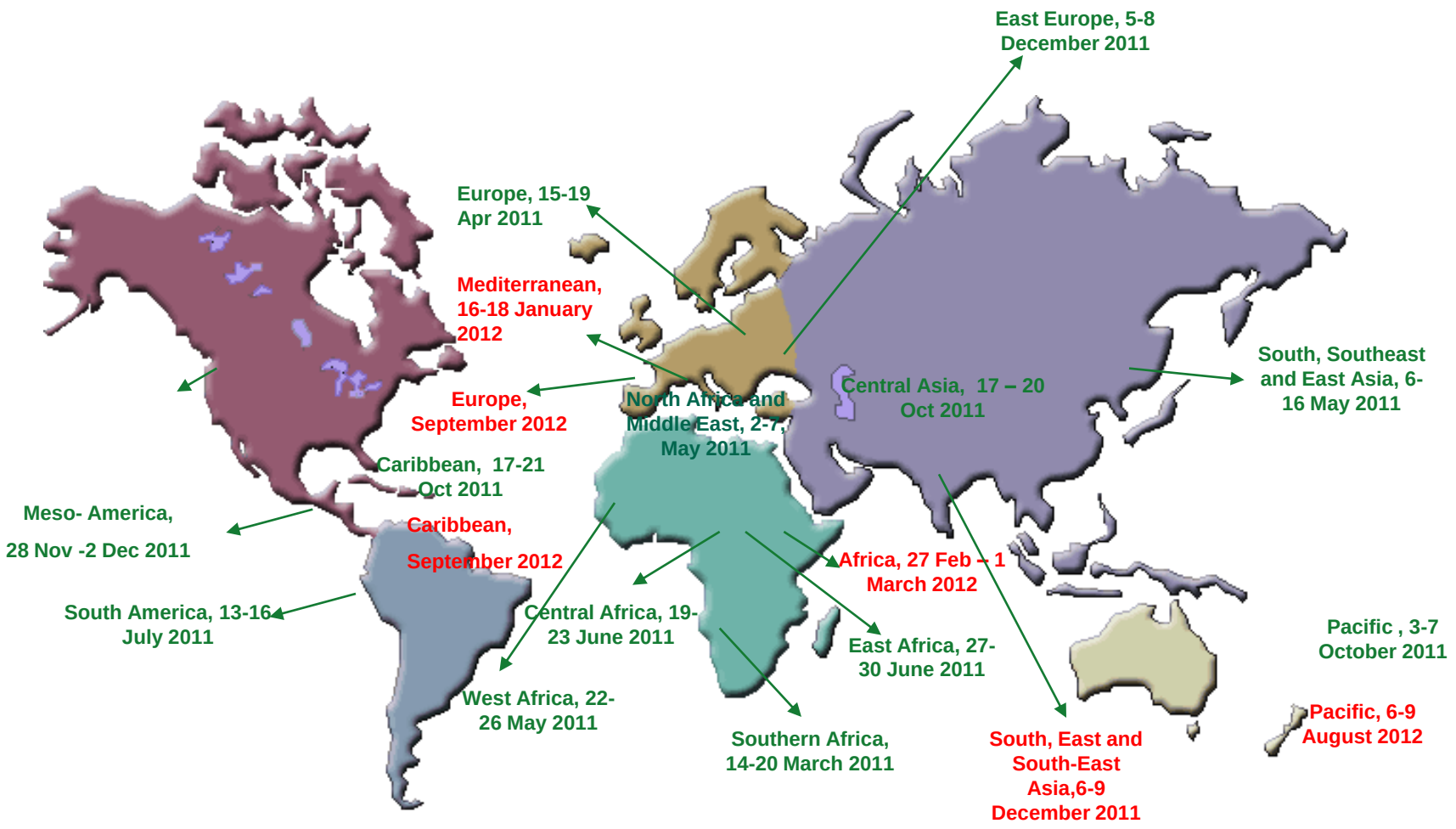
Organized with support of

- Japan Biodiversity Fund
- Host countries
- Regional partners





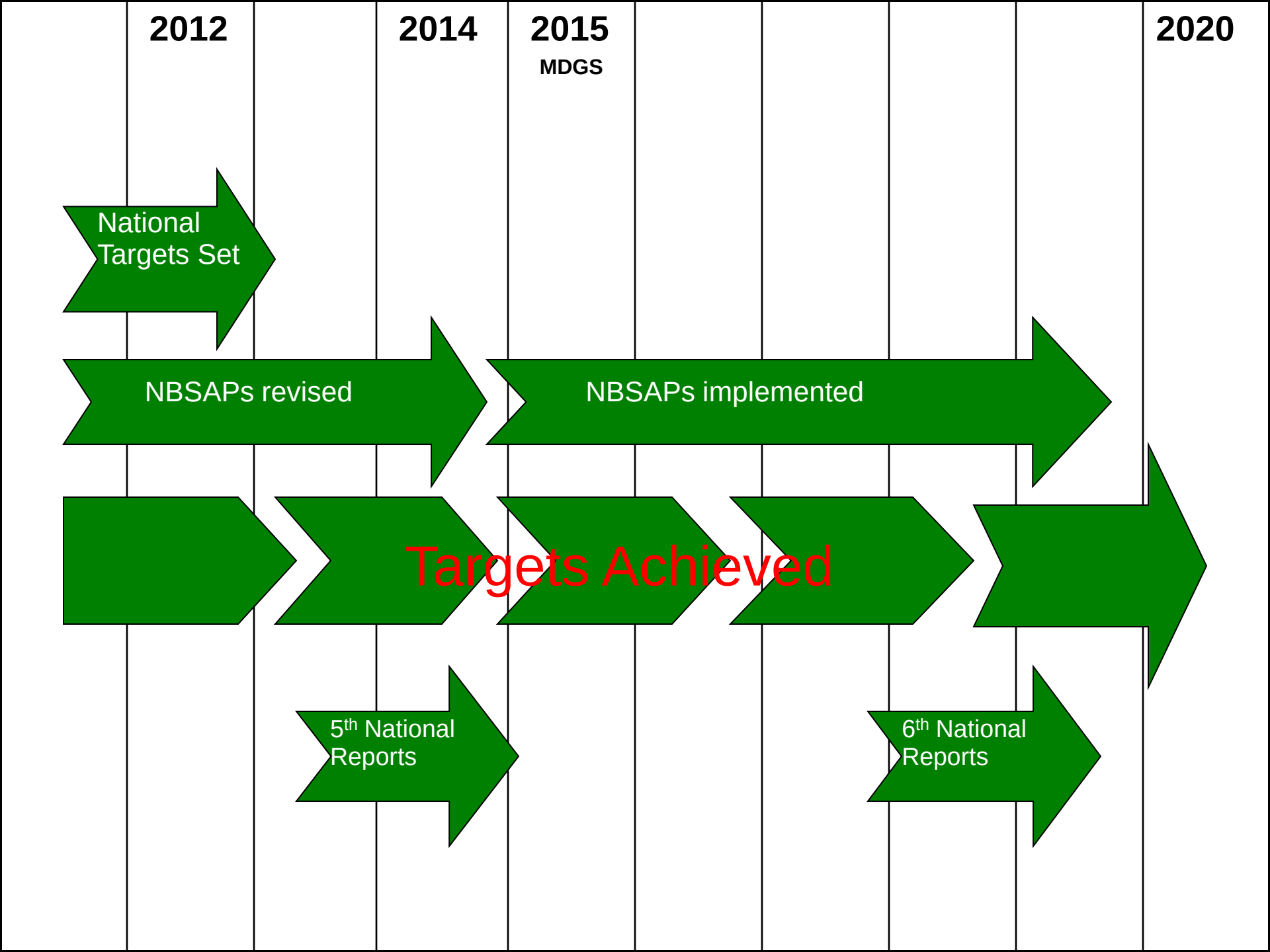
NBSAP Capacity Building Workshops



United Nations Decade on Biodiversity

Follow-up Activities to Support Implementation of SP

- 15 regional or sub-regional workshops on updating NBSAPs organized with support of Japan in 2011 and more workshops planned for 2012;
- Aichi Target Newsletters published to provide updates on NBSAP updating;
- Guides developed for some Aichi targets;
- Access to GEF funds being facilitated for updating NBSAPs (57 LDCs and SIDs through UNEP umbrella, 15 individual proposals through UNEP, 5 countries direct access through the GEF SEC, 43 countries through UNDP);
- Help desk set to provide support to countries for updating NBSAPs;
- Training modules on NBSAP revised, with some new modules developed;
- Partnerships with various organizations and initiatives being developed to deliver support;
- Dialogues held with various stakeholders to promote Nagoya outcomes.


2012
2014
2015
MDGS
2020
National Targets Set
NBSAPs revised
NBSAPs implemented
Targets Achieved
5th National Reports
6th National Reports

THANK YOU

Secretariat of the Convention on Biological Diversity

413 Saint Jacques Street, Suite 800
Montreal, QC, H2Y 1N9, Canada
Tel: +1 514 288 2220
Fax: + 1 514 288 6588
Email: secretariat@cbd.int
www.cbd.int

CHALLENGES IN IMPLEMENTING THE CDB STRATEGIC PLAN FOR BIODIVERSITY 2011-2020 IN THE SOUTHEAST PACIFIC REGION, WITH PARTICULAR REFERENCE TO AICHI BIODIVERSITY TARGETS 6 AND 11



Fernando Félix

Permanent Commission for the South Pacific (CPPS)

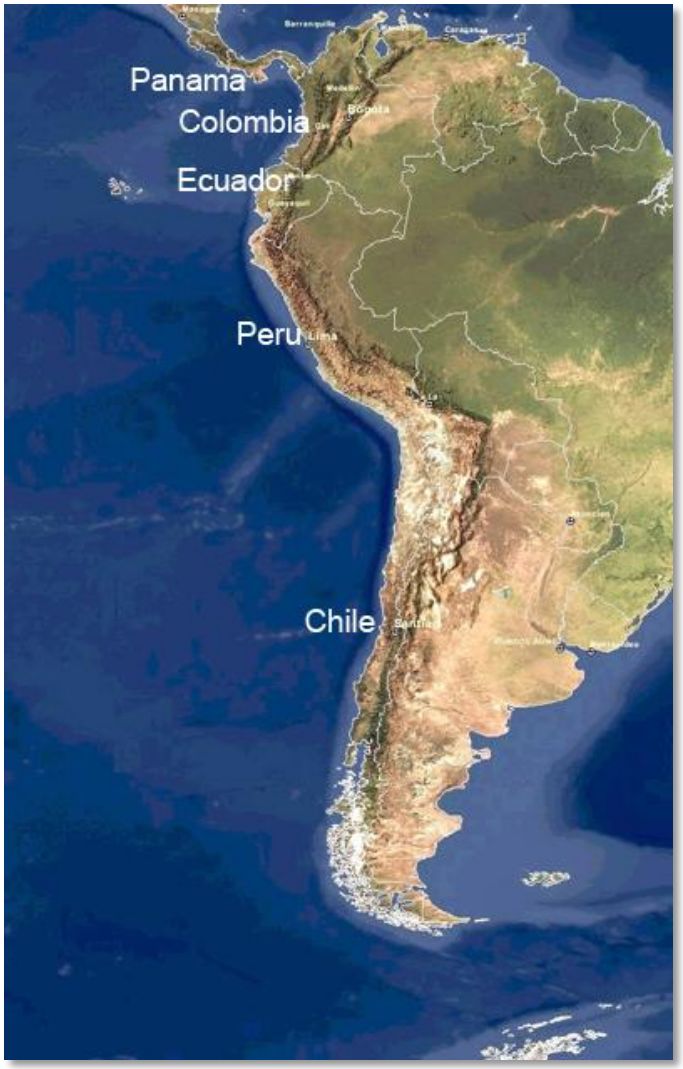
Guayaquil, Ecuador

www.cpps-int.org

Sustainable Ocean Initiative High-level Meeting, Yeosu, Korea

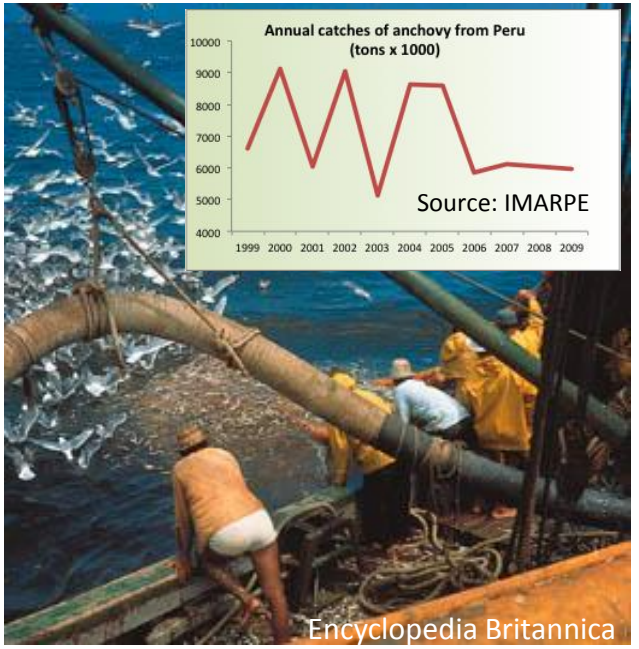
The Southeast Pacific region

- Extends 8,000 km along the entire South America west coast
- Five countries: Chile, Colombia, Ecuador, Panama and Peru
- High diversity of coastal and marine ecosystems
- complex systems of ocean currents
- El Niño Souther Oscilation (ENSO)



Sustainable fisheries (Target 6)

- 2nd most important fishing area in the world (12 million tons/year)
- Landings has decreased in the last 5 years
- Overfishing and poor management
- Extensive small-scale fishing fleets



