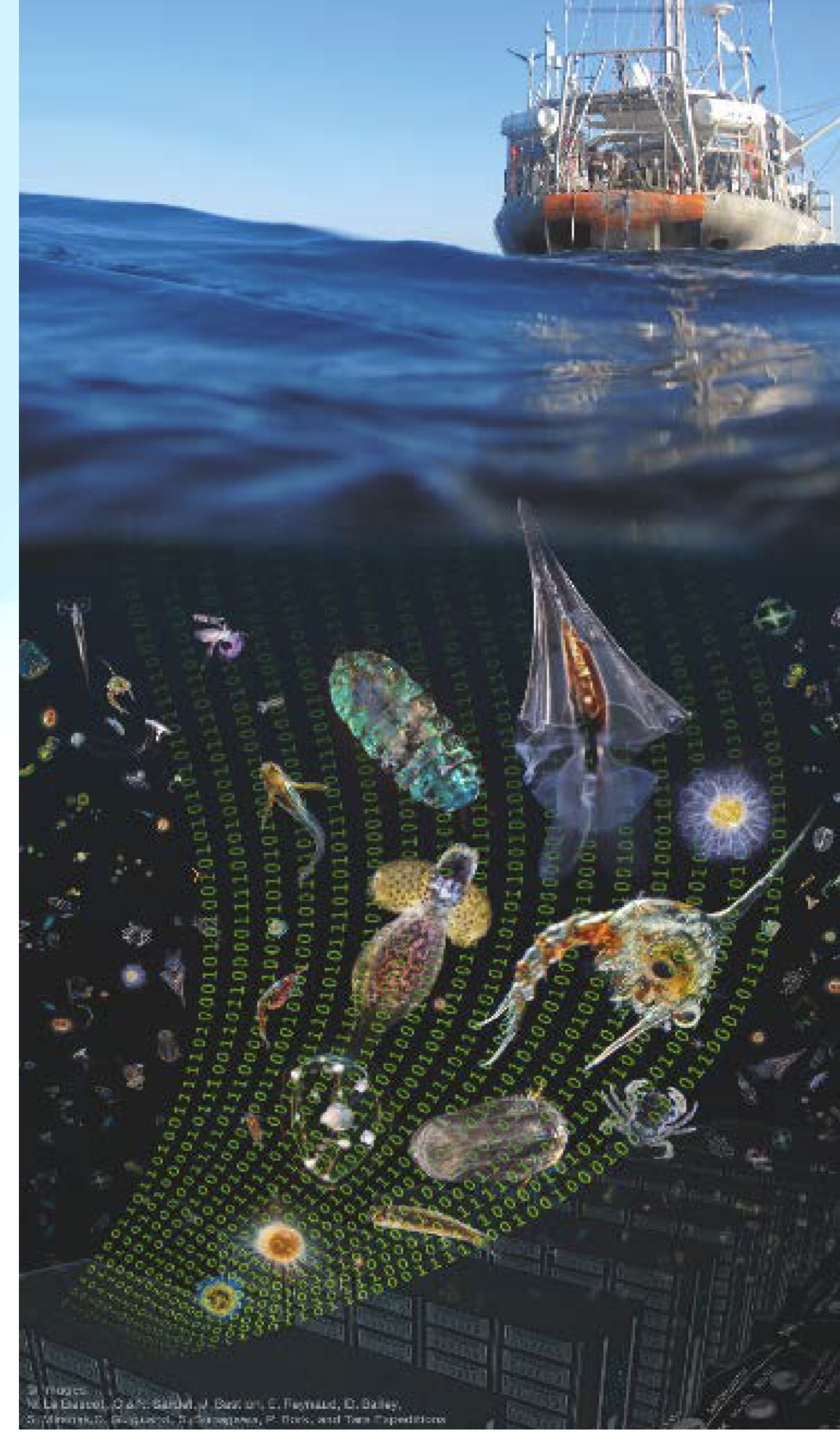# Catching the momentum for ocean policy progress: International frameworks for global ocean governance

ANDRE ABREU / Tara Ocean Foundation

Workshop - Filling the science gaps for a sustainable and predicted ocean: a science to policy dialogue

Santiago 15/05/23

Global Environment Protection gets traction from the 70's

1972: Stockholm Conference

Historical Reports "The Limits of Growth". Meadows Report.

