

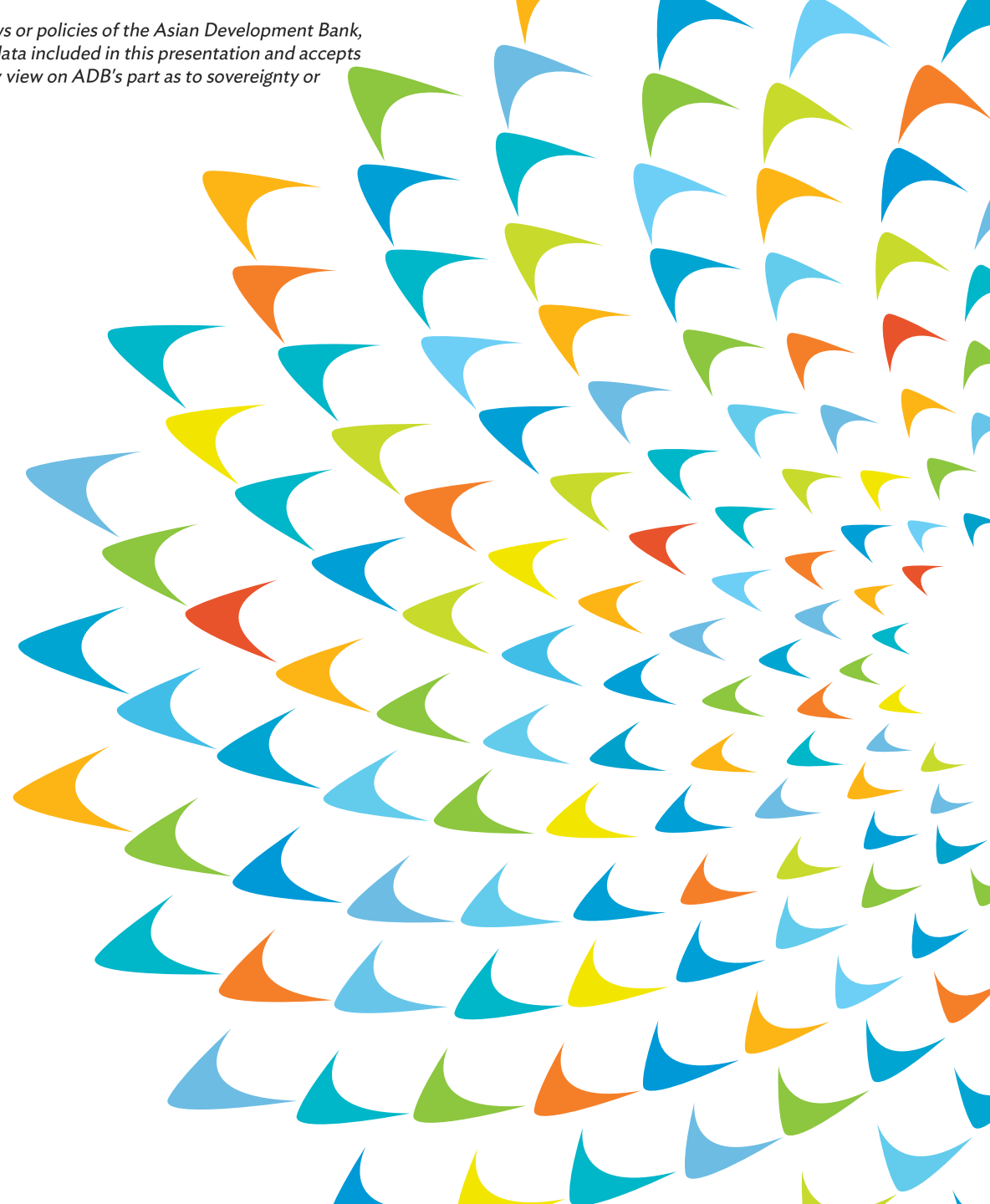


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Sustainable coastal and marine development: Examples from Thailand and Cambodia

Resilient Coasts, Thriving Communities: A Sea of Solutions

18-19 August 2025
Koichi, India



Investing in natural capital: a programmatic approach

This initiative safeguards vital ecosystems—forests, watersheds, wetlands, and marine areas—to ensure sustainable food systems and livelihoods. The \$150 million Natural Capital Fund will catalyze blended finance projects such as restoration of degraded land and elimination of hazardous pesticides

Supported by key interventions

Upstream natural capital accounting and assessments

Investing to maintain and enhance natural capital assets – focusing on public goods with strong interlinks to local livelihoods

Innovative financing mechanisms to generate sustainable revenue streams from ecosystem services

Strengthening partnerships, knowledge and capacity to promote regional cooperation



Gulf of Thailand

- **Overlapping and shared resources**
- **Shallow**
- **Semi enclosed**
- **Highly productive**
- **Over fished**
- **Tourism dependent on coastal and marine biodiversity**
- **Competing use of shorelines**

**Exposed to
HEAT**





Thailand

Seagrass loss leaves Thailand's dugongs struggling to survive

Meadows reduced to blackened stubs have pushed authorities and researchers into crisis mode.