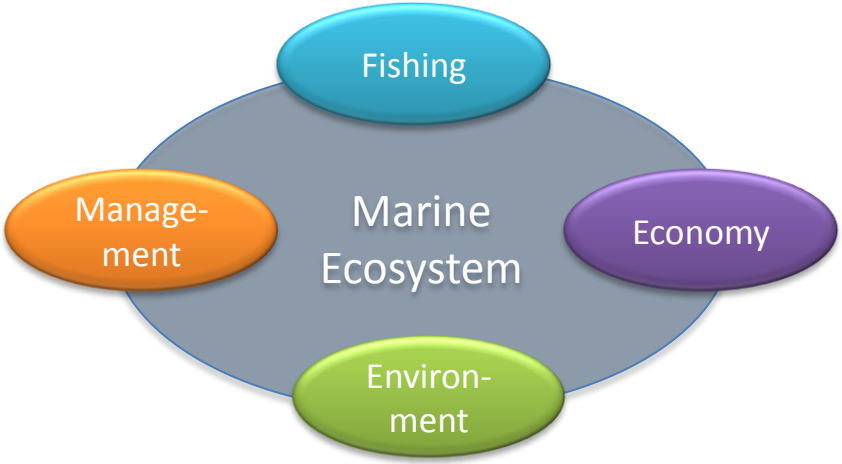


EAF; reaching the balance…









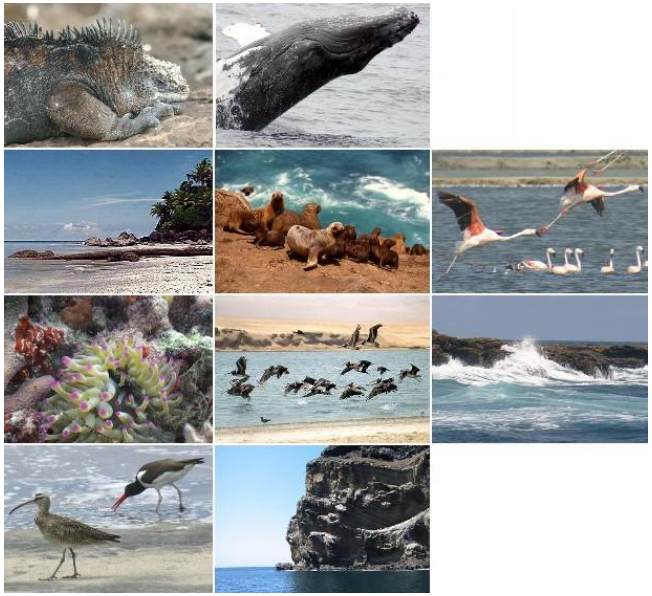




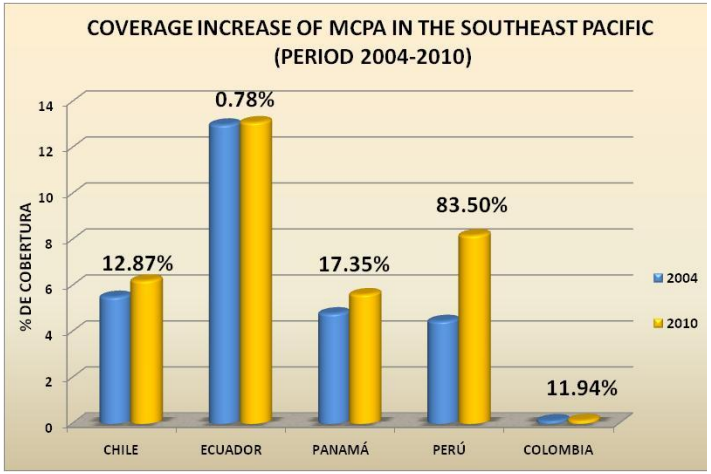


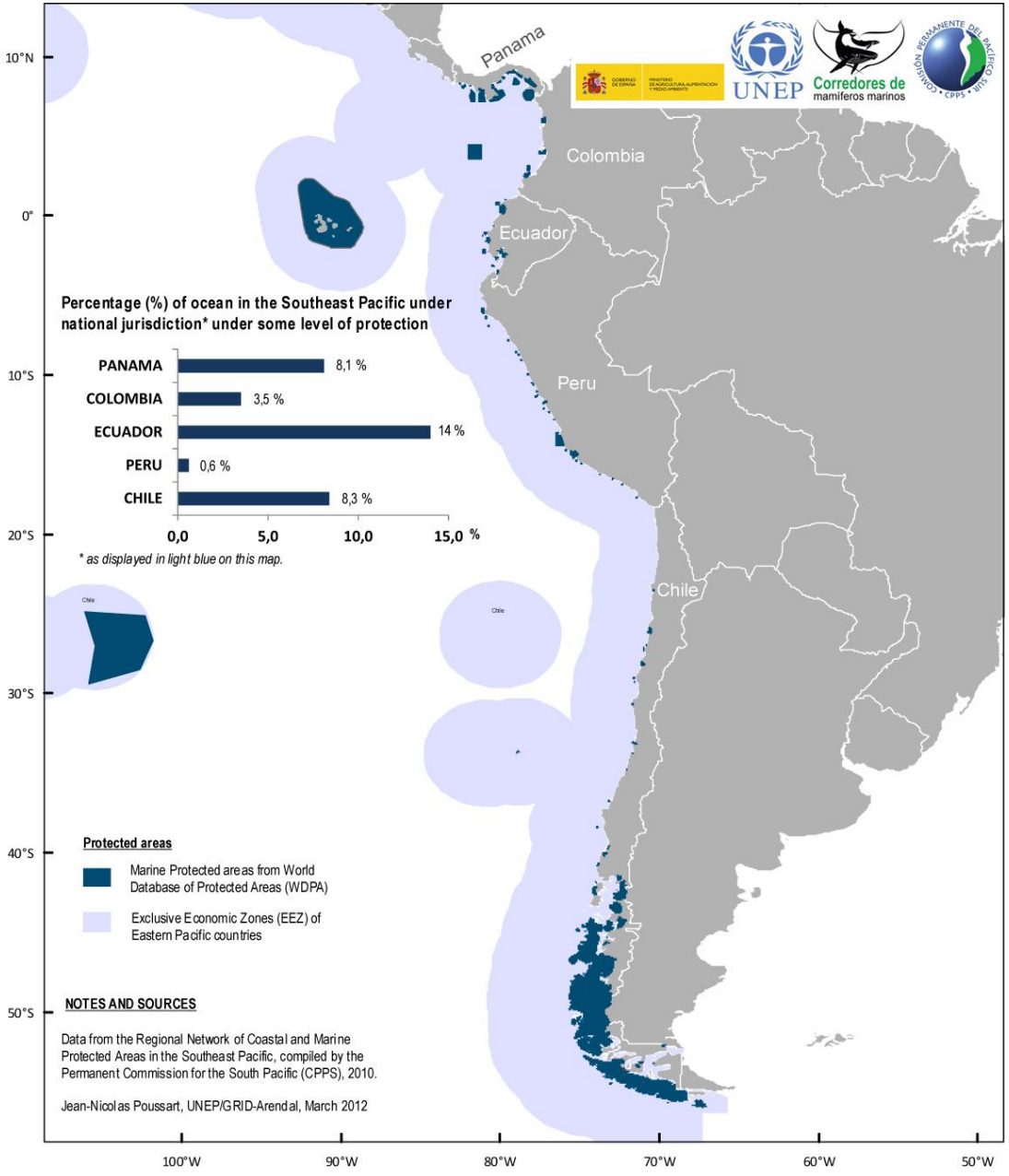
Regional network on MPA (Target 11)

- Strengthen the management of marine and coastal protected areas.
- Increase significantly the coverage of the marine and coastal protected areas by 2012.
- Contribute to the global goal establishing by 2012 representative networks of MPA's base on scientific information and according to the international law.
- Promote the exchange of experiences and information about the individual status of the protected areas included in the network.



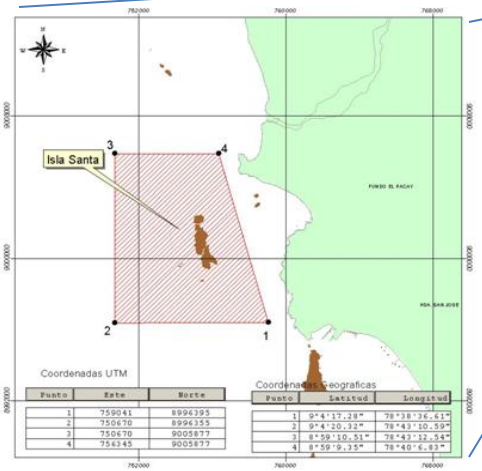
MPAs in the Southeast Pacific

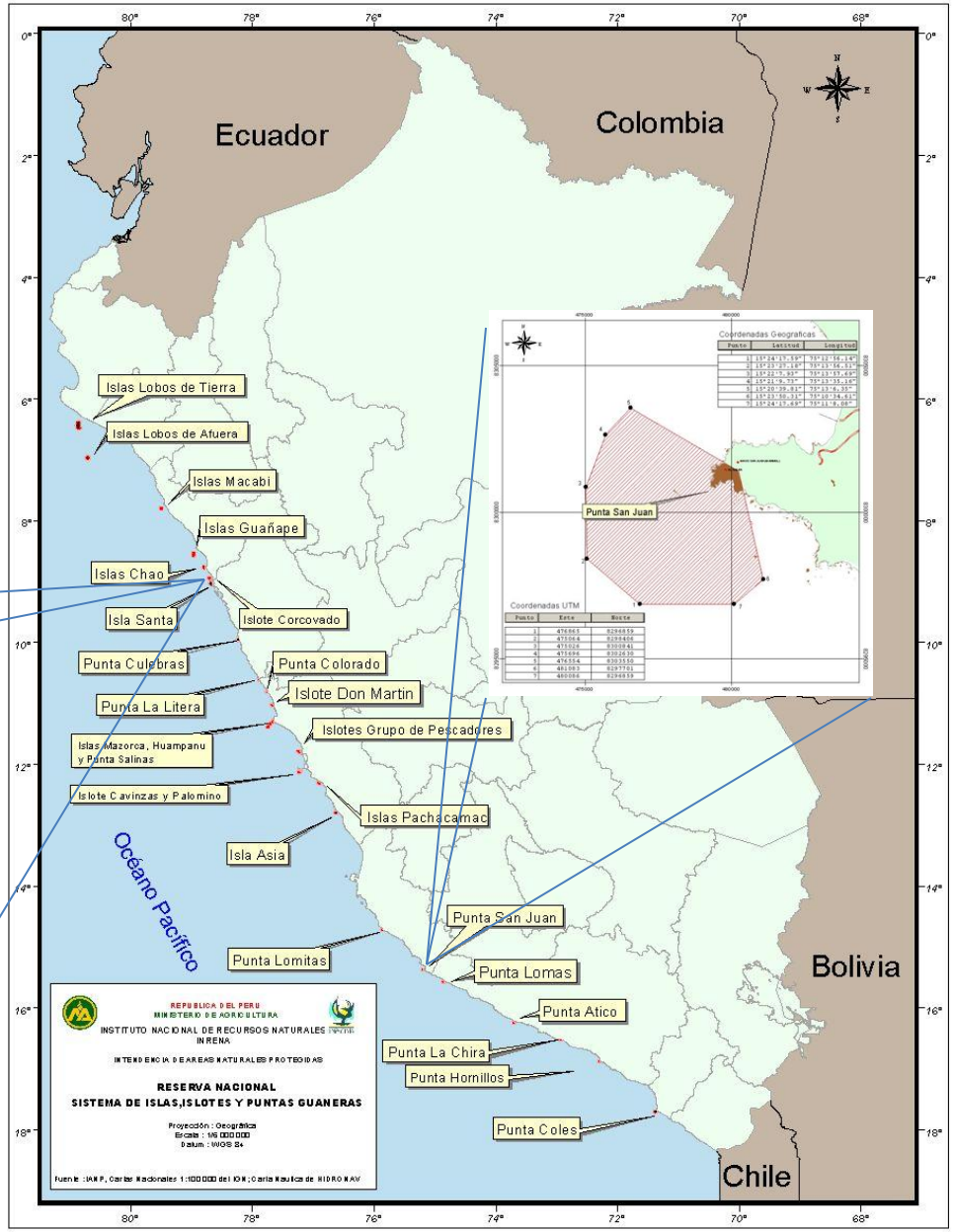




Network of Guano Islands and Tips National Reserve (Peru)

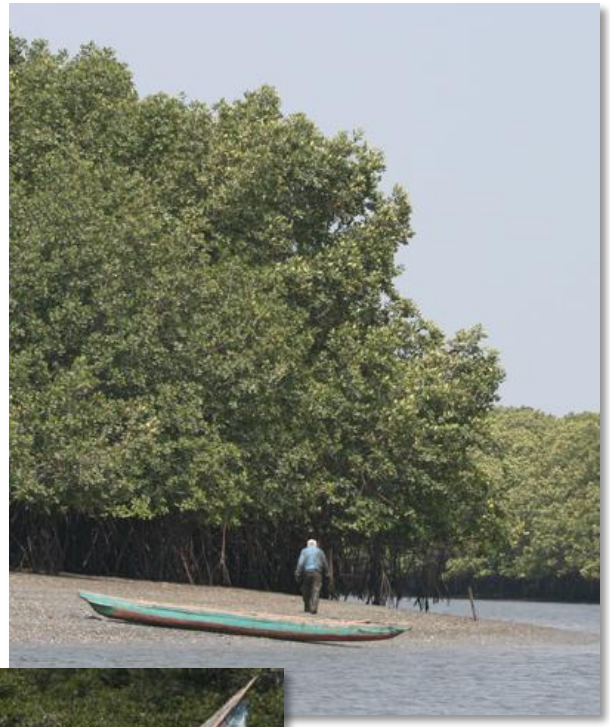
- 22 islands
- 11 coastal tips
- 2 nautical miles of marine area
- total extension 140,883 ha

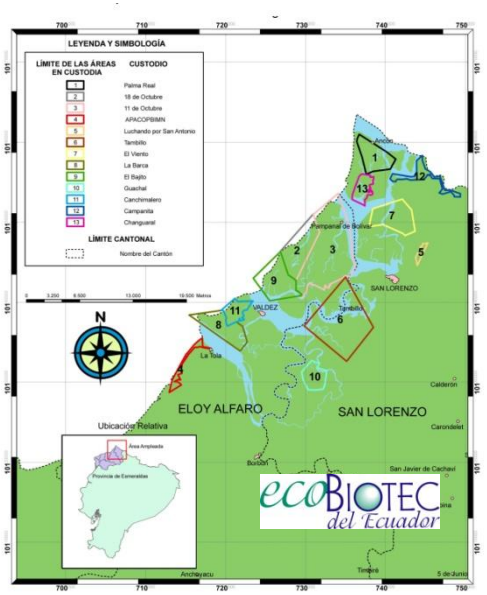




Mangroove Concessions (Ecuador)

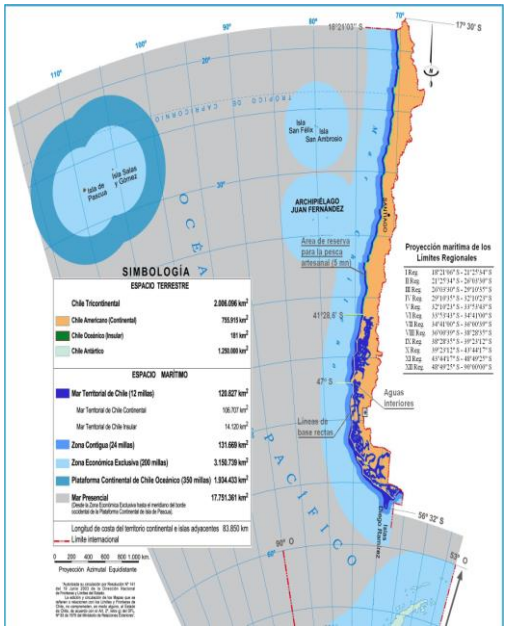
- More than 19,000 ha
- contribute to conservation
- increase ownership on both the area and resources
- give benefits to local communities.







