



SDG 14.4

Restoring fisheries through refugia systems in the South China Sea and Gulf of Thailand

14 LIFE BELOW WATER



CAMBODIA



INDONESIA



MALAYSIA



PHILIPPINES



THAILAND



VIET NAM

The South China Sea and Gulf of Thailand

- UNCLOS 200 nautical Executive Economic Zone
- Disputed Islands (separate from UNCLOS)
- China's maritime territorial claims are based on distance from claimed islands

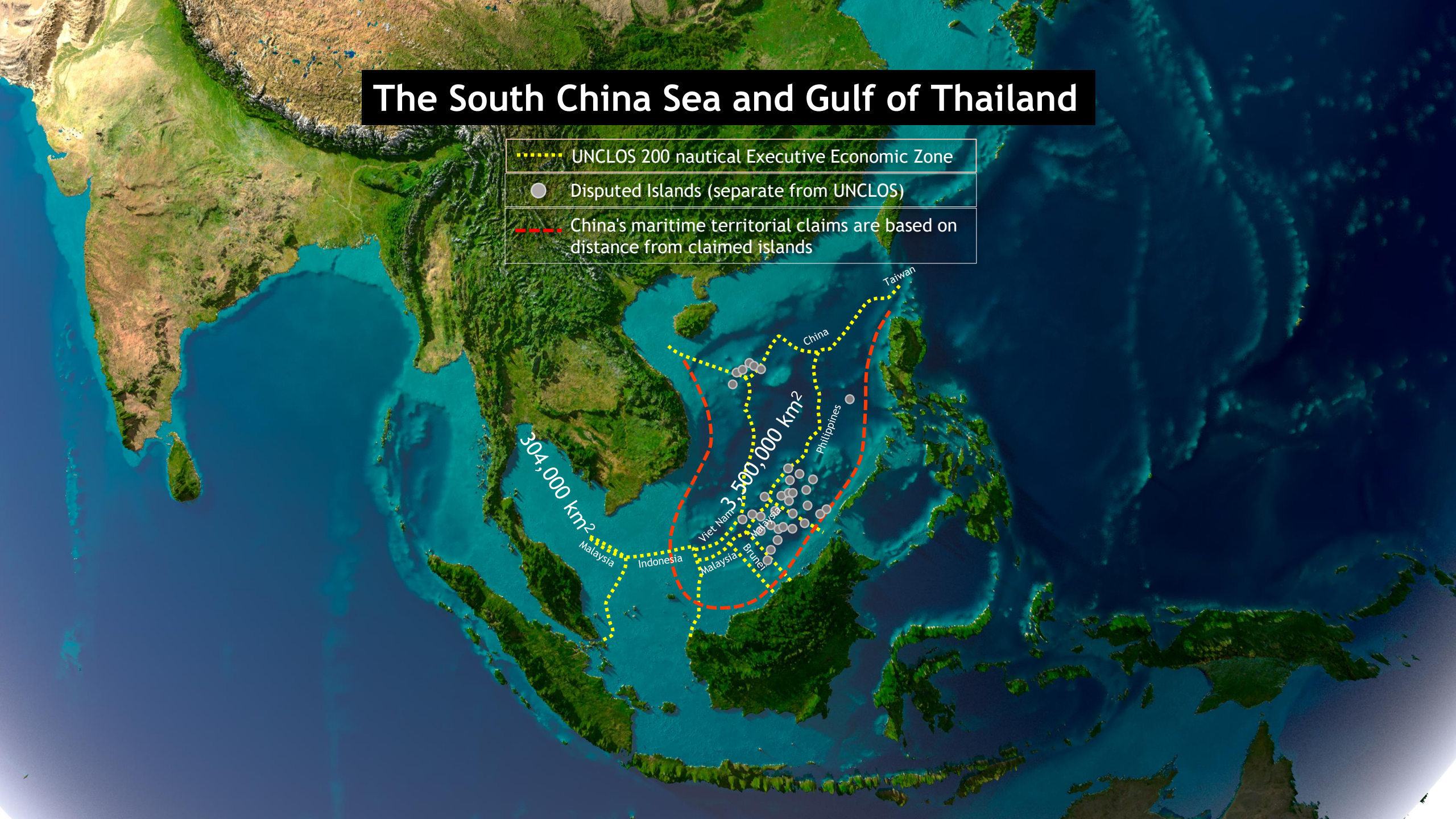




Photo: Flickr / Bachellier Christian (IUCN)



earthraceconservation.org



In the waters of the Philippines. (Photo by Astrid M. Barros)

A global center of shallow water marine biological diversity

- > 8,600 species of several taxonomic groups
- > 3,300 fish species
- > 45 species of Mangroves
- > 700 species of Corals
- > 20 species of Seagrass



www.naturalworldsafaris.com/asia/borneo



www.christina-larson.com/



Supports significant fisheries
that are important to the
food security and livelihoods