1992: Rio Earth Summit

*Sustainable development concept becomes global*

- Climate Convention

- Biodiversity Convention

- Desertification Convention

But where are the Ocean????

Marine Policies : Traditionally addressing species or habitat issues

– Marine Protected Areas
Sanctuaries for Sharks, Dolphins, Whales, Turtles, Coral Reefs.

- Addressing coastal challenges: urbanization, pollution, algae blooms, fisheries issues

– Defining coastal marine sanctuaries for tourism
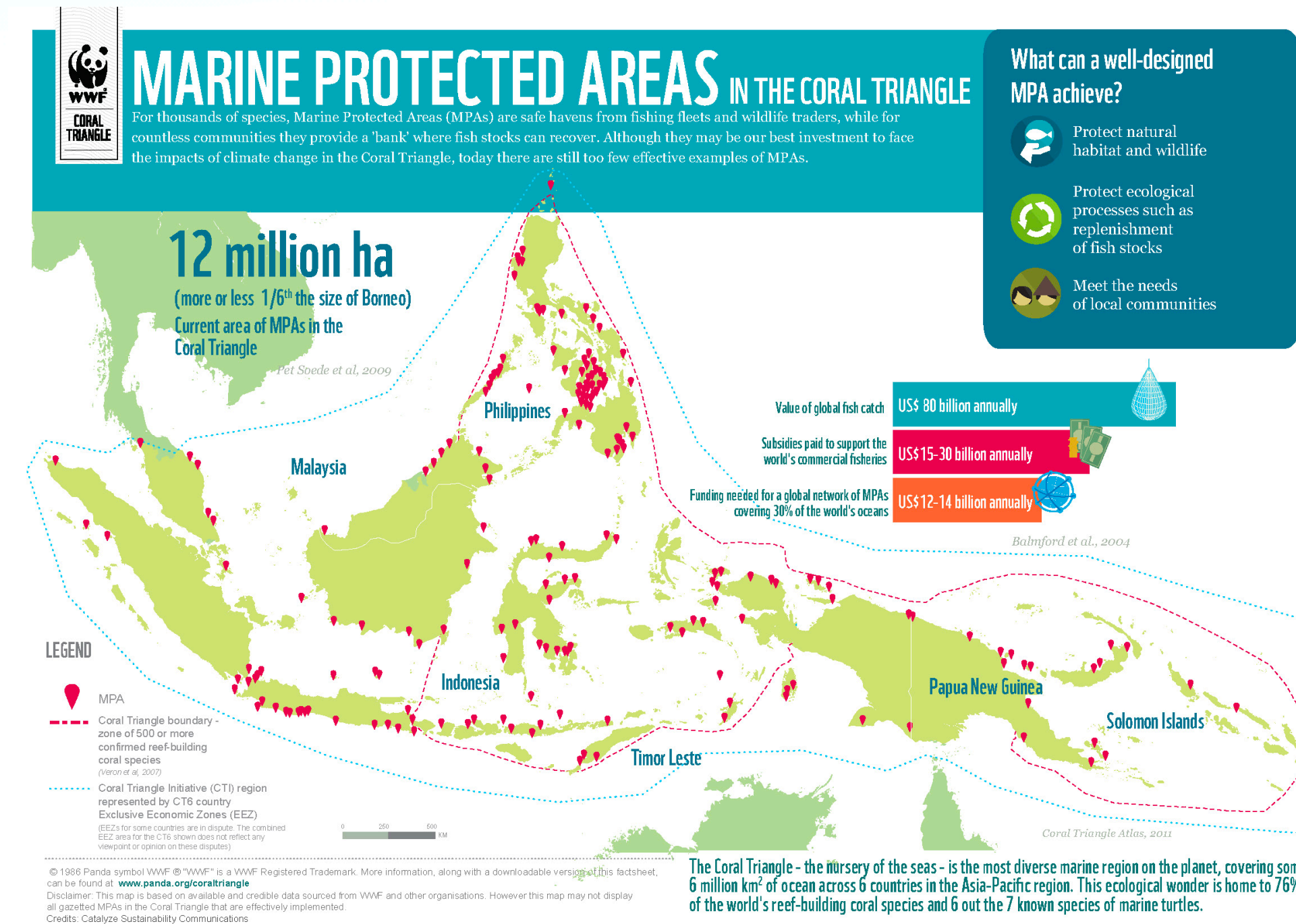
Green starts to get some Blue