Management areas for the exploitation of benthic resources (AMERB) (Chile)



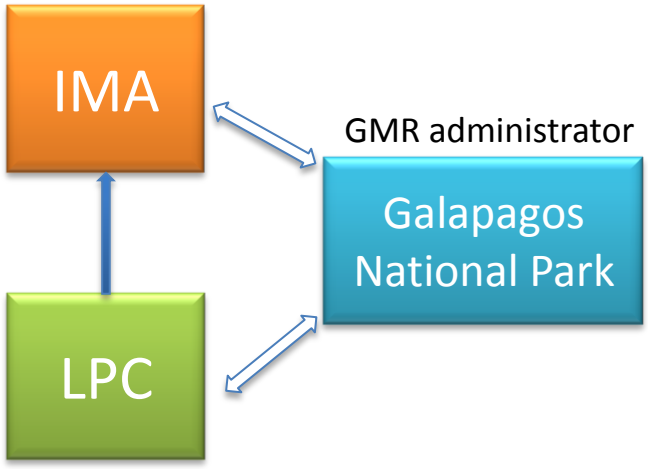
- government assigns rights for use and exploitation for benthic resources
- Areas within 5 nautical miles
- Fishermen associations legally constituted.
- Efficient tool for the optimal exploitation and conservation of marine resources,
- promote the organization of fishermen
- More that 450 concessions.



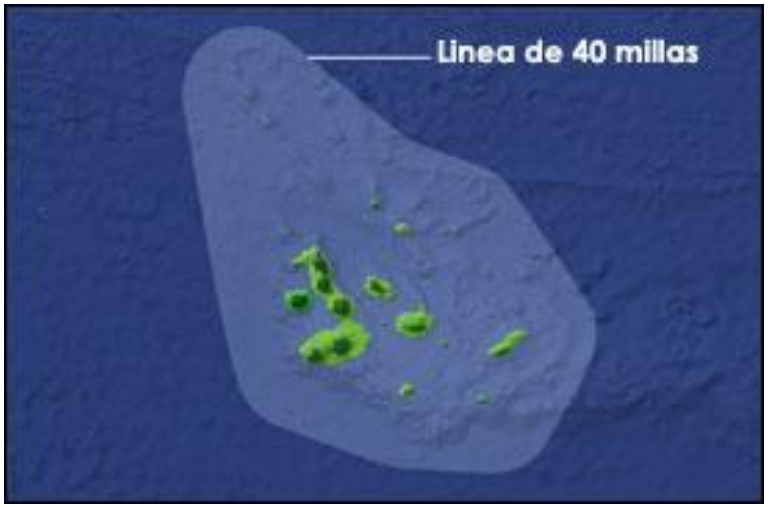
Multi-sectorial administration of the Galapagos Marine Reserve (Ecuador)

- established in 1999
- active participation of local stakeholders
- Two institutionalized levels: local (LPC) and inter-institutional (IMA)

Ministries of environment, tourism, defense, fisheries, and 3 local stakeholders tourism, fishing and conservation



Local Stakeholders: tourism, fishing, conservation, science GNP











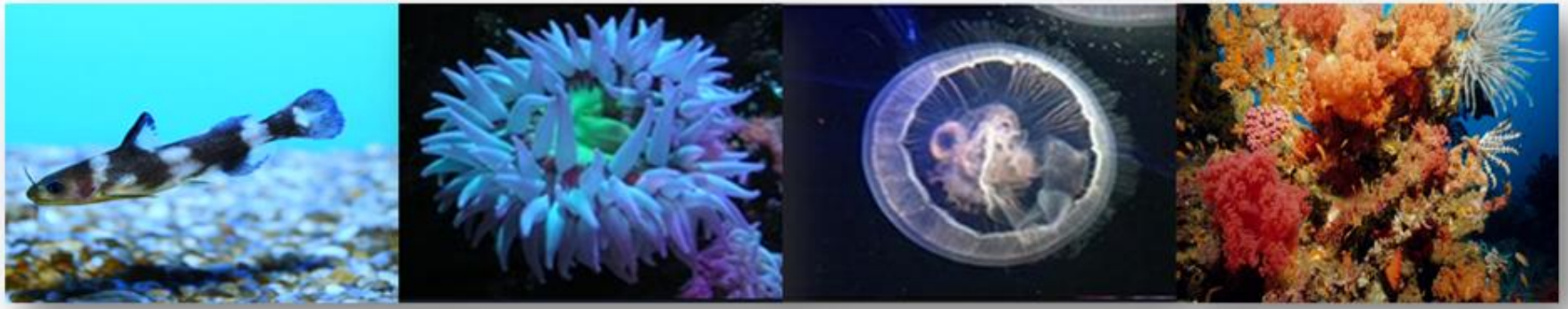
Challenges

- Reach the 10% target at regional scale
- Implementation management plans
- Improve institutional capacity
- Move on from the traditional “land approach” to MPA.
- Financial mechanisms
- MPAs of multiple uses demands additional management efforts



Korea's Experience for conservation and management of marine & coastal ecosystem

Yong Hee Lee & Moon Sang Kwon





Korea´s Key Laws & Policies

- Marine Environment Management Act(2007)
- Conservation and management of marine ecosystems act(2006)
- The 1st Basic Plan for the conservation & management of Marine ecosystems(2009–2018)
- The 4th Marine Environment Comprehensive Plan(2011–2020)



Evaluating of Korea´s Capacity

Strength

- Establishment of specific laws & policies
- Implementation of systematic surveys
- Expansion of MCPA
- Restriction on reclamation projects

Opportunity

- Expansion of international efforts
- Increase of coastal & marine eco-tourism
- Increased significance of the value of biological resources at national level

Weakness

- Limited financial resources for survey
- Deficient interlink between survey outcomes and policy-making
- Lack of efficiency in managing MCPA
- Poor relation with fisheries policy

Threat

- Adverse impact of climate change on marine environment
- Emerging demand on marine space (ex: marine energy production)
- Increasing invasive alien species



Marine and Coastal Protected Area (as of 2010.12)

Name	No.	Size(sq. km)	Agency
Marine Protected Area	4	70.4	MLTM
Ecological and Scenery Conservation Area	3	34.6	MOE
Wetland Protected Area	13	308.4	MOE, MLTM
Specified Island	167	10.5	MOE
National Park	4	3,348.4	MOE
Marine Environmental Conservation Area	4	1,882.1	MLTM
Special Protected District for Wild Fauna and Flora	127	191.6	MOE
Fishery Resources Protection Zone	10	3,034.6	MIFAFF
Natural Monuments	193	1,126.4	CHA
Total	525	10,006.9	

- 9 types MCPAs
- 4 national government ministries and agencies
- 10.1% of terrestrial and inland water area
- 11.5% of territorial sea(86,891sq.km)
- 2.2% of marine area
- 7.1% of tidal flat area

source : MLTM,MOE,MIFAFF,KCG(2011), The 4th Marine Environment Comprehensive Plan, p.41.



Location of MPA and WPA of Korea



Marine Protected Areas
- 4 sites
(Marine Ecosystem Conservation and Mgt Act)

Wetland Protected Areas
- 13 sites
(Wetland Conservation Act)



Barriers and Future plan for MPA Management

Barriers

- Low coverage of MCPAs
- Demands from local community to release MCPA
- Lack of efficient management plan
- Insufficient human technical resources and capacity in local level
- Limited involvement of local communities and stakeholders

Future plan(2020)

- Expansion of MCPA
  - MPA 4 sites ➡ 14 sites
  - WPA 10 sites ➡ 20 sites
- Establishment of local community-driven plan
- Assessment of management plan and measures by KOEM
- Implementation of economic and social assessment on the value of MCPA
- Enhancement of public awareness of local residents



Marine & Coastal ODA of Korea

Year	Scale of ODA (1 million KRW)			Rate	
	Total(A)	Environment & other (B)	Marine & Coastal (C)	C/A	C/B
2000	51,276	11,932	157	0.31%	1.32%
⋮	⋮	⋮	⋮	⋮	⋮
2005	215,120	28,062	177	0.08%	0.63%
2006	184,881	29,783	116	0.06%	0.39%
2007	251,086	38,807	156	0.06%	0.40%
2008	305,541	22,256	316	0.10%	1.42%
2009	355,747	32,136	468	0.13%	1.46%
2010	524,731	156,795	2,001	0.38%	1.28%
annual average growth rate	24.0%	11.6%	12.9%	-	-

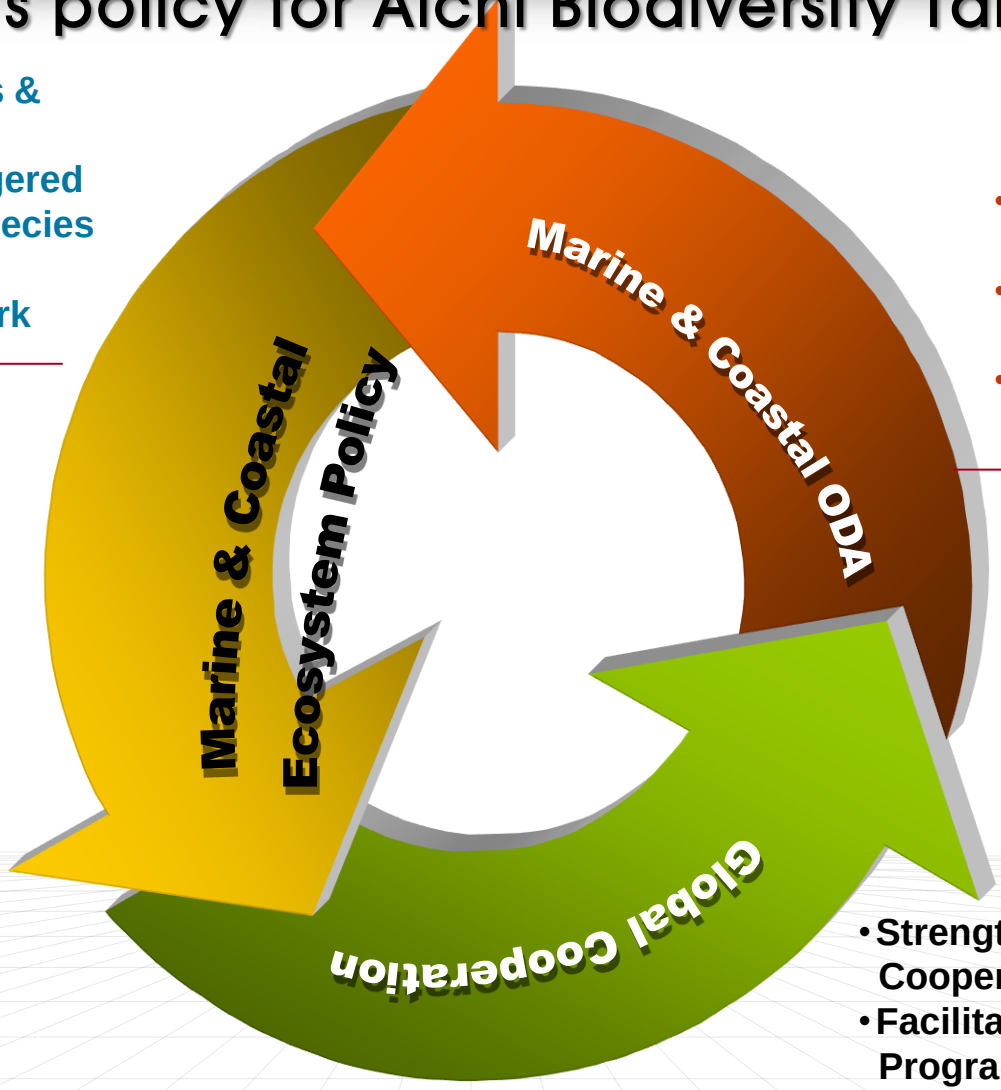
source : KOICA(2010), "KOICA Foreign Grant Statistics(2010)" ; KMI(2011), Strategy of Marine & Coastal ODA, p.43

- Major Project Type
  : training invitation program
- **Target countries**
  : Asian, African and Oceania SIDS
- Major organizations
  : MLTM & KOICA
- KMI, KORDI etc. other marine-related organizations conduct **education program for developing countries**
- Plan to expand Green ODA by 2020
- **Yeosu Project (2009-2012)**
  - support developing countries to address climate change, to prevent marine pollution, and to strengthen capacity building



Future Korea´s policy for Aichi Biodiversity Targets

- Management of Habitats & Spawning places
- Conservation of Endangered & Threatened Marine Species
- Expansion of MCPA and Strengthening of Network



- Capacity Building of Developing Countries
- Marine Scientific Technology Transfer
- Diversification of ODA programs

- Strengthening of Global Marine Cooperation
- Facilitation of Regional Sea Programs (PEMSEA etc)



Thank you !!!