9.7M tons
of Fishes in 2015

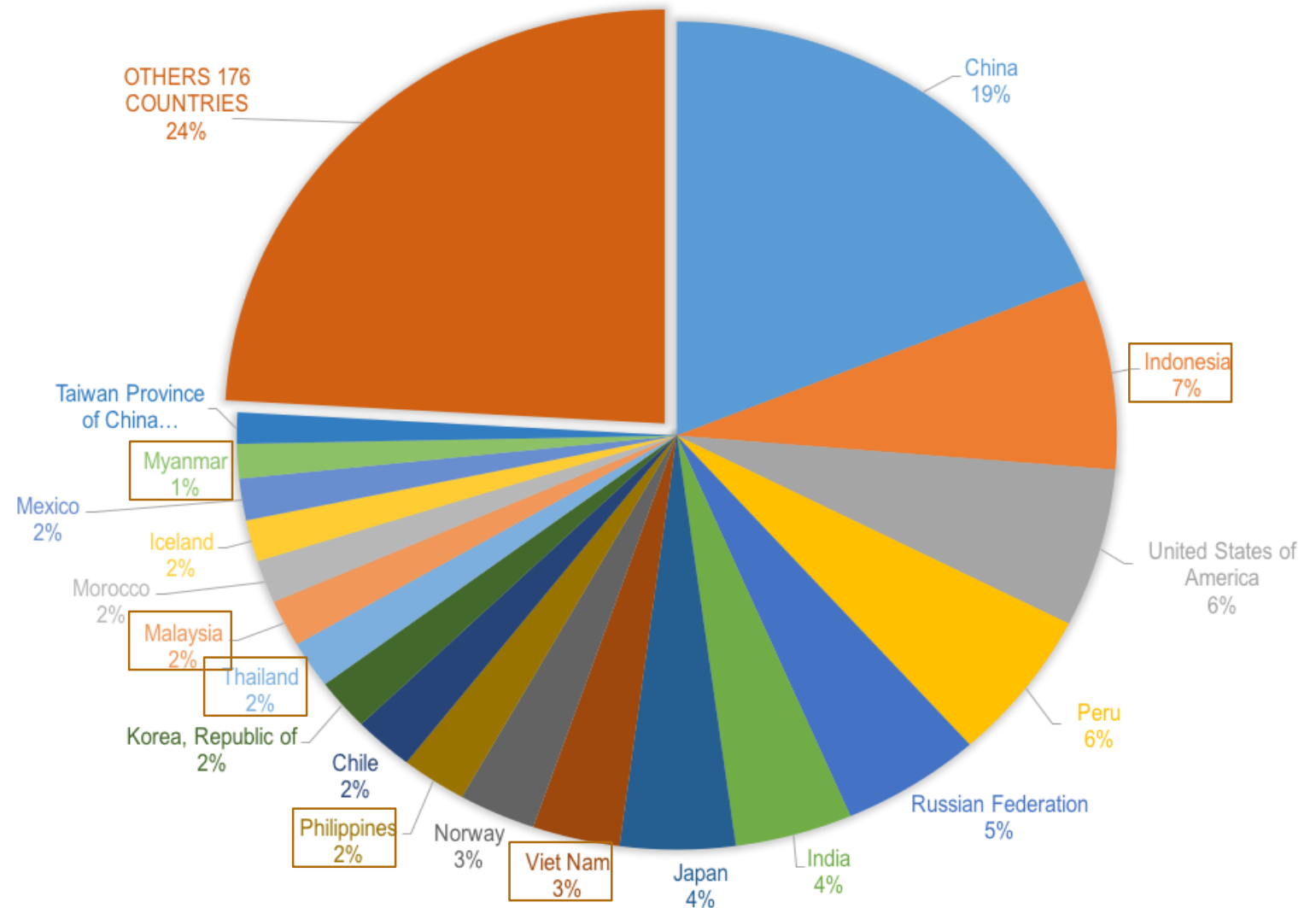


3.7M people
are Involved

17% of the World Marine Capture Fisheries are:

- 1) INDONESIA, 6.03MT
- 2) Viet Nam, 2.61MT
- 3) Philippines, 1.95MT
- 4) Thailand, 1.50MT
- 5) Malaysia, 1.49MT
- 6) Myanmar, 1.09MT

WORLD'S MARINE CAPTURE FISHERIES IN 2015
TOTAL : 81.1 MILLION TONS



2015 WORLD'S TOP 20

I: Illegal
U: Unreported
U: Unregulated

FISHING

A KEY THREAT TO MARINE ECOSYSTEM

- 1) Illegal Fishing Activities within Country
- 2) Poaching in Other Country's EEZ
- 3) Illegal Trading of Live Reef Food Fish, Ornamentals, and EAS
- 4) Landing of IUU Fishing in High Seas & RFMO Areas

