



# PTTEP Decarbonization Pathway

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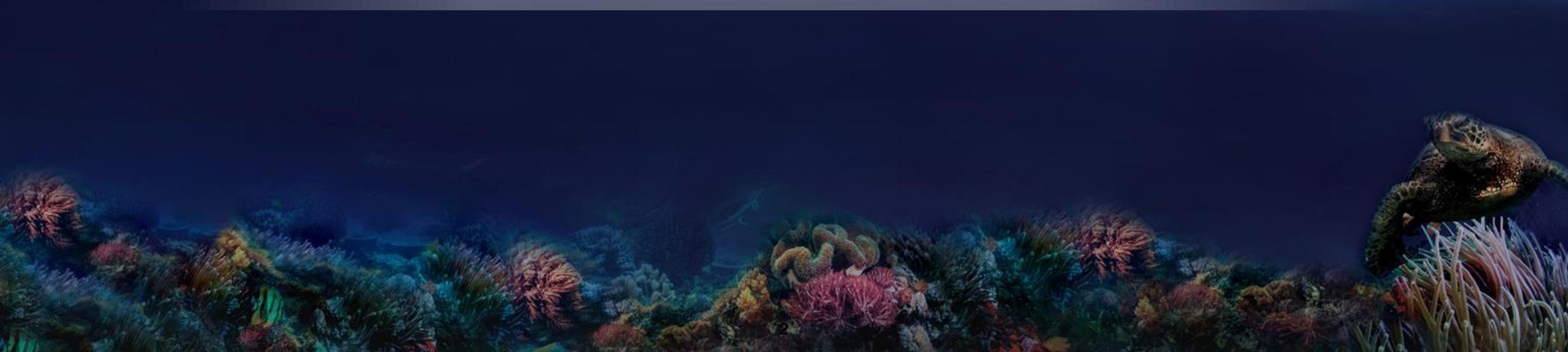
สายงานความยั่งยืนและบริหารผู้มีส่วนได้ส่วนเสีย

ปตท.สพ.

22 ธันวาคม 2566



# Introduction to PTTEP



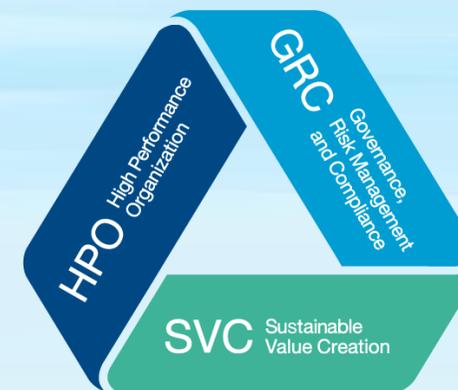
## “Energy Partner of Choice”

through Competitive Performance and Innovation for Long-term Value Creation



To achieve our vision of becoming the “Energy Partner of Choice”, PTTEP has developed the Sustainability Framework comprising:

- High Performance Organization (HPO)
- Governance, Risk Management and Compliance (GRC)
- Sustainable Value Creation (SVC)