Japanese Experiences and Efforts

~ Aichi Biodiversity Targets on Marine and Coastal Biodiversity and the Need for Capacity Development ~



Hajime KAWAMURA

Cabinet Counsellor

Secretariat of the Headquarters for Ocean Policy (SHOP)

Cabinet Secretariat, Government of Japan

Basic Act on Ocean Policy

○**international legal framework related to oceans**:
UNCLOS, Agenda 21, Convention on Biological Diversity, etc.

○**Various challenges at sea around Japan** :
marine pollution, depletion of fisheries resources, coastal erosion, serious maritime accidents

○**Increasing role of the oceans for all mankind** :
security of foods, ocean resources and energy, cargo transport, global environment

Need to **establish executive structure** and
to **promote comprehensive and integrated approach**
to the ocean issues

Basic Act on Ocean Policy

Enactment : 20 April, 2007
Enforcement : 20 July, 2007



Basic Plan on Ocean Policy – 6 Measures
(closely related to today's theme)

1. Promotion of the development and use of marine resources



Fishery



methane hydrate

2. Preservation of marine environment, etc



6. Promotion of Marine Surveys



7. Promotion of Research and Development of Marine Science and Technology



9. Comprehensive Management of the Coastal Zones



12. Enhancement of Citizen's Understanding of the Sea and Fostering of Human Resources



Structure to execute the Act

Government

Headquarters for Ocean Policy

Director-General : **Prime Minister**

Vice-Director : **Chief Cabinet Secretary**

Minister for Ocean Policy

Members : **All Ministers**



Councilors' Meeting

Key figures with deep insight



Cabinet Secretariat

Secretariat (SHOP)

Ministries

Implementing the measures

Clarification of the responsibilities of the State, the local governments, business operators and the citizen

Basic Plan on Ocean Policy

(Approved by the Cabinet on March 2008)

- basic principles of the measures implemented pursuant to the Act
- measures that the central government shall implement

Period of the Plan

5 years (from FY2008 to FY2012) *to be reviewed in the end of FY2012

Marine Protected Areas (MPAs)

"the National Biodiversity Strategy of Japan 2010" (on March, 2010)
"Marine Biodiversity Conservation Strategy in Japan" (on March, 2011)

"Japanese-style" MPAs (definition)

Approved by the HQ for Ocean Policy in 2011

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***.

Classification of Japanese-style MPAs (examples)

ca.8 % of territorial Sea and EEZ

1. **Protection of natural landscape**
   - Marine park zones *(Natural Parks Law)*
   - Natural coastal protected areas *(Law concerning Special Measures for Conservation of the Environment of the Seto Inland Sea)*
2. **Protection of natural environment, wildlife and habitats**
   - Wildlife protection areas *(Wildlife Protection & Hunting Management Law)*
   - Natural monuments *(Law for the Protection of Cultural Properties)*
3. **Conservation and Sustainable Use of Fishery Resources**
   - Protected waters *(Act on the Protection of Fishery Resources)*
   - No-fishing areas *(Fisheries Act or autonomous management by fishermen)*

Further Efforts

- **to establish further MPAs properly**
- **to gain international understanding for "JP-style" MPAs**

- **To identify EBSAs**
- **to establish "MPA-networks"**

Promotion of integration of marine information

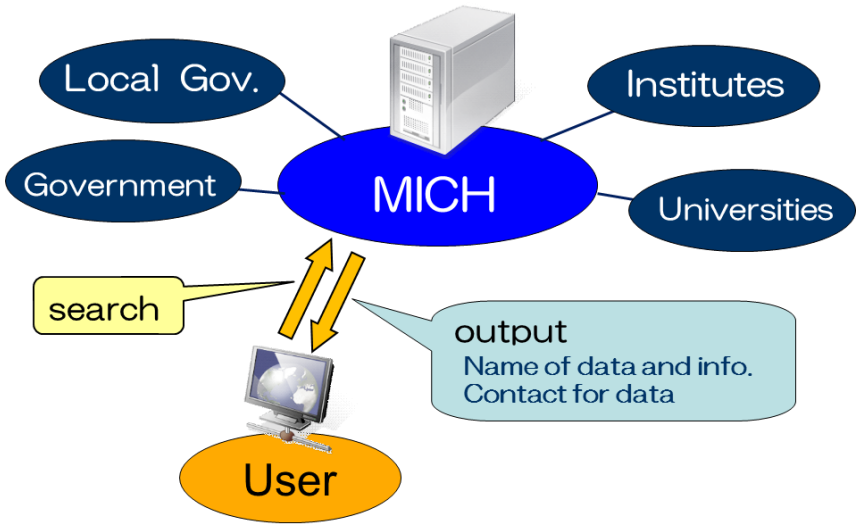
First step: Marine Information Clearing House(MICH)

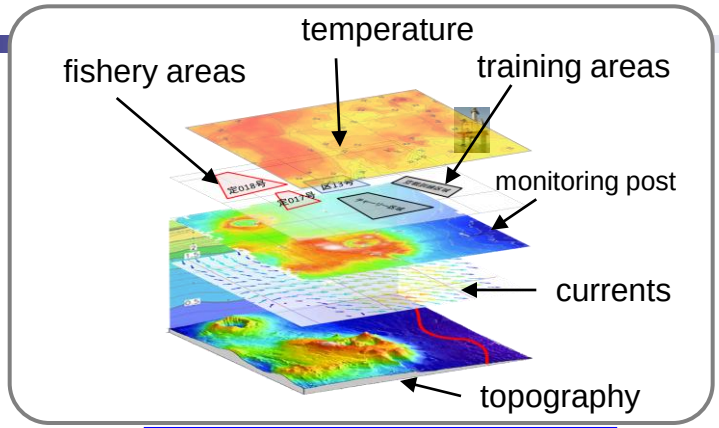
database of metadata of ocean-related information separately stored in each organizations

Next step: building "Marine Cadastre"

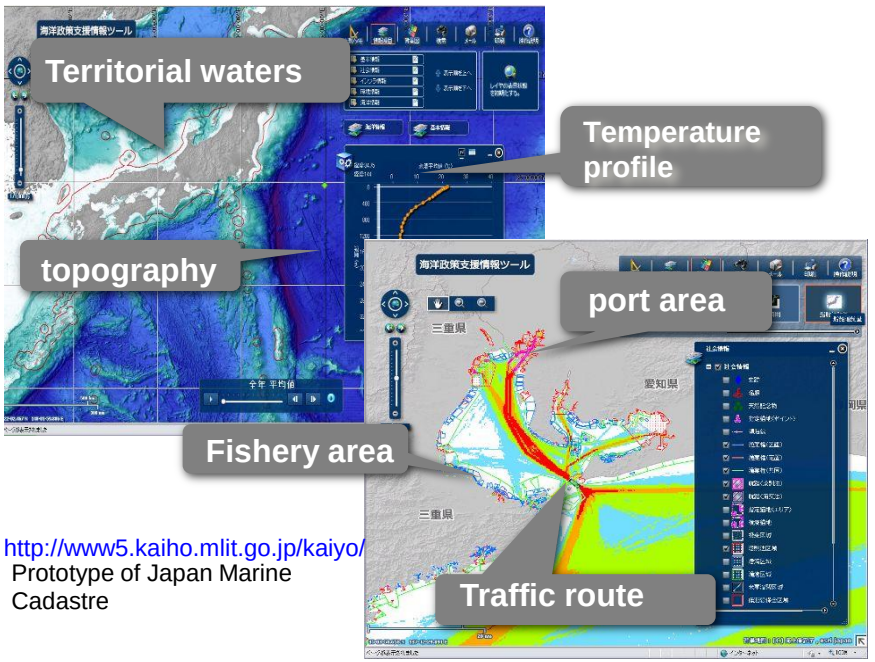
Marine data and information of various organizations will be stored in one database.

Users can select what they want and display individually or overlapped over web.





overlapping marine information



http://www5.kaiho.mlit.go.jp/kaiyo/
Prototype of Japan Marine Cadastre

Comprehensive Management of the Coastal Zones

Current situation & problems

1. **coastal erosion** caused by decreasing sediment supply from land areas (160 ha/year eroded)
2. **pollution** of enclosed coastal seas
3. **marine litter** (drifting in the sea or washed ashore) of land origin
4. **decrease of natural seashores**, including seaweed beds, tidal flats, and coral reefs etc.
5. **conflicts arising among various activities** in the coastal zones

"integrated" coastal zone management

- Management of coastal zones with the integration of land and sea
  - Promoting sediment control
  - Properly managing nutrient salts and pollutant load and restoring/promoting nutrient salts circulation
  - Promoting countermeasures against marine litter
- Coordination of activities at coastal zones
- Establishing of a coordination system for coastal zone management led mainly by local governments

To build consensus by clarifying the details of management and take appropriate measures, with due considerations given to the circumstances of local communities

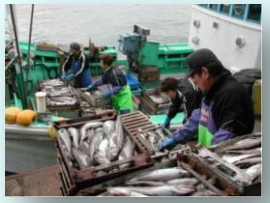
・Law concerning Special Measures for Conservation of the Environment of the Seto Inland Sea
・Law concerning Special Measures for the Rejuvenation of Ariake Sea and Yatsushiro Sea
(Act against red tides, damage to aquacultured Porphyra etc.)
・Shima, Shiretoko etc (by local governments or NPO or fisherman)

References

- **Basic Act on Ocean Policy**
  http://www.kantei.go.jp/jp/singi/kaiyou/konkyo5.pdf
- **Basic Plan on Ocean Policy**
  http://www.kantei.go.jp/jp/singi/kaiyou/kihonkeikaku/080318kihonkeikaku_E.pdf
- **Best practices on Integrated Coastal Management in Japan**
  http://www.kantei.go.jp/jp/singi/kaiyou/enganiki/enganiki.html
- **The National Biodiversity Strategy**
  http://www.env.go.jp/en/nature/biodiv/nsj/index.html
- **Marine Biodiversity Conservation Strategy**
  http://www.env.go.jp/nature/biodic/kaiyo-hozen/pdf/pdf_eng_honbun.pdf
- **Shiretoko**
  http://www.pref.hokkaido.lg.jp/ks/skn/ssi/mokuji.htm
- **Shima**
  http://www.city.shima.mie.jp/kurashi/cat147/post_215/

Basic Plan on Ocean Policy – 12 Measures

1. Promotion of the development and use of marine resources



Fishery



methane hydrate

2. Preservation of marine environment, etc



3. Promotion of Development of EEZ and Continental Shelf



4. Securing Maritime Transport



5. Securing the Safety and Security of the Sea



6. Promotion of Marine Surveys



Basic Plan on Ocean Policy – 12 Measures

7. Promotion of Research and Development of Marine Science and Technology



8. Promotion of Marine Industries and Strengthening the International Competitiveness



9. Comprehensive Management of the Coastal Zones



10. Preservation of remote Islands



11. Securing International Coordination and Promotion of International Cooperation



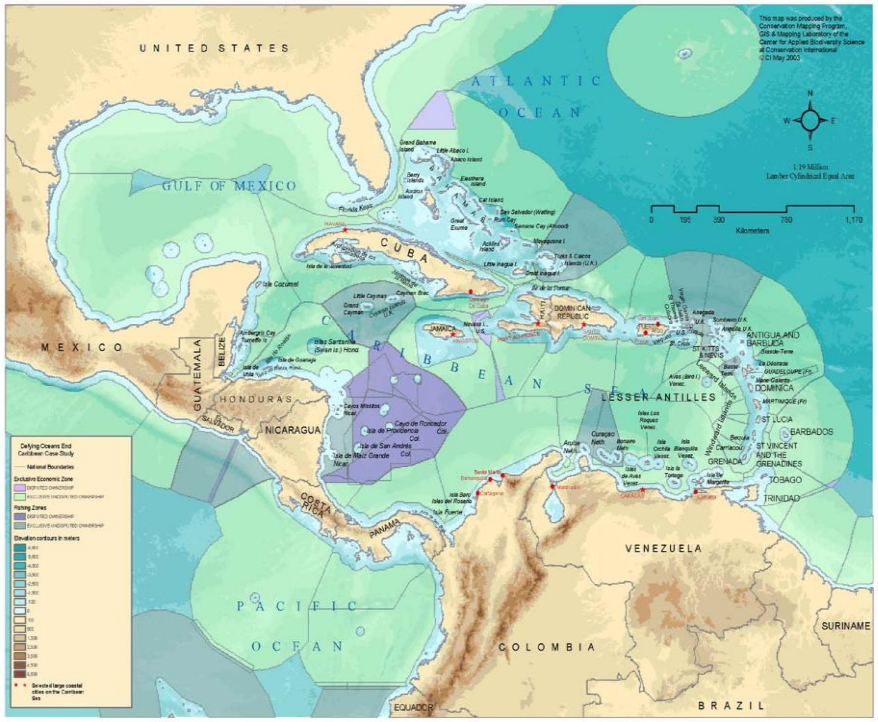
12. Enhancement of Citizen's Understanding of the Sea and Fostering of Human Resources



Wider Caribbean capacity-building priorities under Aichi Targets

Sustainable Ocean Initiative High-level Meeting - International Exposition 2012: The Living Ocean and Coast", Yeosu, Korea, 5 June 2012

Alessandra Vanzella-Khouri. UNEP Caribbean Environment Programme



Wider Caribbean Region:

- 40 countries, diff legal systems, 4 official languages
- Largest grouping of SIDS in the world
- Over 300 MPAs, only 6% effective
- Protecting less 10% marine environment
- MPA ecological networks still incipient
- Coastal/marine tourism major revenue source
- Receives majority of cruise ships and divers of the world
- One of the busiest shipping areas in the world

UNEP

CARIBBEAN ENVIRONMENT PROGRAMME

CaMPAM Network & Forum

CAR·SPAW·RAC CARAIBE

Is there a regional legal environmental framework?