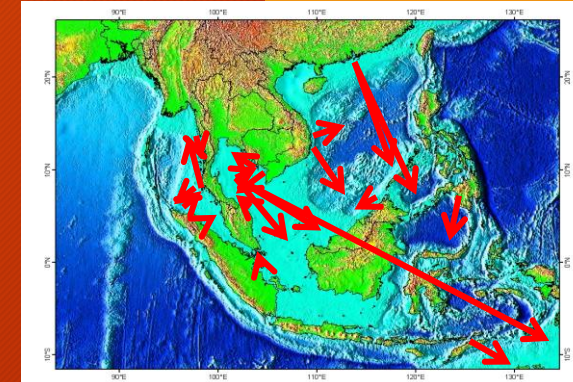
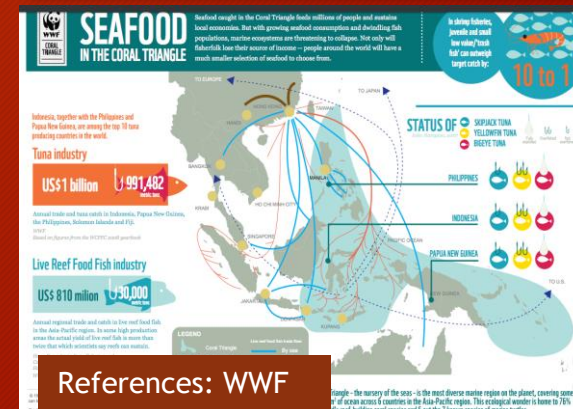
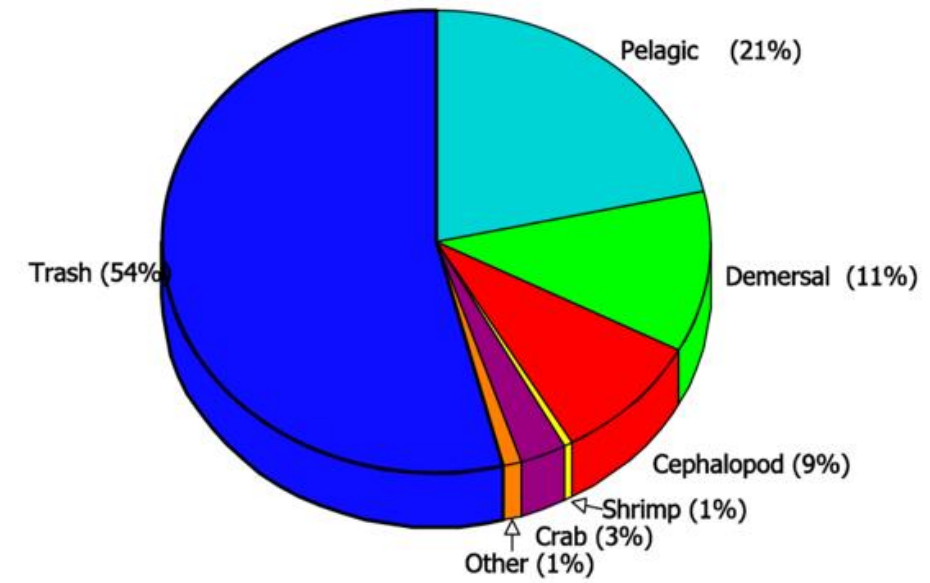


Figure 4.2: Kelantan registered Malaysian vessels moored at Sungai Patani fishing port, Thailand 2004-05.³⁴²



References: WWF

What's happened in the SCS & GOT



ASEAN-SEAFDEC DECLARATION ON COMBATING IUU FISHING





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Fisheries *refugia*: a novel approach to integrating fisheries and habitat management in the context of small-scale fishing pressure

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ABSTRACT

Fisheries of the South China Sea, including the Gulf of Thailand, are characterised by high levels of small-scale fishing effort. Increasing fishing pressure, coupled with continued decline in the expanse and quality of coastal habitats critical to the life-cycles of most species, has raised serious concerns regarding the long-term sustainability of Southeast Asian fisheries. This paper reviews the development of a UNEP/GEF South China Sea Project initiative to address the regional need to improve the integration of fisheries and habitat management.

FISHERIES REFUGIA CONCEPT

Box 3. Definition of fisheries *refugia*

“Spatially and geographically defined, marine or coastal areas in which specific management measures are applied to sustain important species [fisheries resources] during critical stages of their life cycle, for their sustainable use”.