Fondation tara ocean *explore and share*

2012 Rio+20 Summit:

Definitions for High Seas treaty,

SDGs 14

2015 Climate COP21

Paris treaty: Ocean included.

Ocean & Climate nexus

Plastic Pollution

Public concern on the ocean agenda

Science: A lot of progress in last two decades

- Genomics: sequencing facilities becomes affordable

- Satellite observation: Copernicus, Galileo, Google, micro-sattelites…

- High definition microscopy: UVPs, Planktoscope

- Modelling & Bioinformatics: progress through more robust science based predictions (ex : wheater reports, risks prevention etc)

- AI & ML: Navigating an ocean of data: Not only ChatGPT… for ocean it is also is changing everything!!!

Plankton: The invisible majority

- Science developments allows new knowledge production on planktonic ecosystems

- Advances on human genome and medicine shows the way for marine biology

- Human gut is studied and microbiome appears much more important than previously known
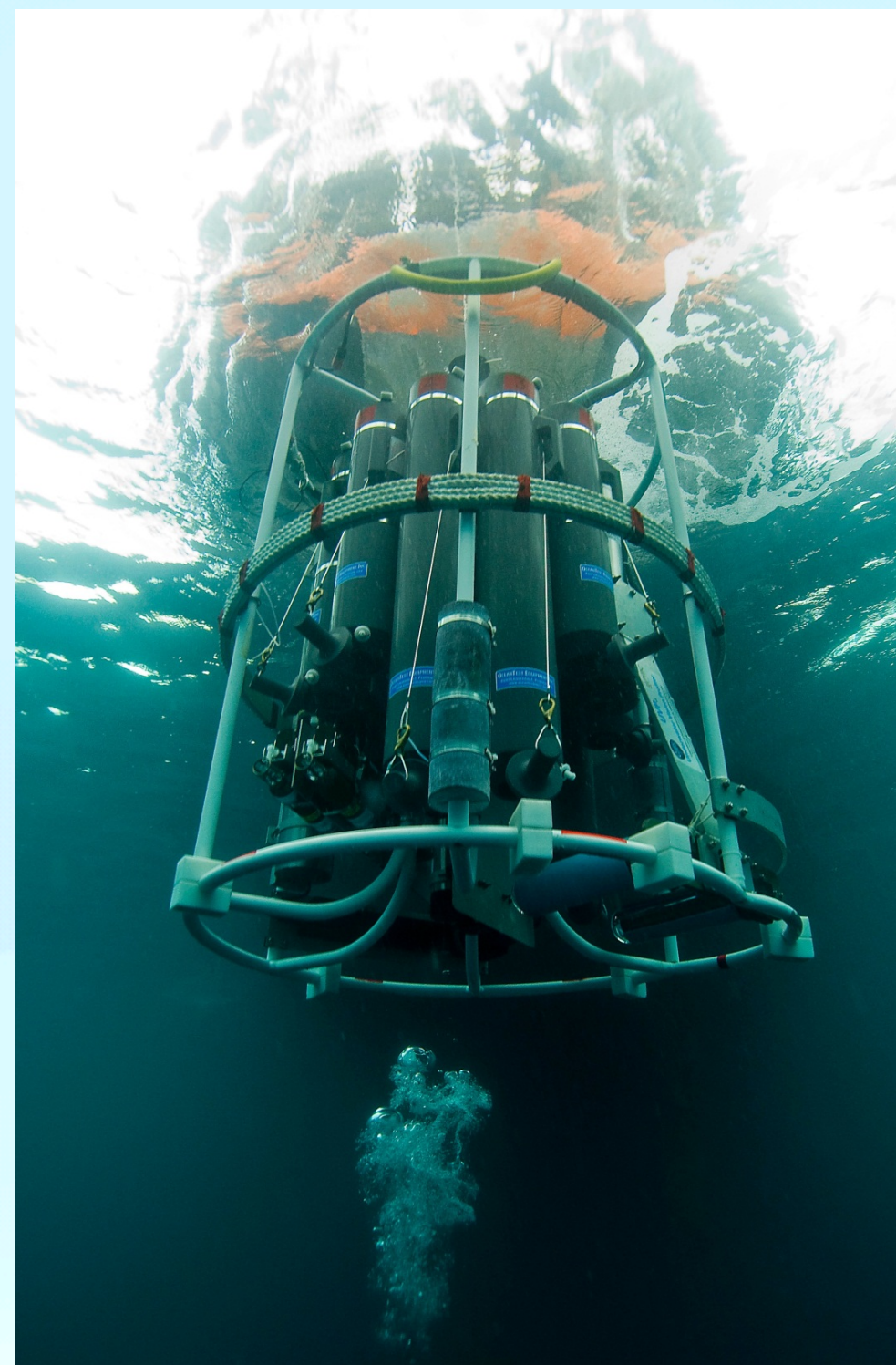
Decade for Ocean Sciences and Sustainable Development