- The Convention for the Protection and Development of the Marine Environment of the WCR (Cartagena Convention) and its 3 Protocols on biodiversity, land-based pollution, and oil spills response. In force since 1986. *Only legally binding, region-wide environmental agreement for the Wider Caribbean Region.*

- A technical programme, UNEP's Caribbean Environment Programme provides technical support to governments to meet the Convention's and Protocols objectives

UNEP

CARIBBEAN ENVIRONMENT PROGRAMME

CAR·SPAW·RAC CARAIBE

What is UNEP-CEP doing on Aichi biodiveristy targets?

- Facilitates **regional cooperation**, collaboration and common approaches √
- Supports **coastal and marine EBM** within countries √
- Strengthening of **MPAs and MPA networking** (**CaMPAM programme**) √
- Support **land-based pollution** (e.g. sewage) and marine debris **control** √
- Support **invasive species control** (e.g. lionfish) √
- Support **alternative livelihoods** among coastal communities (eg. fishers to reduce fishing pressure) √
- Better practices for **sustainable fisheries** √
- Support **transboundary management of endangered species** (sea turtles, marine mammals) √
- Synergies **and support to relevant regional efforts** (NGOs, scientific, govnt) √
- **Awareness building** (site and national level)
- Facilitates information and **lessons sharing and exchanges** on MPA, fisheries practices √
- **Create partnerships for capacity building** and technical assistance

UNEP

CARIBBEAN ENVIRONMENT PROGRAMME

CaMPAM Network & Forum

CAR·SPAW·RAC CARAIBE

Major challenges and priorities

✓ Support countries efforts to increase/improve marine protection:

Strengthening of MPAs and MPA networks – Capacity building:

- More exchanges among MPAs managers, fishers to share MPA lessons learnt, good practices (eg. provide exclusive fishing rights for local fishers)
- Targetted training on specific needs (e.g. how to develop representative MPA networks, alternative livelihoods for fishers)
- Mentorship programme of regional MPA managers & experts to support MPAs on specific issues
- Small Grants to strengthen concrete technical and institutional needs (eg. development of MPA bussiness plans

✓ Promote more interaction with fisheries organisations:

- Awareness building among fisheries authorities and integration with MPA authorities

✓ Promote more interaction with tourism sector

✓ Political will - promote more aggressively value of marine ecosystems to help "make the case" (eg. ecosystem services?)

UNEP

CARIBBEAN ENVIRONMENT PROGRAMME

CAR·SPAW·RAC CARAIBE

Thank you



Caribbean Environment Programme (CEP)
United Nations Environment Programme (UNEP)
Kingston, Jamaica
avk@cep.unep.org
www.cep.unep.org

Convention on Biological Diversity

22 May 2012
INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY
Marine Biodiversity

Sustainable Ocean Initiative High-level Meeting (5 June 2012, Yeosu, Korea)

Vision and Collaborative Implementation of the Sustainable Ocean Initiative

Jihyun Lee

Secretariat of the Convention on Biological Diversity

www.cbd.int

Global Commitments to Aichi Biodiversity Targets on marine and coastal biodiversity

Challenges Ahead (COP 10 In-depth Review)

- Capacity Disparity : Institutional, Managerial, Technical, Scientific, Human Resources, Financial Resources, etc
- Weak Governance : Sectoral conflicts; lack of coordination among different government agencies and different levels of governments (national and subnationals); limited participation of indigenous and local communities

COP 10 emphasized

- the need for **training and capacity-building** of developing country Parties as well as through **relevant regional initiatives**
- these training workshops should contribute to sharing experiences related to **integrated management of marine resources and the implementation of marine and coastal spatial planning instruments**
- facilitate the **conservation and sustainable use** of marine and coastal biodiversity
- address other **regional priorities** that are brought forward as these workshops are planned.

How can we work better to address multiple challenges toward achieving our common goals?



What will be the legacy of Japan, the President of COP 10, on marine and coastal biodiversity?

Sustainable Ocean Initiative

- S: **Share** experiences, expertise, ideas and vision
- O: **Open** to new ideas, diverse approaches, different sectoral concerns, and different ecological, socio-cultural, and economic contexts
- I: **Innovative** in creating new partnerships, strengthening existing collaborations, inviting partners, and mobilizing necessary technical expertise and financial resources

- First consultation meeting for developing Sustainable Ocean Initiative (24 October, 2010, COP 10 meeting, Nagoya, Japan)
- SOI launching and programme development meeting (2-4 August, 2011, Kanazawa, Japan)
- SOI Side Event at 16th meeting of the Convention's Subsidiary Body on Scientific, Technical and Technological Advice (2 May, 2012, Montreal, Canada)

Sustainable Ocean Initiative – Kanazawa Meeting

- A focus on facilitating achievement of the Aichi Biodiversity Targets on marine and coastal biodiversity, particularly **targets 6, 10 and 11**, in a holistic manner
- A strategic, action-oriented approach that will support **on-the-ground implementation priorities**
- Reliance on **partnerships and sharing at various scales** (local, regional and global) and between different sectors, groups and stakeholders including between biodiversity and fisheries sectors
- A focus on providing **targeted capacity development** at all levels throughout its activities
- Achieving a **balance between sustainable use and conservation** and the promotion of flexible and diverse approaches towards this end

Proposed Activities for SOI

- Facilitating **information sharing and exchange**, as well as learning from both successful and unsuccessful experiences;
- Creating partnerships that can provide for **targeted capacity-building and technical assistance**
- Providing for a **two-way communication** between global policy and scientific communities and local stakeholders;
- Improving the **scientific basis for implementation**, including through improved technologies, cooperative research efforts, objective monitoring, results-based initiatives, open access data and analysis, and integration of local knowledge and science; and
- **Monitoring progress** towards the Aichi Biodiversity Targets on marine and coastal biodiversity (particularly targets 6, 10 and 11) and **facilitating the provision of guidance and capacity** that will help their achievement.

SOI : Proposed Implementation Mechanism through Partnerships

CBD COP

SBSTTA

CBD Secretariat

UN-Oceans
UNDOALOS, UNDP, UNEP, FAO, IMO, IOC/UNESCO, etc

Monaco Blue Initiative

Global Ocean Biodiversity Initiative

IUCN-CEM_FEG

Global Island Partnerships

Regional Seas Organizations and Initiatives

Japan MOE, Cabinet Secretariat, OPRF, Universities

French MPA Agency

Korea Maritime Institute

City Biodiversity Initiative

Global Committed Partners

Regional Committed Partners

National /Subnational Committed Partners

Information Sharing

Tools, Guidance

Capacity Development

Monitoring

Local Integrated Implementation toward Targets

Partners share

Common Vision

Coherent and Complementary Goals and Obj.

Commitment to share what they have
(Knowledge, Expertise, Experiences, Human Resources, Financial Resources, Networks, Time, Logistic support, etc)

You are all invited to SOI Partnerships!

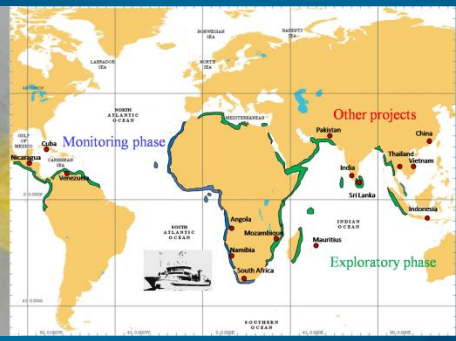
Any suggestions for SOI collaborative implementation?

INSTITUTE OF MARINE RESEARCH







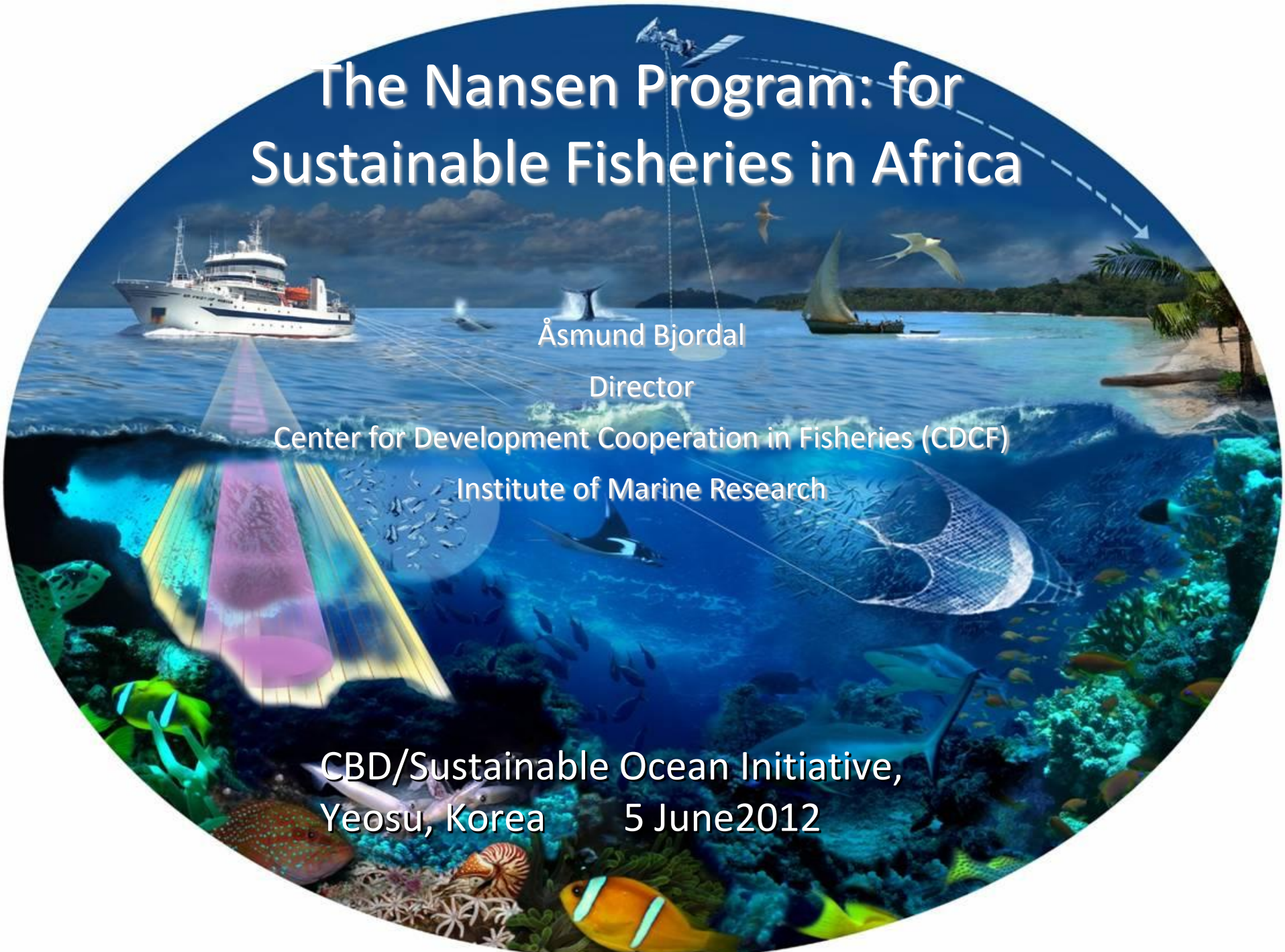


Adressing the Aichi targets, 6 and 11: Collaboration and implementation

-The Nansen program

-Rebuilding of stocks

The Nansen Program: for Sustainable Fisheries in Africa



Åsmund Bjordal

Director

Center for Development Cooperation in Fisheries (CDCF)

Institute of Marine Research

CBD/Sustainable Ocean Initiative,
Yeosu, Korea 5 June2012

The Nansen Program

The original idea, conceived in the 1960s:

- A research vessel available for developing nations.
- Operated from Norway with Norwegian crew and core scientific staff
- In close cooperation with FAO, uncoupled from Norwegian fishery interests, flying the UN-flag
- First vessel left Norway in 1974 – next in 1993

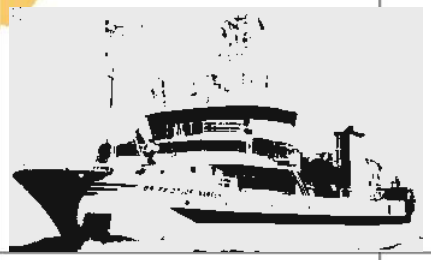




Nansen programme

Monitoring & EAF phases

Other projects



Exploratory phase

Results summary

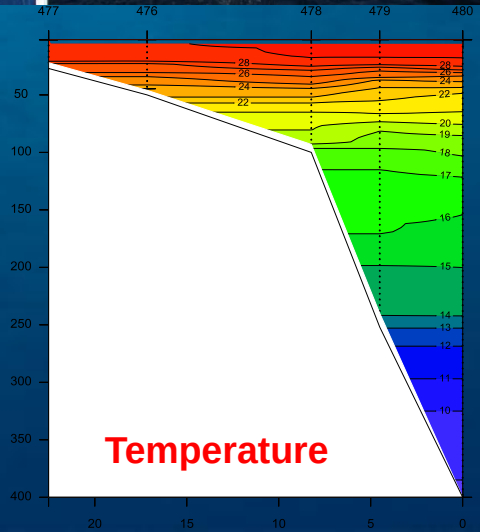
- Conducted continously since 1975
- Surveys in 70+ countries
- Collected a vast amount of marine data in othervise data poor regions – contributing to the national, regional and global marine databases.
- Basis for fisheries management
- Institutional cooperation and competence building, including more than 100 MSc and PhDs

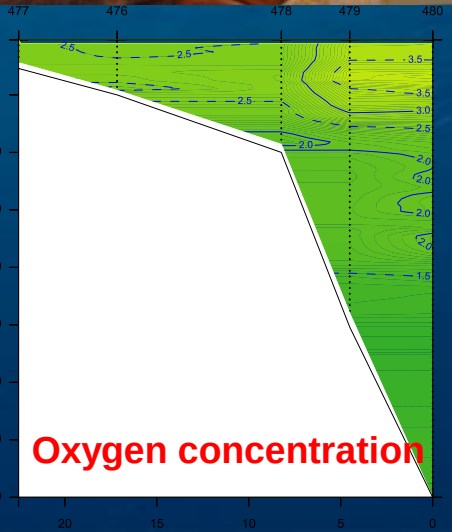
Oceanographic investigations











Plankton studies


Multinet


Bongo net


Processing samples

Trawl surveys: studies on distribution of bottom fish, biodiversity, taxonomy.