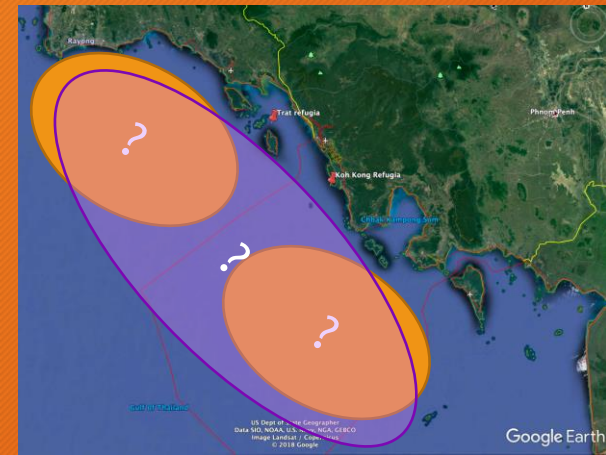
Thus, fisheries *refugia* should:

- **not** be simply ‘no take zones’;
- have the objective of sustainable use for the benefit of present and future generations;
- provide for some areas within *refugia* to be closed due to their critical importance [essential contribution] to the life cycle of a species or group of species;
- focus on areas of critical importance in the life cycle of fished species, including spawning and nursery grounds, or areas of habitat required for the maintenance of brood stock;
- have different characteristics according to their purposes and the species or species groups for which they are established and within which different management measures will apply; and
- have management plans.

Management measures that may be applied within fisheries *refugia* may be drawn from the following [non-exhaustive] list of classical fisheries management actions:

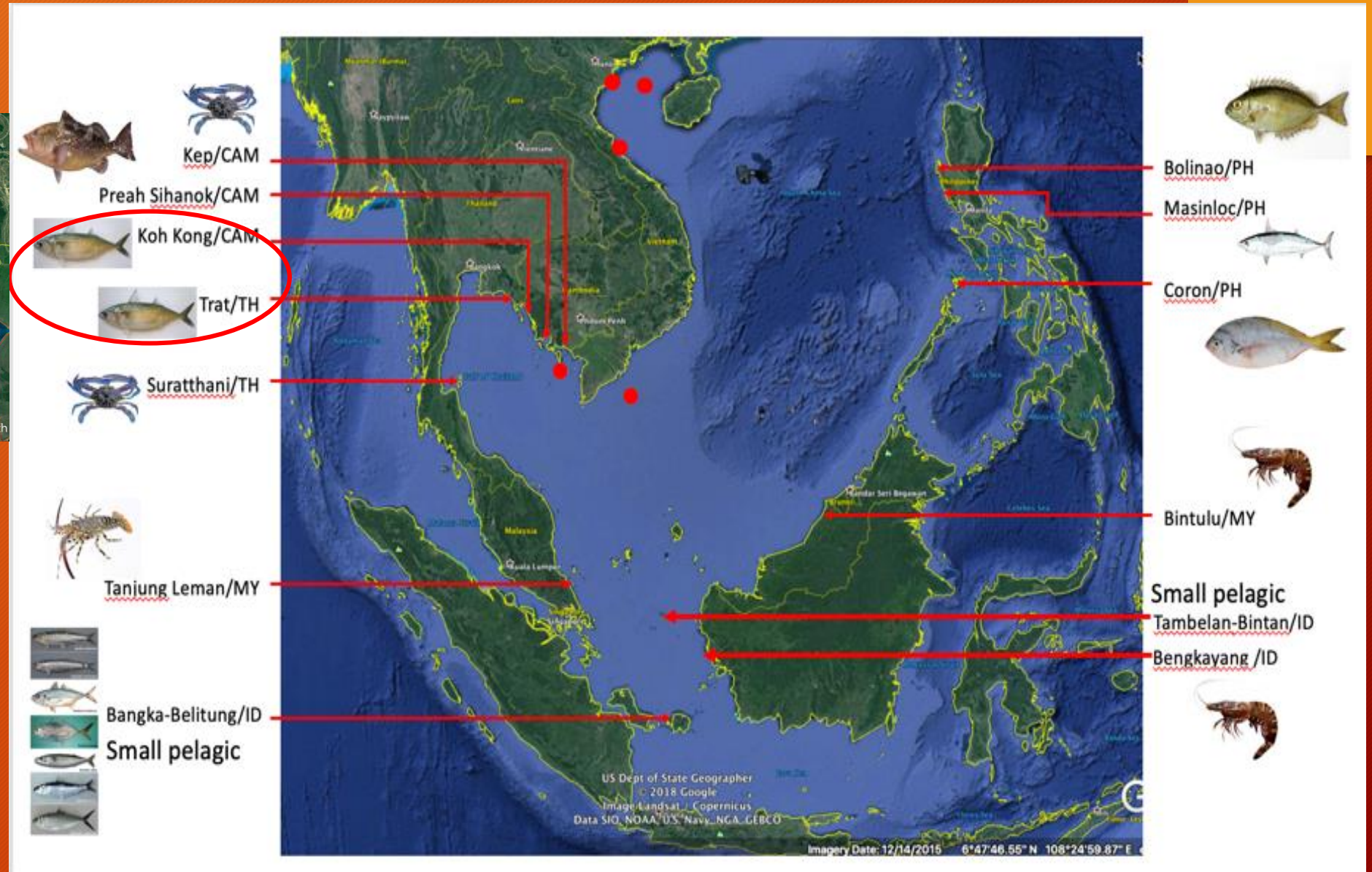
- exclusion of a fishing method (e.g. light luring, purse seine fishing);
- restricted gears (e.g. mesh size);
- prohibited gears (e.g. push nets, demersal trawls);
- vessel size/engine capacity;
- seasonal closures during critical periods of fish life cycles;
- seasonal restrictions (e.g. use of specific gear that may trap larvae); and
- limited access and use of rights-based approaches in small-scale fisheries.