Growing demand for scientific knowledge to feed national, regional and global Ocean policy

What "a predicted ocean" means in 2030?

A global ocean science organization?

Integrated monitoring tools in a global online map?

High Seas: thinking outside borders

BBNJ negotiations concluded in 2023. First COP to decide many important issues

What kind of protection for the High Seas?

What frame to regulate DSI?

New tools for high seas monitoring and protection: ABMTs/MPAs
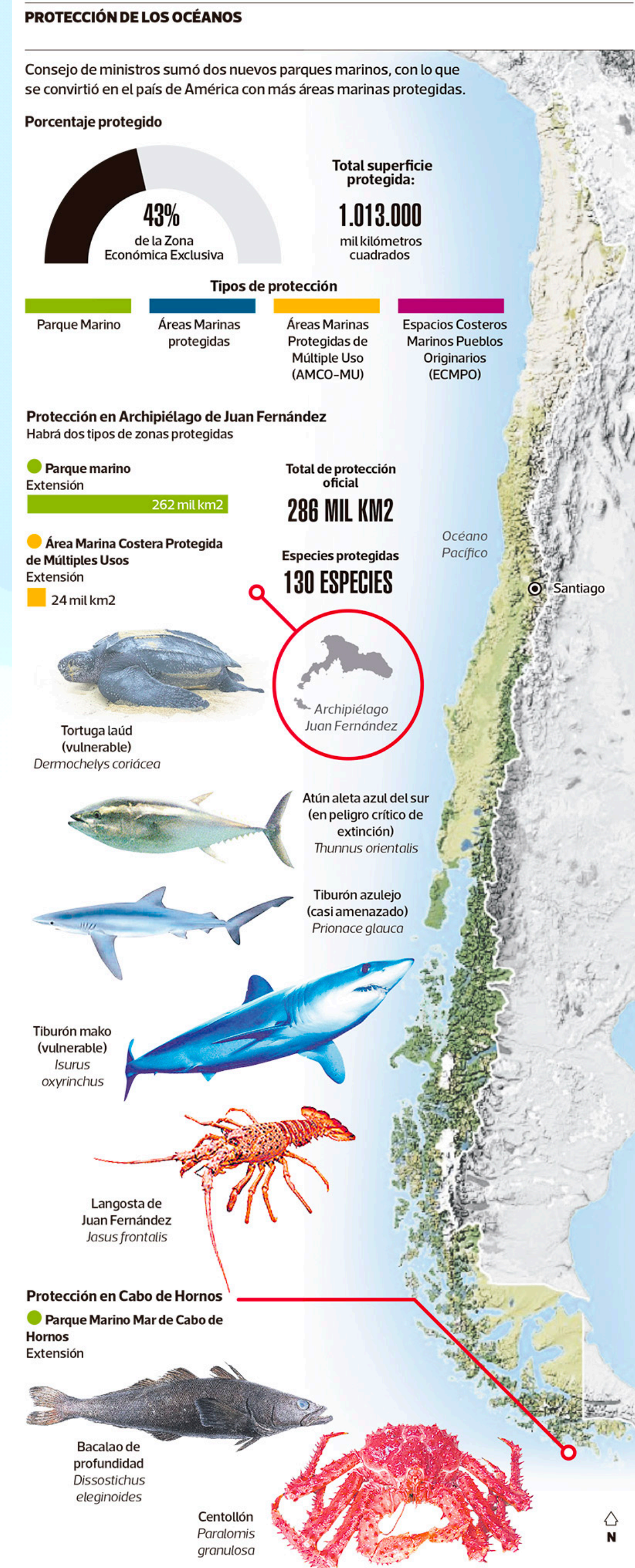
UNCBD - Post 2030 biodiversity framework