Lutjanus madras



Lutjanus lutjanus



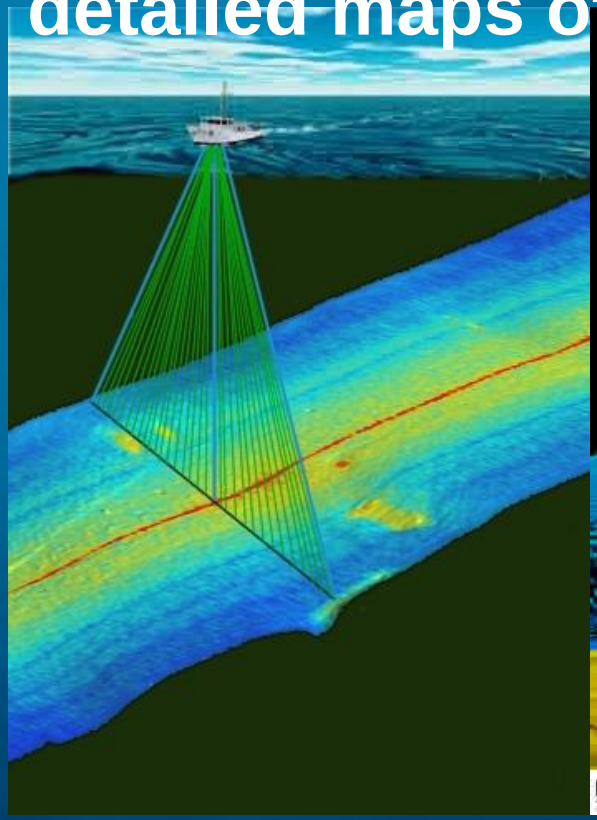
Lutjanus lsebae

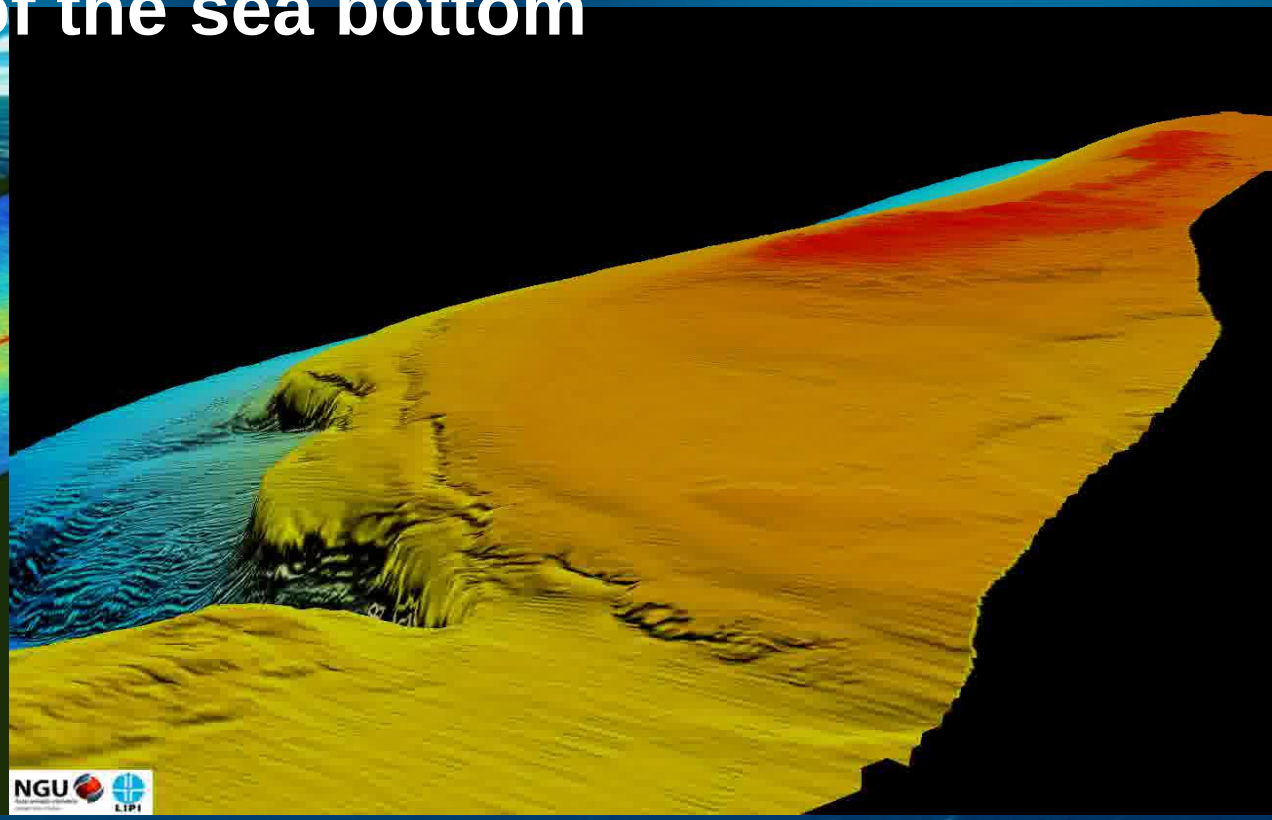


Lutjanus kasmira

Remote sensing of the ocean using acoustics

Using multi-beam echo-sounders to obtain detailed maps of the sea bottom





Petroleum/fish/environment

- In recent years D.F. Nansen has also conducted baseline environmental studies related to offshore petroleum activities in African waters: Angola, Ghana and Mozambique

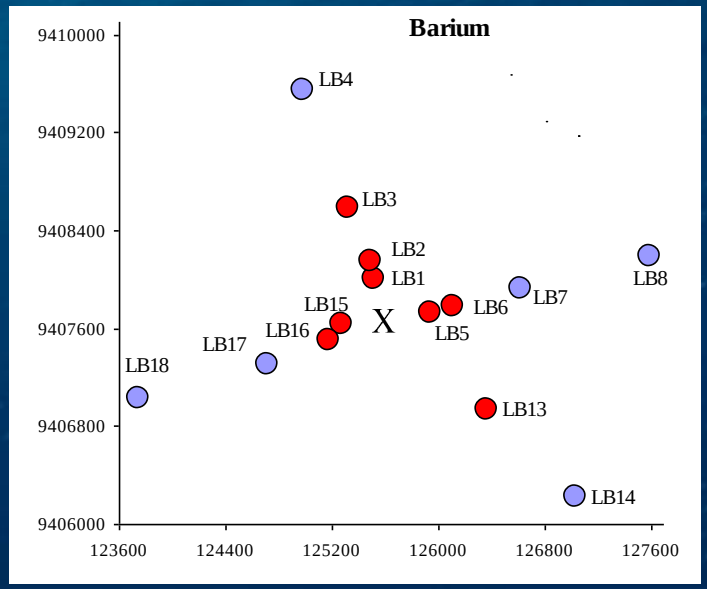
Oil-Environment interactions











The 2006 Cabinda study
Significant contamination by Petroleum related chemicals (red dots)

Regional cooperation and confidence building

- Fisheries management is also a regional and international issue
- Must be based on trust between neighbouring countries
- The Nansen vessel and programme have been important instruments for building cooperation and confidence in fisheries research and management

Nansen Program: present and future

- Since 2007: the ecosystem approach to fisheries
- From 2012: still focus on fish resources, but a widened scope towards ecosystems, biodiversity, ocean acidification, pollution and climate change effects
- Financed through 2014
- 2015+ (???)

Nansen Program: future

- FAO will be the obvious cooperating partner organization also in the future
- The vessel should in the future also serve as a common UN platform for marine research – including UNDP, IOC, UNEP as well as GEF

Nansen Program: future

- Clear need for Nansen in the future – to provide the knowledge base for sustainable use and conservation of marine ecosystems in Africa
- Also a good platform for data collection and competence building towards the Sustainable Ocean initiative goals
- THANKS