A REGIONAL SYSTEM OF FISHERIES REFUGIA

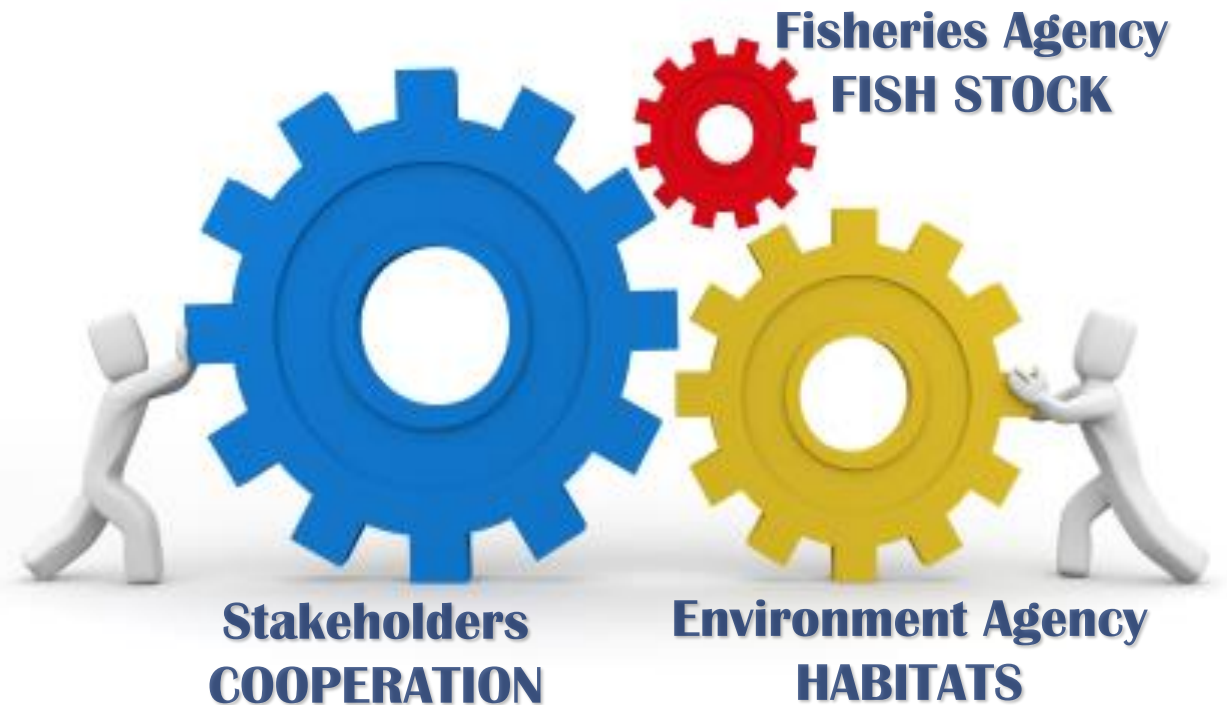
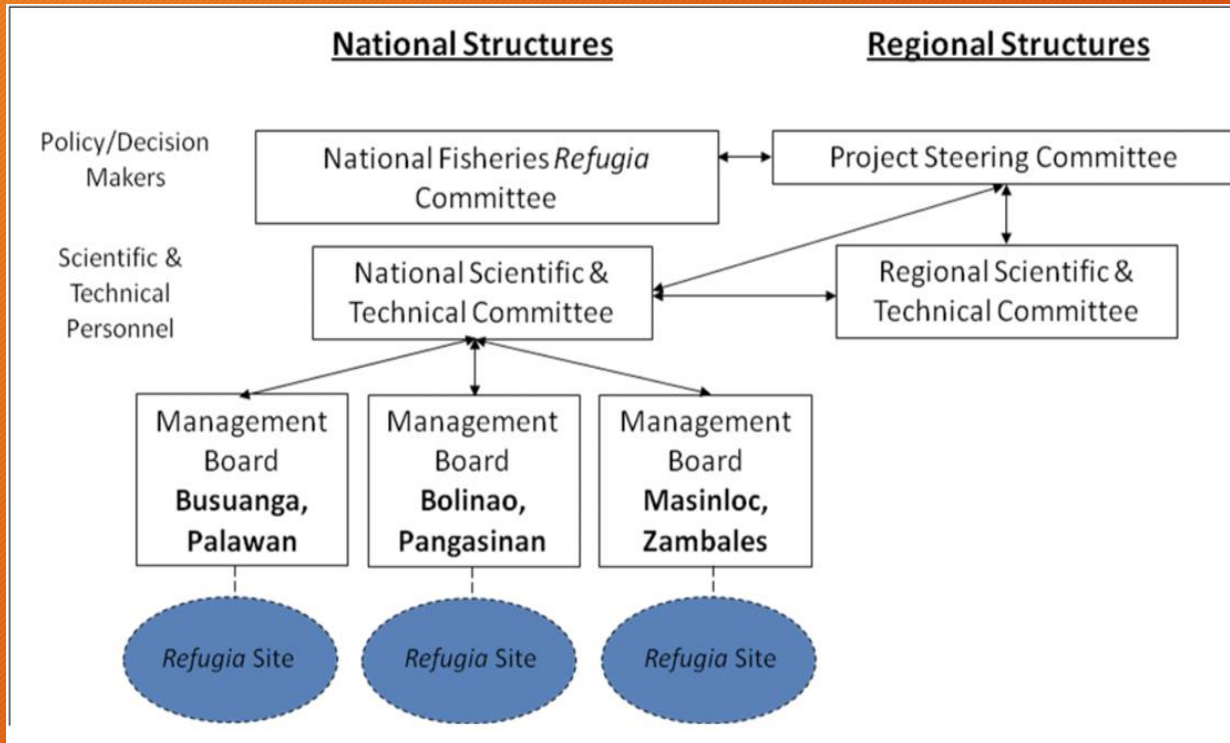