-22%

-35%

-67%

Low tides and no green grass

While many researchers are linking seagrass decline to the rise in dugong deaths, the authorities remain cautious. The DMCR's director-general, Pinsak Suraswadi, cites other factors – such as disease, grazing pressure from other species and habitat damage from coastal developments – that could also be contributing to the crisis. Nevertheless, the widespread loss of seagrass remains a major concern.

Marine agency notes most dugongs died from starvation, while one was found with rope burns on its body and is believed to have been entangled in fishing nets

Marine Heat Wave Impacts
Flow across the ecosystem





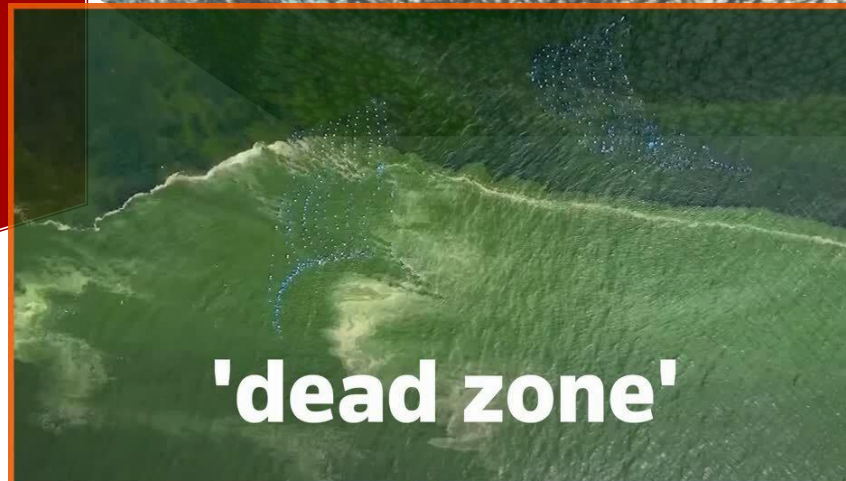
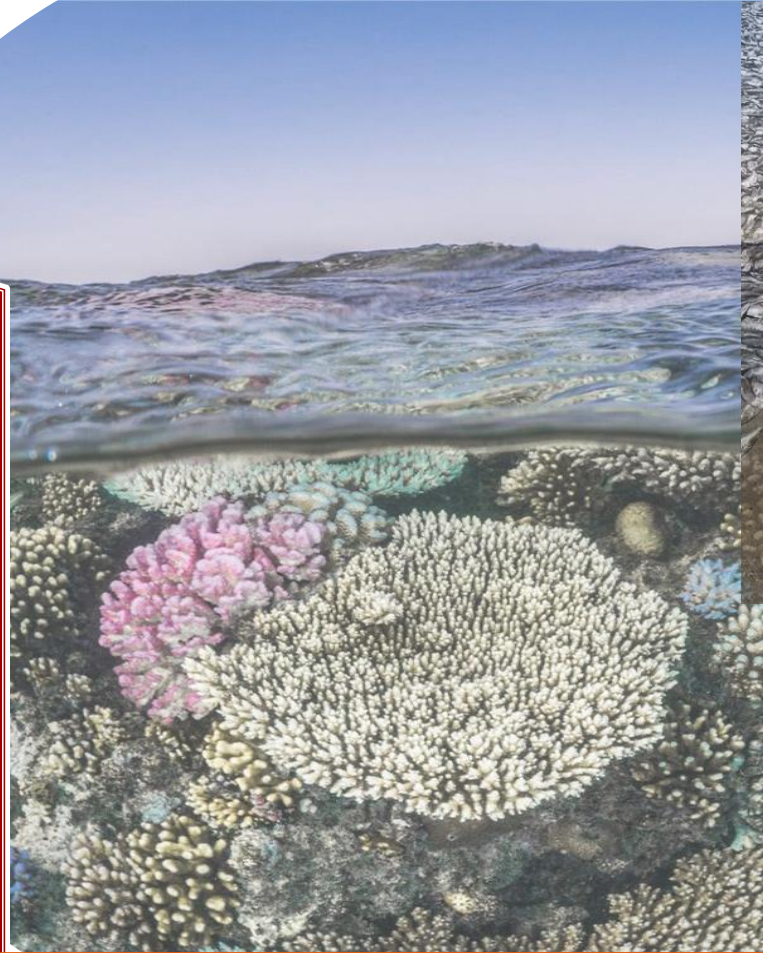
Mangrove
Heat exposure - 48 hours