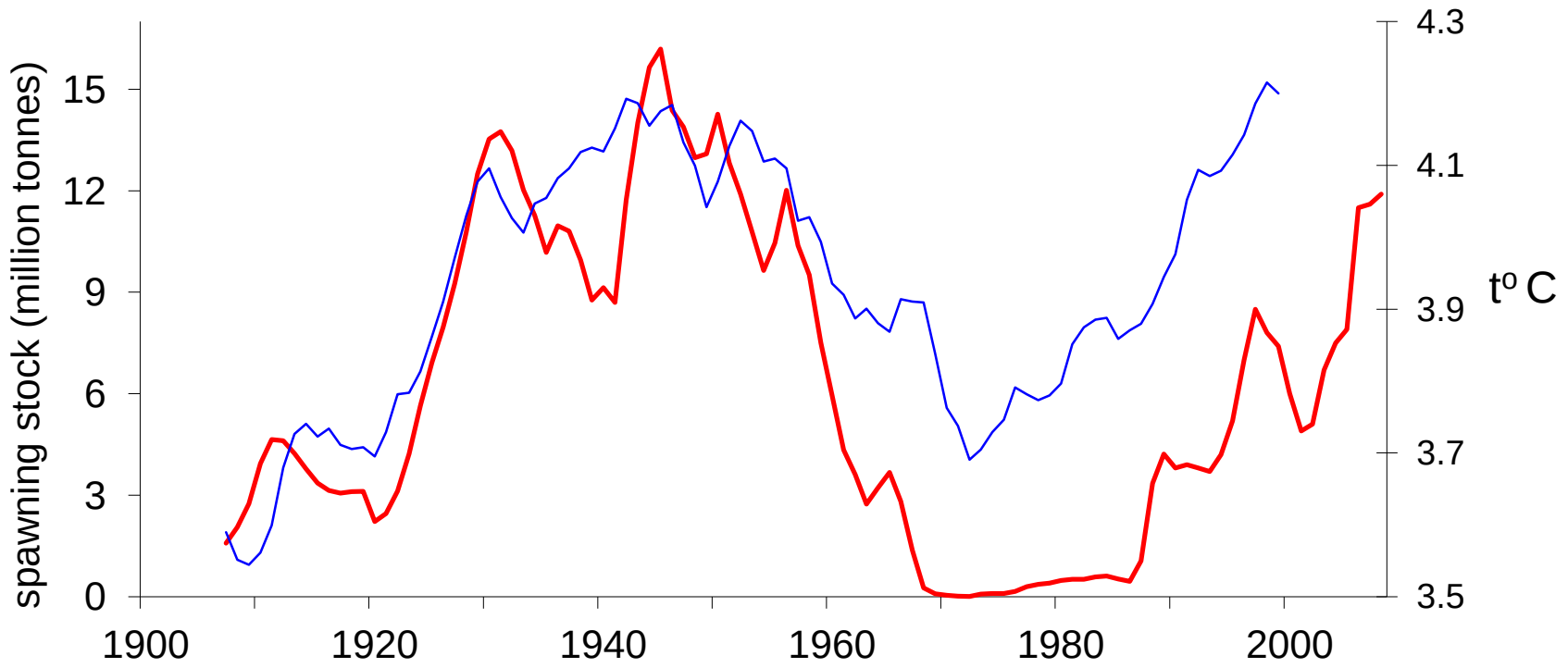
Aichi target 6

- Re: Overfishing, depletion and rebuilding of fish stocks

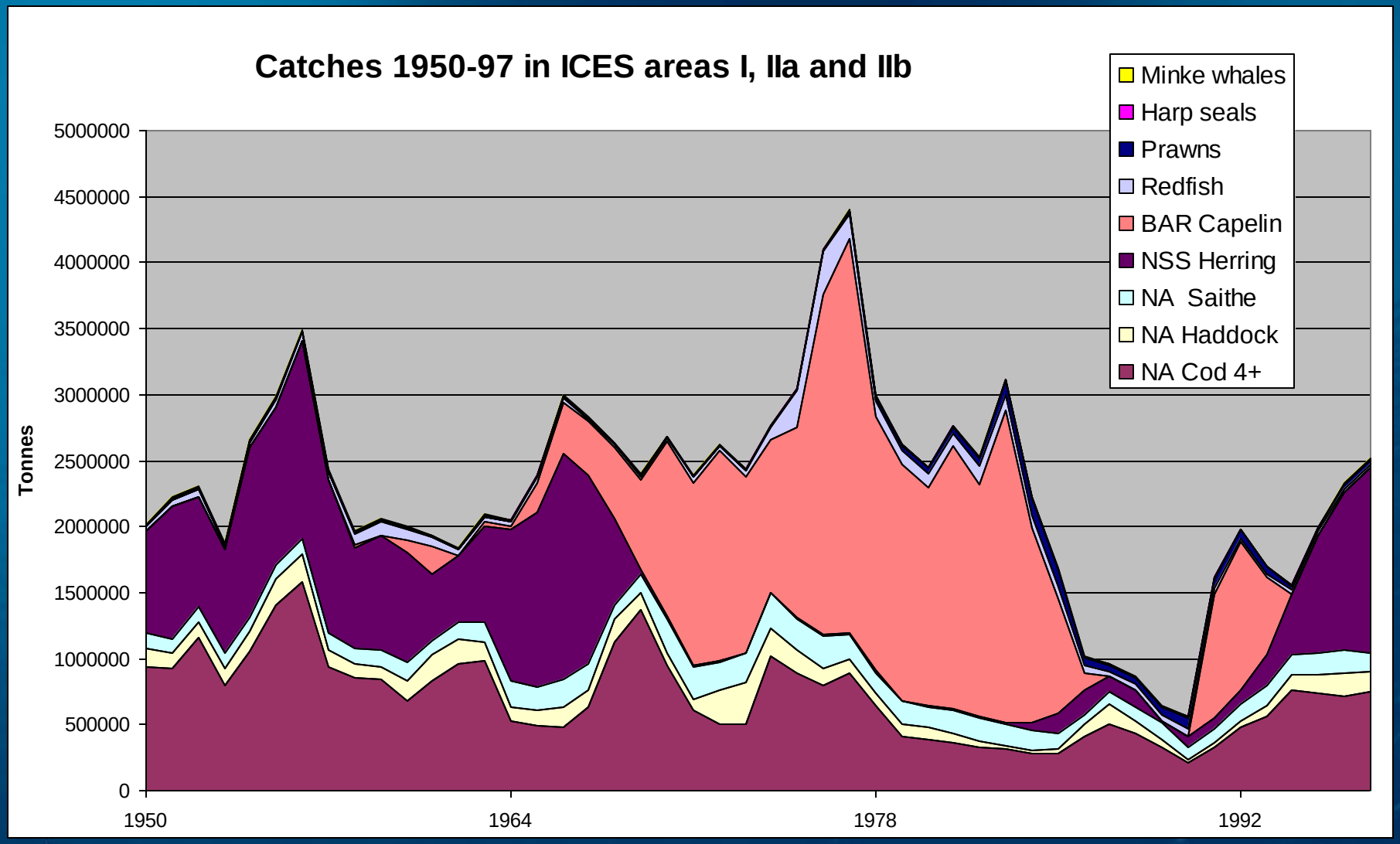


Norwegian spring spawning herring – the largest herring stock in the world –

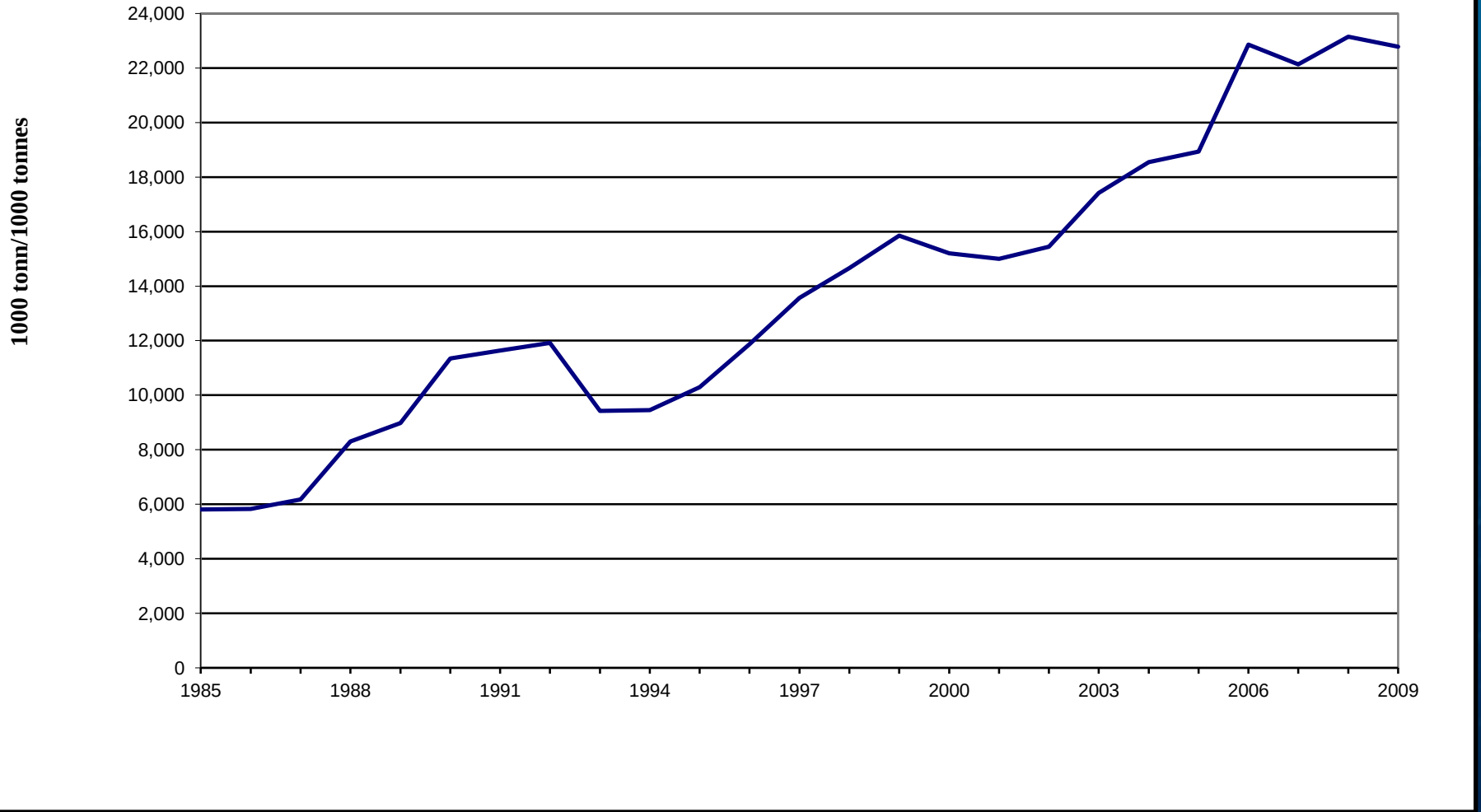
Depletion of the largest fish stock in the N. Atlantic (NSS-Herring): an eye opener and point of departure for sustainable fisheries management



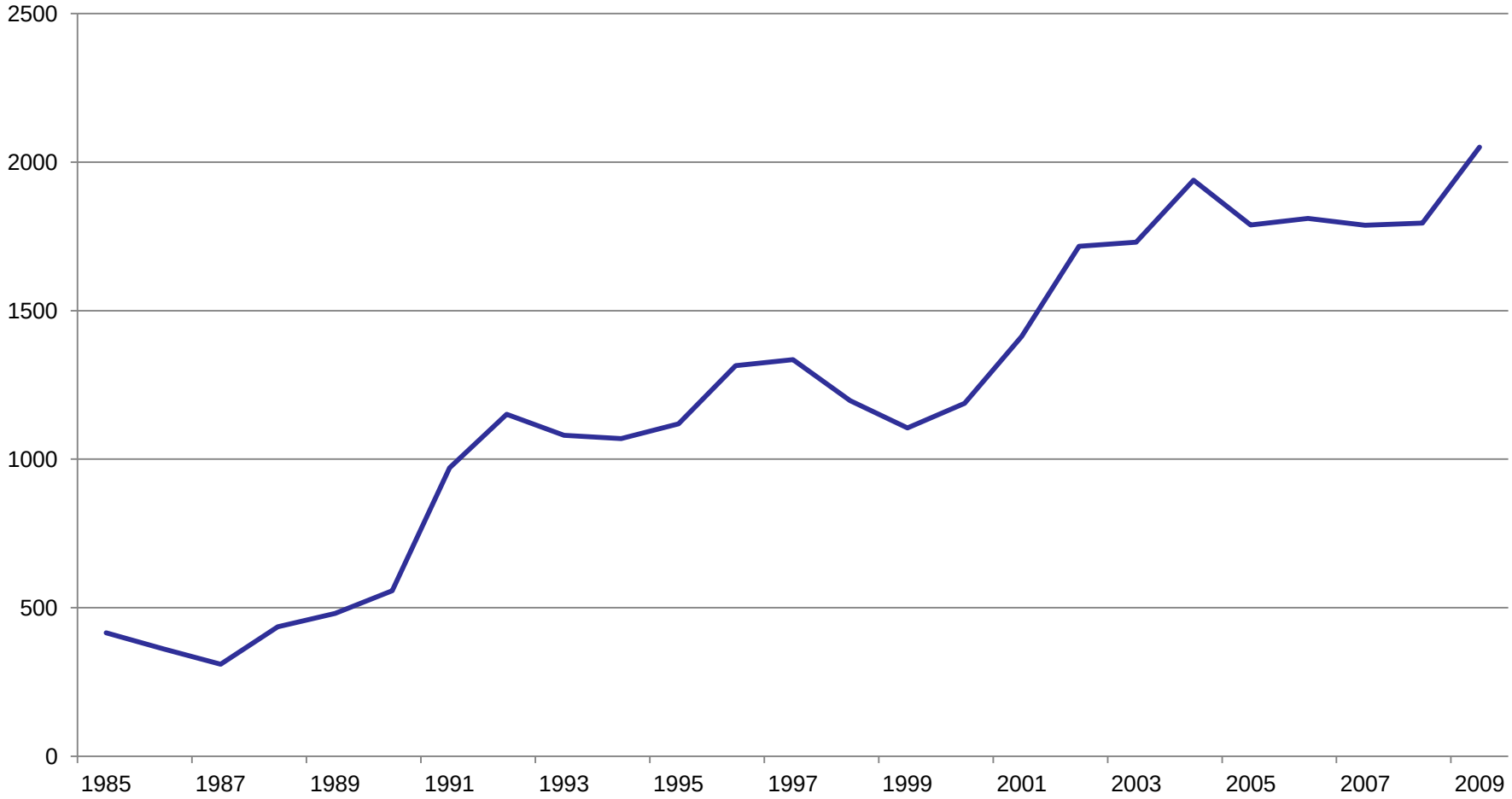
(Toresen and Østvedt 2000)


Catches 1950-97 in ICES areas I, IIa and IIb
Minke whales
Harp seals
Prawns
Redfish
BAR Capelin
NSS Herring
NA Saithe
NA Haddock
NA Cod 4+
Tonnes
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
1950
1964
1978
1992

Aggregate spawning stock of important pelagic species 1985 – 2009 (1000 tonnes)



Aggregate spawning stock of important groundfish species in The Barents- and Norwegian Seas 1985 – 2009 (1000 tonnes)



Possible ways of collaboration on Sustainable Ocean Initiative

Hiroshi Terashima
Executive Director
Ocean Policy Research Foundation

5 June 2012
Sustainable Ocean Initiative High-level Meeting

Legal and Policy Frameworks for Ocean Governance

* UN Convention on the Law of the Sea was adopted in 1982 and entered into force in 1994.
* Agenda 21 was adopted at Rio Earth Summit in 1992.
* WSSD Plan of Implementation was adopted at World Summit on Sustainable Development in 2002
* Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) was adopted in 2003

* Convention on Biological Diversity was opened for signature at the Rio Earth Summit and entered into force in 1993.
* Aichi Biodiversity Targets was adopted at CBD COP 10 in 2010.

Challenges in Implementing the UNCLOS/Agenda 21 Regime and CBD COP10 Achievements

- Under the UNCLOS, Individual States are requested to coordinate and cooperate in securing a legal order on the oceans to promote sustainable development and use, conserve natural resources, and protect the environment and biological diversity.
- ↓ ↓
- A multi-layer approach over-arching international, regional, national and local level implementation is necessary.
- key factor for promoting Sustainable Ocean Initiative is training and capacity-building of developing countries.

Aichi Biodiversity Targets on Marine and Coastal Biodiversity

* **Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species**

* **Target 10: By 2015, the multiple anthoropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by CC or ocean acidification are minimized**

* **Target 11: By 2020, at least 17 % of terrestrial and inland water areas, and 10 %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 system of protected areas and other effective area-based conservation measures , and integrated into wider landscapes and seascapes**

Recent Japanese Initiatives on Marine Biodiversity

* Enactment of Basic Act on Ocean Policy (2007)
* Adoption of Basic Plan on Ocean Policy (2008)

Chapter 2: 2 Preservation of Marine Environment

Maintain a well-preserved marine environment in accordance with the Third National Biodiversity Strategy, including those for ensuring marine biodiversity and actively reducing environmental burdens on the sea

* Enactment of Basic Act on Biodiversity (2008)
* Adoption of New National Biodiversity Strategy (2010)
* Adoption of Strategy for Conservation of Marine Biodiversity (2011)

OPRF Collaboration on SOI Implementation

OPRF is a think tank dealing comprehensively with wide range of ocean problems in fields from social to natural sciences, including ocean policy and marine traffic, security, coastal zone management, the marine environment, and marine education.

OPRF activities includes :

<Global Level>

Participation in the Global Ocean Forum activities/ Conservation and Management Surveys on Islands and their Surrounding Ocean Areas/ Support for the Education & Research of World Maritime University, etc

<Regional Level>

Implementation of SDS-SEA by Participating in the PEMSEA activities, etc

<National & Local Level: >

Enactment and implementation of the Basic Act on Ocean Policy/ Promotion of Integrated Coastal Zone Management/ Research on Assessment Method for the Health Check of Enclosed seas and Bays/ Education & Capacity-building/ Networking, etc

Thank you for your attention

Hiroshi Terashima

Executive Director

Ocean Policy Research Foundation

Convention on Biological Diversity
Sustainable Ocean Initiative
YEOSU, 5 June 2012



Agence des aires marines protégées

Christophe Lefebvre, French Marine Protected Areas Agency
IUCN Global Ocean Councilor

Together we can better facilitate the ocean protection through the establishment of marine protected areas as specified by Target 11 of the CBD's Strategic Plan for Biodiversity 2011-2020

By 2020, at least….. 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 landscapes and seascapes."

Vision and Collaborative Implementation of Sustainable Ocean Initiative

1. DEVELOP technical guidance for national governments to meet the requirements of Target 11, including the requirement to be *"of particular importance for biodiversity and ecosystem services"* and to be *"effectively and equitably managed, ecologically representative and well connected systems of marine protected areas";*

Vision and Collaborative Implementation of Sustainable Ocean Initiative

2. DEVELOP criteria for the of *“other effective marine area-based conservation measures”*, including inter-sectoral marine conservation measures, Conserved marine Areas by indigenous peoples and Local Communities, and Sacred Marine Natural Sites, to meet the requirements of Target 11;

Vision and Collaborative Implementation of Sustainable Ocean Initiative

3. PROPOSE guidance and tools that support the application of the principle of coastal communities and other sea stakeholders regarding the recognition, governance and management in systems of marine protected areas.

Vision and Collaborative Implementation of Sustainable Ocean Initiative

4. DEVELOP guidance, disseminate information, and provide assistance regarding the legal tools and mechanisms and decision-support systems for achieving the integration of marine protected area systems into marine spatial planning, and sectoral development plans;

Vision and Collaborative Implementation of Sustainable Ocean Initiative

5. **ENCOURAGE the designation and implementation of large scale networks of marine protected areas with strong involvement of marine and coastal communities, and of fishing sectoral stakeholders**

Vision and Collaborative Implementation of Sustainable Ocean Initiative

6. **PROMOTE guidance and training to expand regular assessment of management effectiveness to all marine protected areas**.