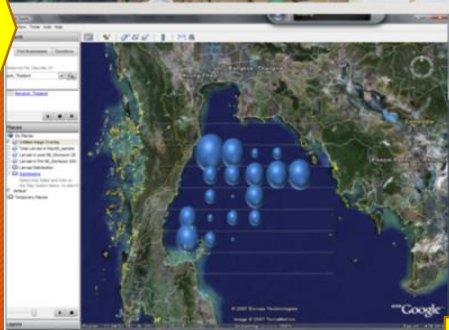
Transboundary species

- ✓ migration pattern ?
- ✓ Identified refugia ?



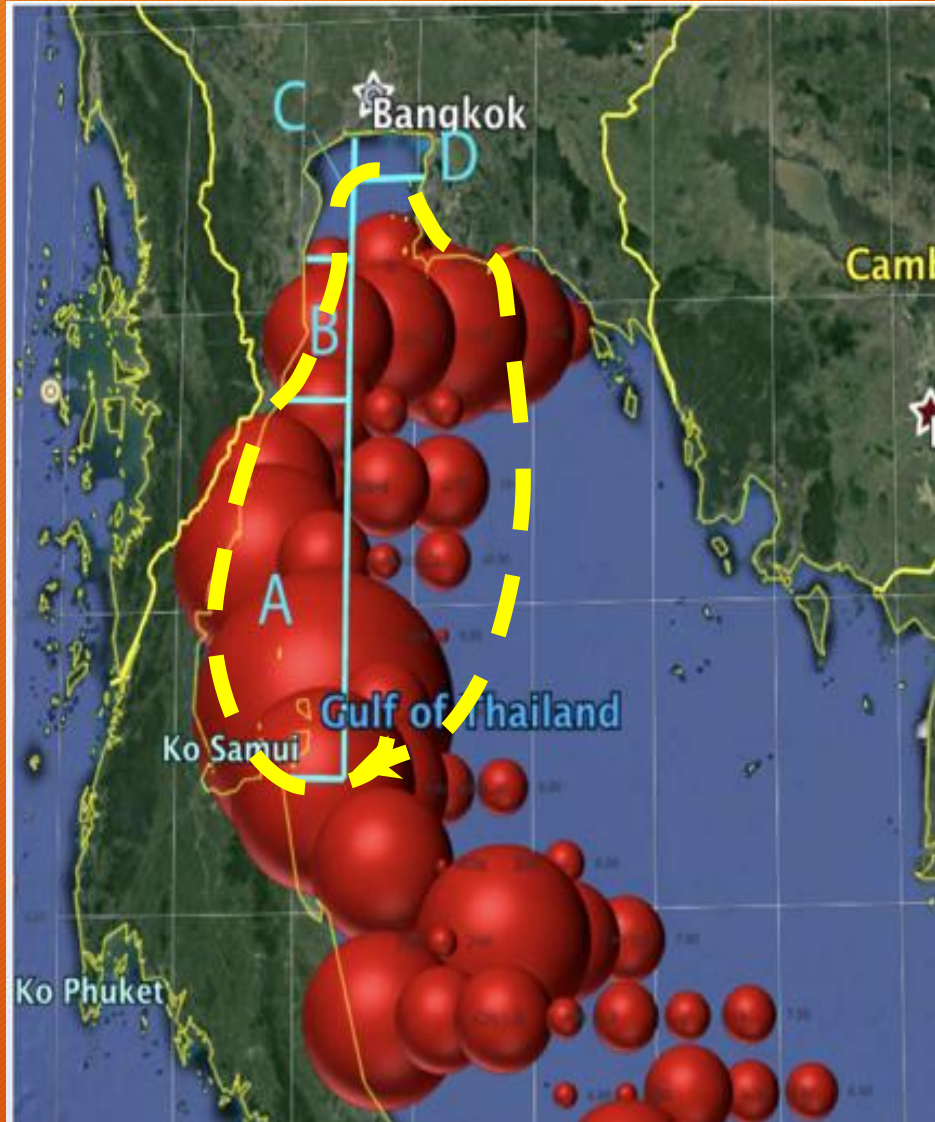
WORKING MECHANISM TO ESTABLISH FISHERIES *REFUGIA*