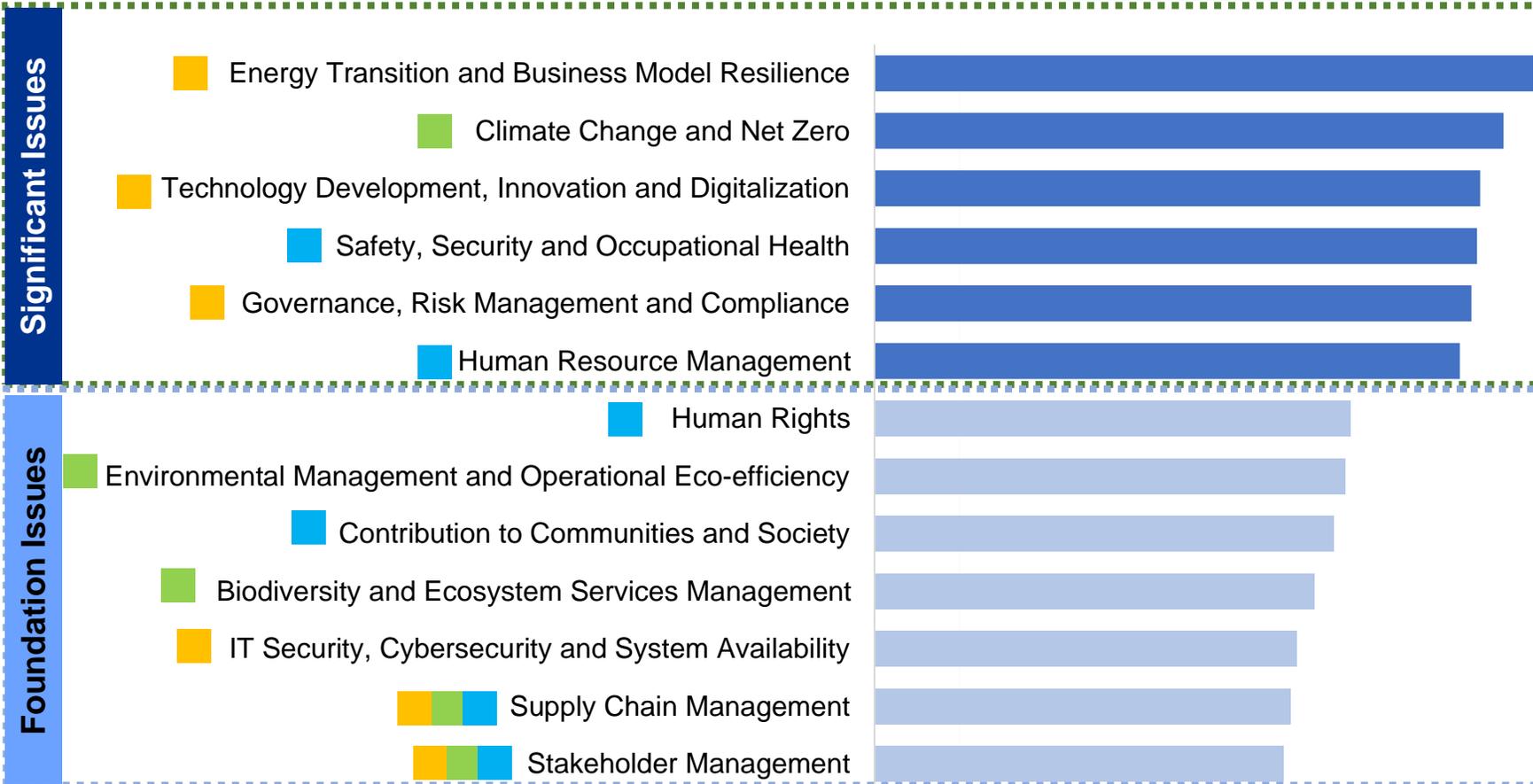


▶▶ Sustainability



# 2023 PTTEP Materiality

## PTTEP Significant sustainability issues



Legend: ■ Governance & Economic Dimension ■ Environmental Dimension ■ Social Dimension



## Sustainability Benchmarking

S&P Global

MSCI

MOODY'S | ESG

SUSTAINALYTICS

a Morningstar company



FTSE4Good



DISCLOSURE INSIGHT ACTION



SET AWARDS 2022

Sustainability Awards of Honor



## 1 DRIVE VALUE

Strengthen E&P and ensure Thailand energy security

- Maximize production
- Expedite development
- Monetize discovery

Enhance competitiveness of unit cost

Expand gas-weighted portfolio and LNG business



## 2 DECARBONIZE

Manage E&P for lower carbon portfolio

Execute GHG emission reduction plan

Accelerate CCS projects

Maximize use of renewable and future energy in operation

Pursue emission offsetting and Ocean for life



## 3 DIVERSIFY

Scale up AI and Robotics Ventures (ARV)