Develop and implement a SOI system for the voluntary appraisal of marine protected area management effectiveness and governance quality that will illuminate and communicate innovative and effective approaches. (the IUCN Green List of Well-Governed and Well-Managed Protected Areas, MPAs Categories Certification project);

Vision and Collaborative Implementation of Sustainable Ocean Initiative

7. PROMOTE the regional integration of marine protected areas networks, to :

- Reinforce capacity building and managers professionalization;
- Facilitate the implementation of management effectiveness assessment systems;
- Generate and share information on MPA progress and management effectiveness;

Vision and Collaborative Implementation of Sustainable Ocean Initiative

8. REFINE and DEVELOP the key datasets to support mapping and publication of regular editions that will monitor progress towards the achievement of Target 11 at global, regional and national scales.

Vision and Collaborative Implementation of Sustainable Ocean Initiative

9. **TAKE the leadership of the International Marine Protected Areas Congresses in 2013 and 2017….as milestones of Aichi Target 11 implementation.**

Vision and Collaborative Implementation of Sustainable Ocean Initiative

10. **Build with IUCN a Global Ocean Conservation effectiveness promoting Aichi target 11 in the framework of all core activities of world ocean initiatives, organizations and alliances:**







Marine and Coastal Biodiversity Conservation through MPA Network



Dr. Jong Geel Je

Director, City and Nature Institute
Chairs, Korea Protected Area Forum and Gyeonggi DMZ Forum
Co-President, Ecotourism Korea

He was used to work for Korea Ocean Research & Development Institute (KORDI) for 20 years since 1984. He was born in 1955 at Changwon, the southern coastal city and educated at Konkuk University and Seoul National University where he gained M.A. in zoological science and Ph D. in marine ecology respectively. He was once a member of the National Assembly during 2004-2008. His main interest is marine conservation especially marine ecosystem management, environmental education and ecotourism. He has remained and actively involved in nature conservation research and has participated extensively in diverse conservation activities. In recent years he has combined his experience of conservation researches as an environmental consultant.

Panel Discussion on Vision and Collaborative Implementation of the Sustainable Ocean Initiative

SOI's Visions to:

- focus on facilitating achievement of Aichi Biodiversity Targets 6 & 11.
- develop partnerships
- focus on providing targeted capacity development
- work together to achieve a balance between sustainable use and conservation



Aichi Biodiversity Targets

Target 6

By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably and legally, applying ecosystem based approaches

Target 11

By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas are conserved through effectively and equitably managed of protected areas

How to achieve ?

Visions

Networking

> working together

Targets

MPA

> conserving marine and coastal biodiversity

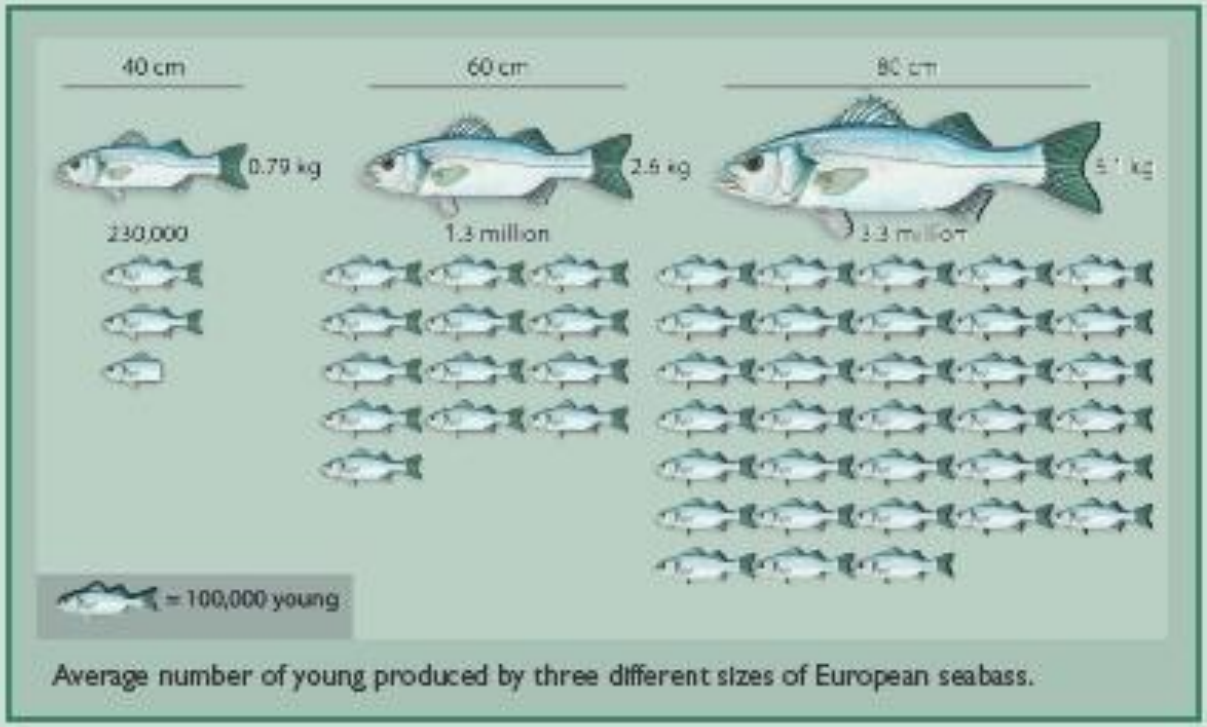
Why MPA?

- ✓Costal and marine ecosystem in decline
  - overfishing
  - marine pollution
  - habitat degradation
  - invasive species
  - climate change

MPAs' contribution to:

- ✓ Conserving biological diversity and associate ecosystems
- ✓ Protecting critical spawning and nursery habitats
- ✓ Protecting settlement and growth areas for marine species
- ✓ Focal points for educating the public about marine ecosystem and human impact upon them

etc.



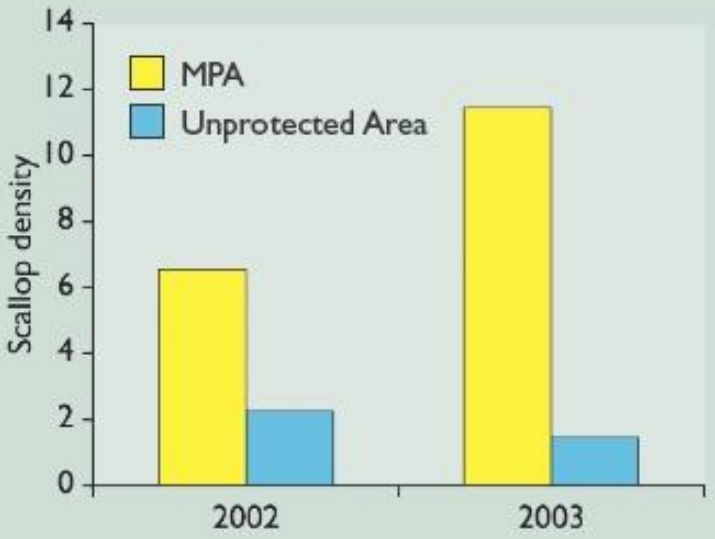
Average number of young produced by three different sizes of European seabass.

Bigger Animals Have More Young

Fishes and invertebrates grow bigger in marine reserves than in unprotected areas. This effect of marine reserves is extremely important because these large animals contribute much more to the next generation. They produce disproportionately more offspring than small fishes and invertebrates. For example, an 80 cm European sea bass produces 14 times more young than when it was 40 cm (see figure, left). Bigger and more abundant animals living in a marine reserve can produce far more young than their smaller neighbours in unprotected waters.

(PISCO, 2011)

** The Science of Marine Reserves (PISCO: Partnership for Interdisciplinary Studies of Coastal Oceans, 2011)

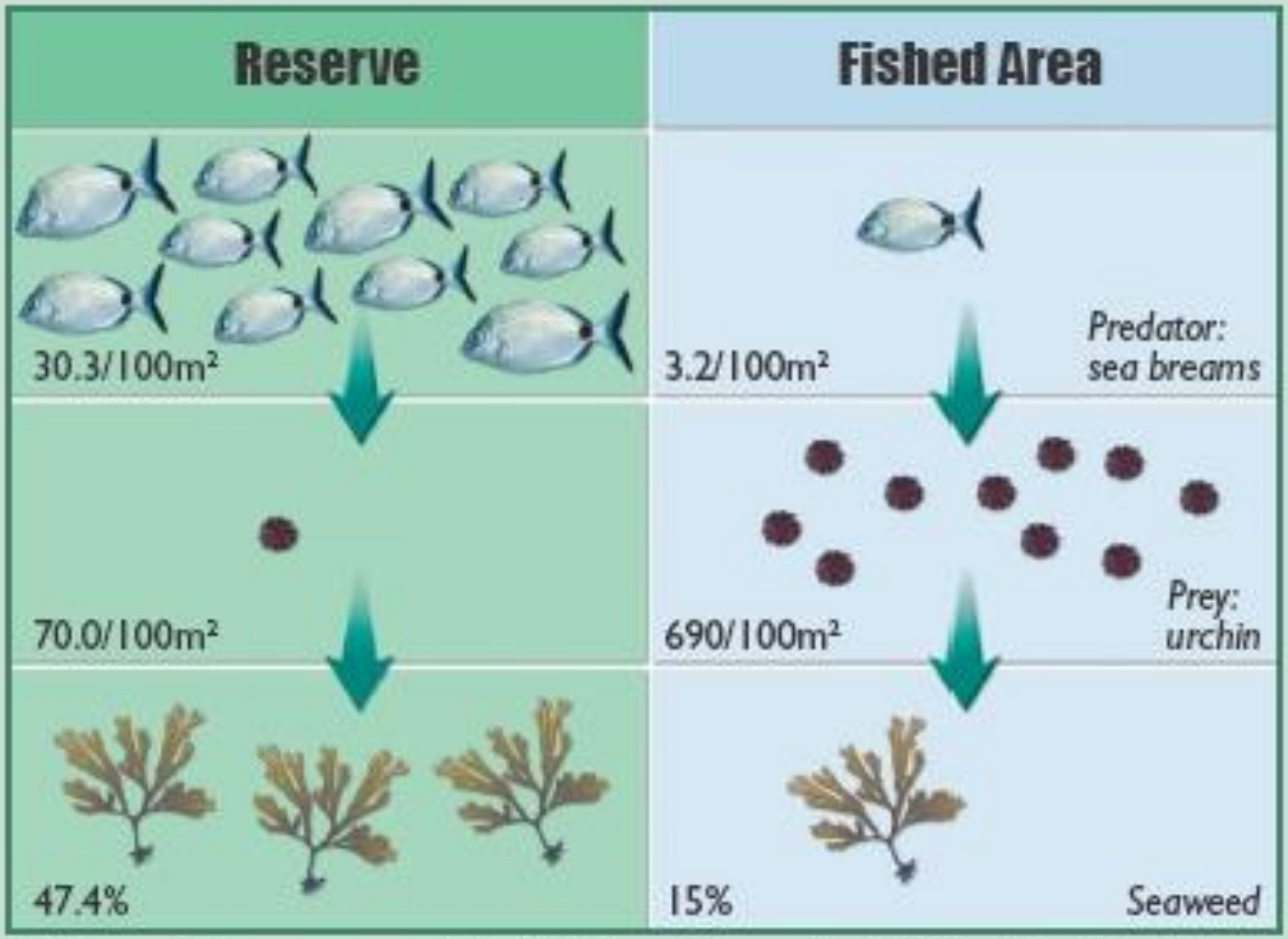


Average densities of legal-sized scallops per 100m both inside the Bradda Inshore fishing exclusion zone and outside in adjacent fully fished areas during the years 2002 and 2003. *Data: Ref: 31*



At left: Scallop sizes within the Bradda Inshore fishing exclusion zone (left) and in surrounding fully fished areas (right) in 2003. *Data: Ref. 31*

(PISCO, 2011)



In the no-take reserve within the Torre Guaceto MPA in Italy, abundant sea breams keep their urchin prey in check, enabling seaweeds to flourish. Outside of the reserve, urchin barrens are common. *Data: Ref. 19*

(PISCO, 2011)

MPA Network ?

- ✓A collection of individual MPAs or reserves operating cooperatively and synergistically.

- ✓Linked through **biological levels**, as well as **administrative levels**, reflecting a consistent approach to design, finance, management and monitoring.

- ✓Also a social **network of local people** managing the components of individual MPAs and promoting the network's viability and longevity

MPA Networks can contribute to:

:through 3 inter-related functions and benefits

- ✓ **Ecological** – A network can help maintain functional marine ecosystems by encompassing the temporal and spatial scales of ecological systems
- ✓ **Social** - A network can help resolve and manage conflicts in the use of natural resources
- ✓ **Economical** - A network can facilitate the efficient use of resources

Well-planned MPA Network

- ✓ Will be a major step in restoring and sustaining the health of the oceans,
- ✓ Can help stem the losses of marine resources and recover not only marine life, but entire ecosystem,
- ✓ Can magnify benefits of individual sites, protect large-scale processes, slow the loss of endangered species and restore depleted fisheries.

Resilient MPA Network

- ✓Resilient systems are adaptable, flexible and prepared for change and uncertainty (Hughes et al. 2005). Resilience is a critical aspect of MPA network design, particularly in the face of global climate change.

* The term resilience incorporates the capacity of socio-ecological systems to cope with, adapt to, shape change and learn to live with uncertainty and surprise (Brand and Jax 2007).

Yellow Sea Case

- ✓ Annual meetings for MPA Networking in the YSLME Project
- ✓ Network of Get-bul (tidal flat) Visitor Centers
- ✓ Fishermen Network
- ✓ Network of Scientists and members of environmental NGOs




2011
용진군 해양보호구역 지역주민 생태관광교육




先進
民族共榮
일시:2003.8.11~15
장소:전남도립 남도대학
제5회 해양환경교육지도자 양성을 위한 훈련과정

Implementation

- ✓ Cover all major marine habitats
- ✓ At least 20 to 30% of each habitat (*the 5th World Park Congress called to create a global system of MPA network)
- ✓ By 2020, 10% of coastal and marine areas (Aichi Nagoya Target, 10th CBD)
- ✓ Need no-take zones
- ✓ Also need institutional network and cooperation
- ✓ Establish regional MPA networks

  > Join SOI



Thank You!!!

Have good time during your stay in Yeosu.