40 degrees (air)
(43% survival)
cf

45 degrees (air)
(15% survival)

Heat and Deoxygenation

- Fish cannot breath
- Coral impacted
- Algal blooms
- Food Safety



Oceanic Climate Risks including marine heatwaves are real!

Without adaptation
wealth and health will
continue to decline!

- ✓ Not just **fisheries**
- ✓ **Food security** – local consumption of quality nutrition
- ✓ **Tourism** is mostly coastal
- ✓ Coastal habitats **regulate heat** protect our infrastructure

Vulnerability to Climate Change



Coastal habitat land erosion

- » Land loss by 2040
6 billion Baht /yr
- » Sea level rise
impact of **\$6.4 bn**
in 2015!



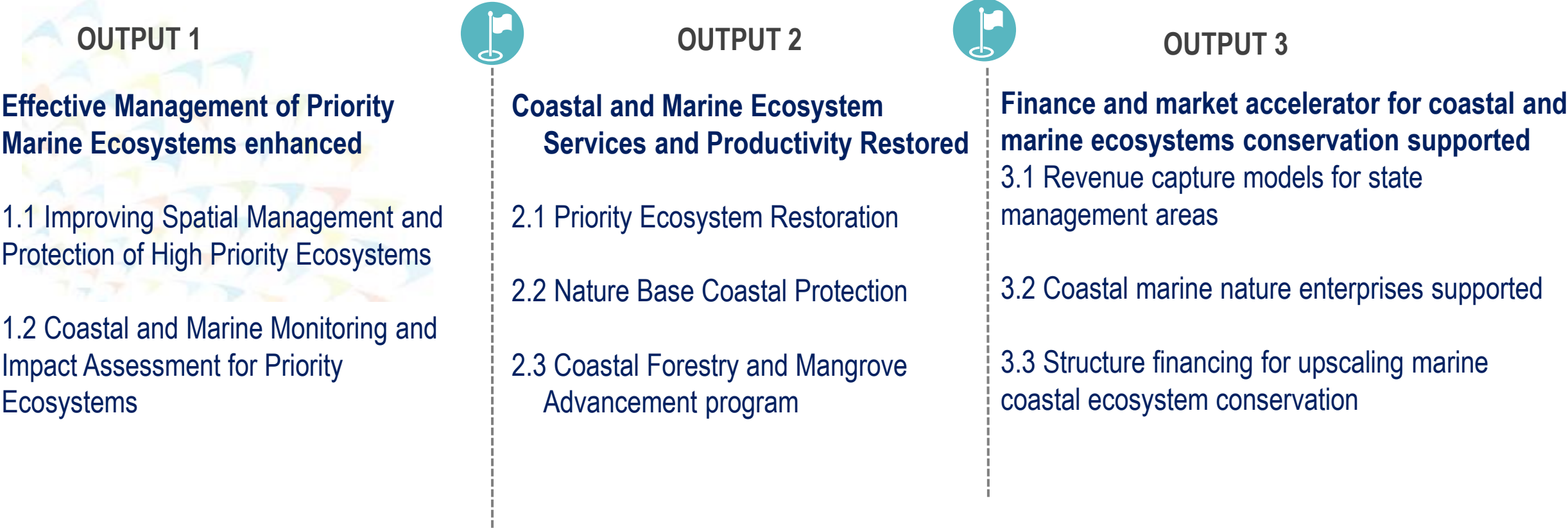
Fisheries
**650,000-
700,000** jobs,
Economic
impact
\$24 bn
40% Gulf of Thailand



Tourism
**4.2 million
jobs**
50% coastal and
marine
12% of GDP



Overarching activities: Economic impact assessment of declining marine and coastal ecosystems under IPCC RCP8.5 on GDP, GNI, employment, and economy as the whole Coastal Assessment to inform design of interventions



Output 3: Finance and market accelerator for coastal and marine ecosystems conservation supported