PROCESS OF ESTABLISHMENT THE FISHERIES REFUGIA

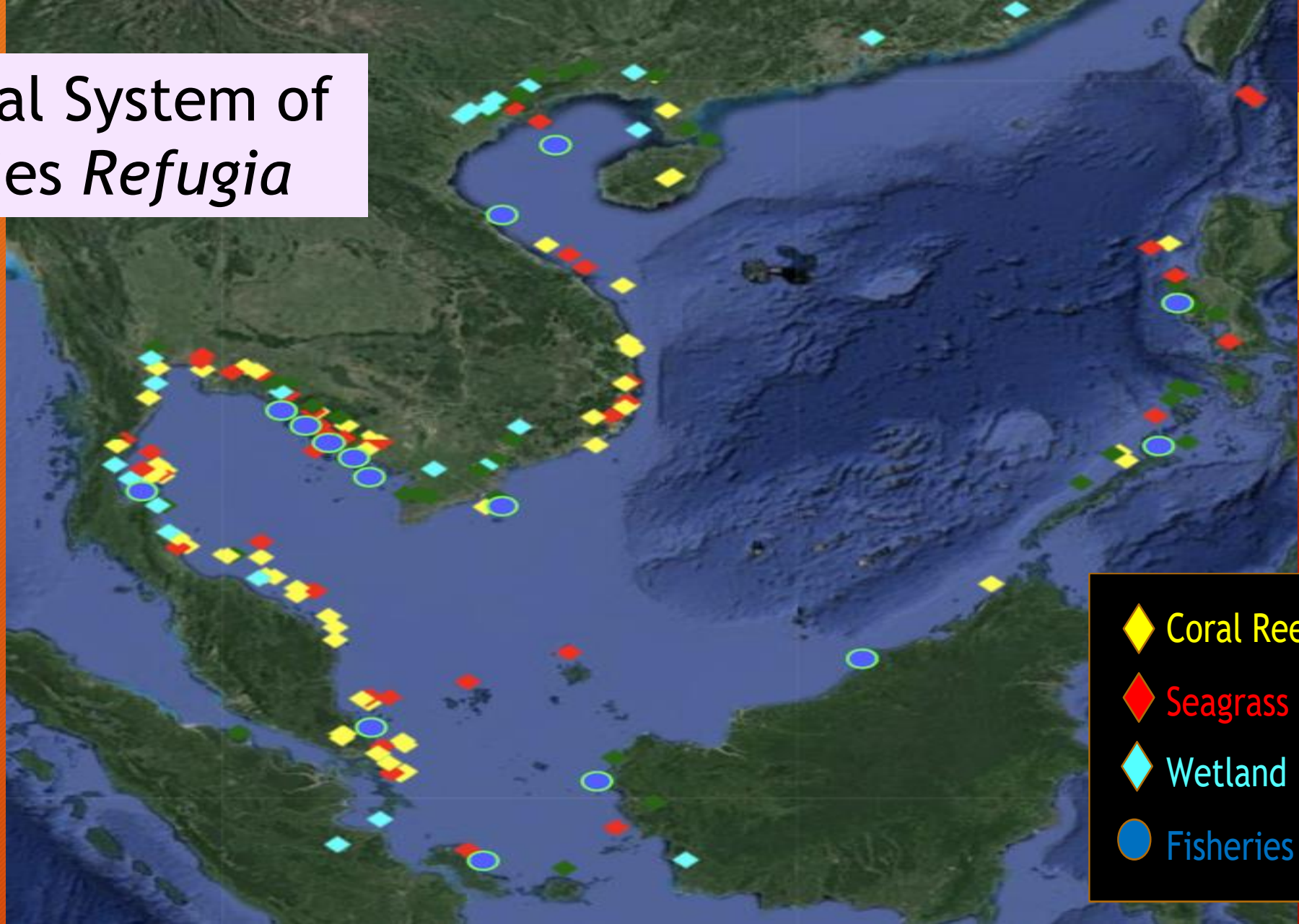
GOOD PRACTICES ON FISHERIERS *REFUGIA* of CHUB MACKEREL IN THAILAND



Chub Mackerel
(*Rastrelliger brachysoma*)