Target: 30% of protected areas

- 30x30 Target too ambitious?

- Why is it so complex to define MPAs: National interests need to be preserved (fishing, mining, oil&gas, aquaculture)

- Question of level of protection needs to be discussed with local populations and concerned stakeholders

How governments decide to protect some area?

– IUCN Species red-list : Periodic assessment showing risk of extinction of some species

– UNESCO protocols for Cultural Heritage or Biosphere Reserve: Fernando de Noronha, Easter island, Hawaii

– Local initiative with citizens mobilizations

PROTECCIÓN DE LOS OCÉANOS

Consejo de ministros sumó dos nuevos parques marinos, con lo que se convirtió en el país de América con más áreas marinas protegidas.

Porcentaje protegido

43% de la Zona Económica Exclusiva

Total superficie protegida: 1.013.000 mil kilómetros cuadrados

Tipos de protección

Parque Marino | Áreas Marinas protegidas | Áreas Marinas Protegidas de Múltiple Uso (AMCO-MU) | Espacios Costeros Marinos Pueblos Originarios (ECMPO)

Protección en Archipiélago de Juan Fernández
Habrá dos tipos de zonas protegidas

Parque marino
Extensión 262 mil km2

Área Marina Costera Protegida de Múltiples Usos
Extensión 24 mil km2

Total de protección oficial 286 MIL KM2

Especies protegidas 130 ESPECIES

Océano Pacífico

Santiago

Archipiélago Juan Fernández

Tortuga laúd (vulnerable) *Dermochelys coriácea*

Atún aleta azul del sur (en peligro crítico de extinción) *Thunnus orientalis*

Tiburón azulejo (casi amenazado) *Prionace glauca*

Tiburón mako (vulnerable) *Isurus oxyrinchus*

Langosta de Juan Fernández *Jasus frontalis*

Protección en Cabo de Hornos
Parque Marino Mar de Cabo de Hornos
Extensión

Bacalao de profundidad *Dissostichus eleginoides*

Centollón *Paralomis granulosa*

N

FUENTE: Ministerio de Medio Ambiente

LA TERCERA

Some current science to policy tools

- EBSAs - Ecological and Biological Significant Areas

- Biodiversity Hotspots - UNCDB

- OHI - Ocean Health Index

- CPI: Conservation Priority Index

- VMEs: Vulnerable Marine Species

- HopeSpots (Mission Blue)

A few scientific groups addressing planktonic ecosystem or ocean microbiome in these processes

What will be Next-Gen models and tools to orient decision makers?

– **Global Fishing Watch** : Open online dynamic map showing all vessels in real time. Combining satellite data with floaters and AIS data

– New Protocols for **EBSAs** including zooplankton data (IUCN, IOC)

– Holistic new approaches for **Augmented Ocean Observation** including biological data

– **Ocean Twin** initiative (EU) ???

– OHI: Upcoming **Ocean Microbiome Health Index** (BlueRemediOmics, AtlantECO)

– **KOPAs** - Key Ocean Planktonic Areas (Plankt'ECO, CEODOS, AtlantECO)

– Define new **Ecosystem Services** provided by plankton…improve fisheries prediction tools, *and many others!*

Gracias! Bon vent !