Activities	Next steps
3.1 Coastal and marine state revenue collection models, concessions using PPP arrangements for the management and operation of project sites	Project site assessment for cost recovery revenue capture potential Revenue capture modalities Institutional strengthening for revenue capture PPP options and potential targets Data sheets for potential PPP models PPP Development and market assessment program
3.2 Coastal and Marine Nature Enterprise business identification and business planning support	Opportunity assessment, screening and scoring viability of communities and commercial business Business planning and support program design for (i) Community enterprises; and (ii) Commercial enterprises
3.3 Structure financing for upscaling marine coastal ecosystem conservation	Pre-feasibility assessment of: Blue-carbon & biodiversity credit Blue-bond readiness and lay out steps for Nature-Bond Incubator, covenants, and pipeline to issue a THB or USD blue bond by 20XX. Reef-insurance pilot: Structure parametric coverage for storm coral-bleaching events at X selected MPAs.



Cambodia

Key Issues



- Fish habitats and breeding grounds degraded – rebuild resilience to enable the sector to adapt
- Climate change risk grows
 - 2050 capture catch (-25%), need to adapt
 - capture fishery - uncertain and risky
 - Subsector needs resilience to avoid collapse
- Subsector management – create time to adapt before stocks collapse
 - Reduce effort in marine capture fishery
 - Reduce bad/illegal fishing practices
 - Enhance fisheries productivity
 - Allow people to exit, the sector can not support the current level of effort
 - Shift effort to growing seafood – non fed mariculture
 - Support business and commercial development to attract investment
- Marine Fishery Management can not support an open access system

Sustainable Coastal and Marine Fisheries - SCMF

Project implementation period:

7 years (2023-2029)

Target Sites:

4 Coastal Provinces

(Kep Kampot, Preah Sihanouk and Koh Kong)

EA: Ministry of Agriculture, Forestry and Fisheries (MAFF)

IA:

- Fisheries Administration (FIA/MAFF)
- Ministry of Environment (MoE)
- Khmer Enterprise(KE/MEF)

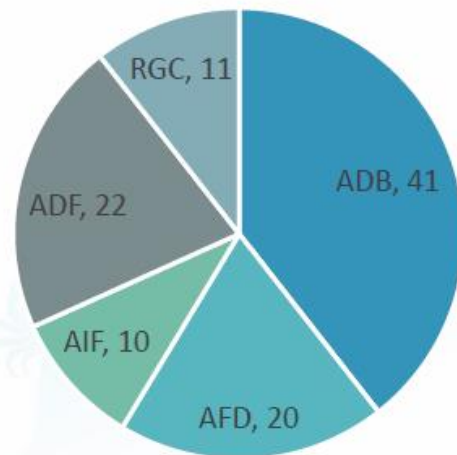
Funding Sources

Total: 104 million USD

Concession Loan : 71 M USD (ADB, AFD, AIF)

Grant : 22 M USD (ADF)

Contribution : 11 M USD (RGC)



Outcomes

Coastal and marine fish stocks recovered, and diversified climate-resilient income generated by 2030

3 Components:



Adaptive Coastal and Marine Fisheries Management Enhanced



Climate-Resilient Coastal Infrastructure Developed.



Sustainable and Inclusive Marine Business Incubated and Commercialized.

Where is the Value?

A: Change what is caught

- Growing juveniles to larger higher grade higher value catch by securing access
 - Crab \$100 million plus
 - Mussels increase in value by 3 fold
 - Blood cockle increase value from 3\$ to 10\$ from waiting for 3 months

B: Move from catching to growing

- Reduce effort and practice
- Higher output ie., mussel yields from 25 to 30t/ha to 75 -120 t/ha
- Open water mariculture – low cost, rapid gains – clams, mussels, cockle
- New products: oyster, sea cucumber

C: Cost effective fisheries management

- Habitat structures
- Digital surveillance
- Rule based management

D: Seafood mariculture production diversification for Benthic species

E. Mangrove program:

- Protection status
- Rehabilitation and expansion
- Mangrove Based Livelihood Program

F: Reducing risks to market access and diversification through safe seafood:

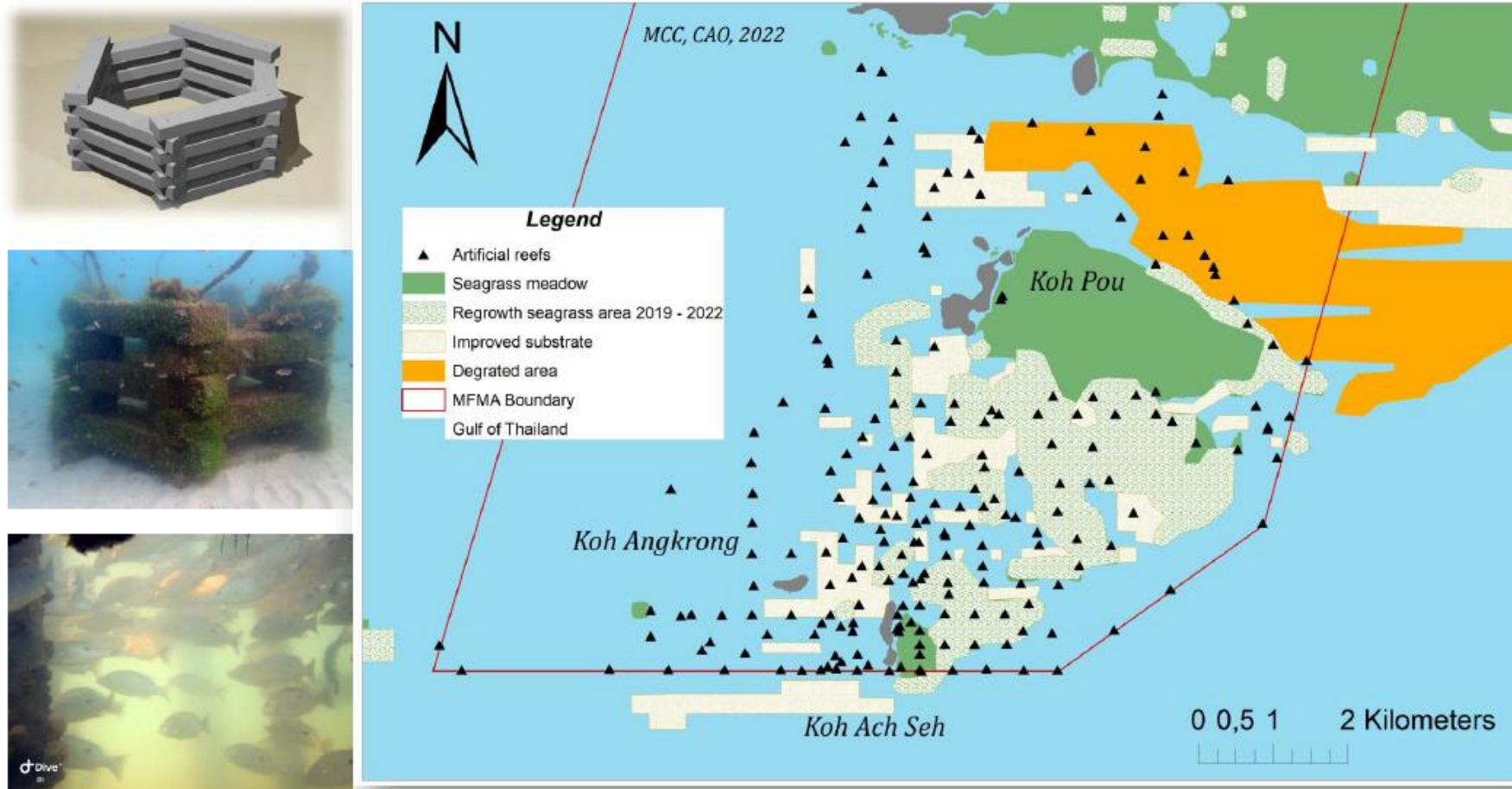
- On boats
- Landing sites
- Post harvest Establishments
- Digitalisation of fisheries value chain

G. Marine Business incubated and commercialised:

- SME Start – Up Incubation
- Business Services
- Upscaling

H. Gender transformation

Artificial Habitat Deployment in KEP MFMA



- Deployed 397 boxes up to end of 2023
- Seagrass in the area grow from 2790 Ha (2005) to 6399 Ha (2022)
- Presence of Marine mammals and other endangered species
- Seafood (BS crab and fish) continue to supply the increasing demands of tourists

The development of small and medium enterprises in coastal communities will be supported through a program.

Awareness raising, training, business planning and establishment, and supporting conditional grants.

At least 25 viable commercial marine enterprises operating successfully.

8 childcare facilities run by trained staff to enable greater participation of **women in economic opportunities**.

Value-added investments provided to open-water, **non-fed mariculture** producers, including grading and packaging facilities and marketing programs.

200 women will receive preparatory training **to access the business development** program.





End of Presentation