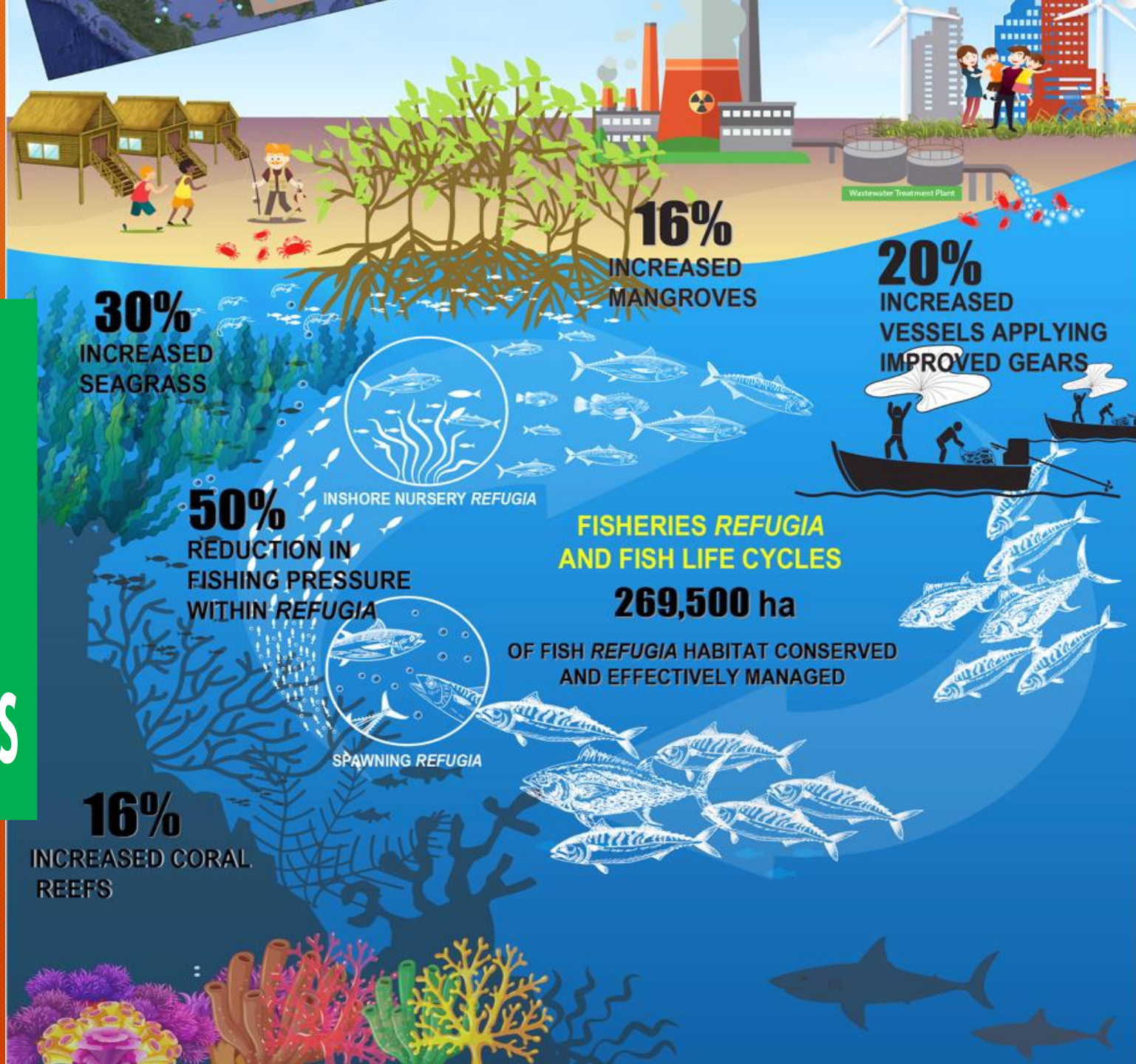


A Regional System of Fisheries *Refugia*



Focus on fish life-cycle e critical habitat linkages

Healthy Ecosystems Support Sustainable Fisheries





UN
environment



THANK YOU

14 LIFE BELOW
WATER