Develop Carbon Capture and Storage (CCS) as a Service

Explore hydrogen, and offshore renewables





# EP NET ZERO 2050



## Exploring for Lower Carbon E&P Portfolio

- 1 Lower Carbon E&P Portfolio Management

## Production and Planet in Balance

### Beyond Conventional Practice

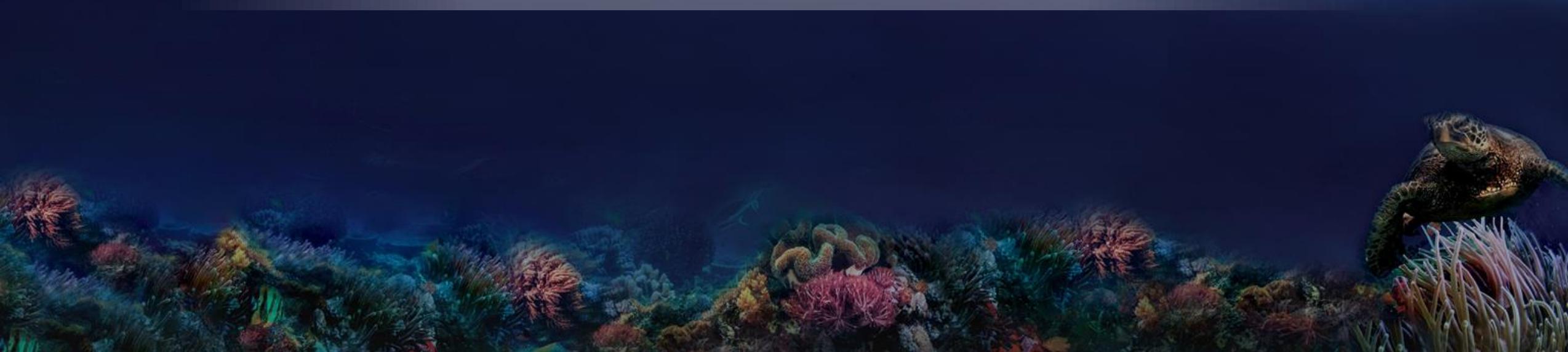
- 1 Zero Routine Flare for New Assets
- 2 Carbon Capture Utilization and Storage (CCUS)
- 3 Maximization of Renewable Energy in Operations
- 4 Full Application of Circular Economy Concept
- 5 Methane Emission Reduction via Technology

### Beyond Operation

- 1 Carbon Removal Project and Carbon Credit Acquisition
- 2 Advanced Carbon Removal Technology



# PTTEP Collaboration



# PTTEP Collaborations in Climate Management

## Ecosystem Build-up



Networking



Partnership/  
Membership



MOU



International Organization

Value Chain

and many  
**More...**

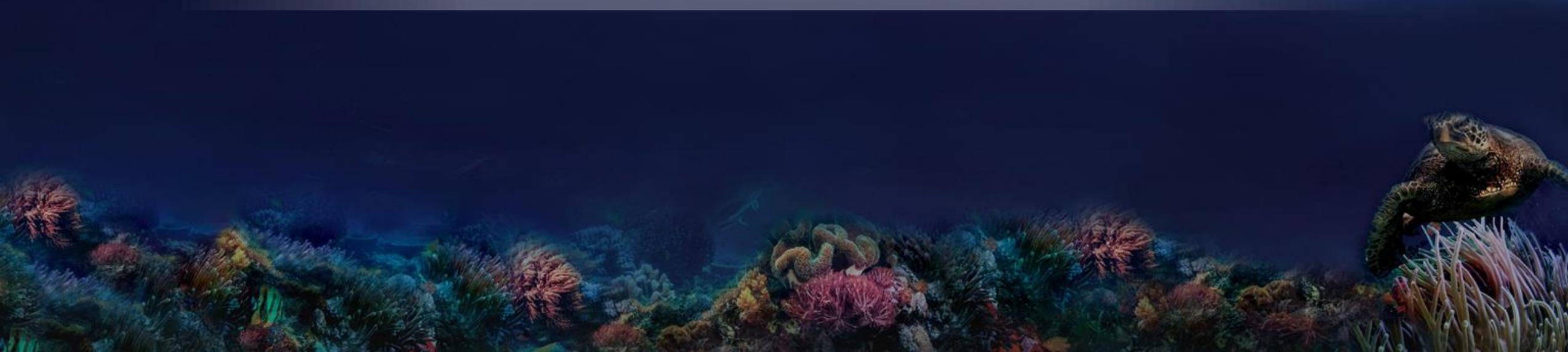
Government Bodies

Academies/Institutes

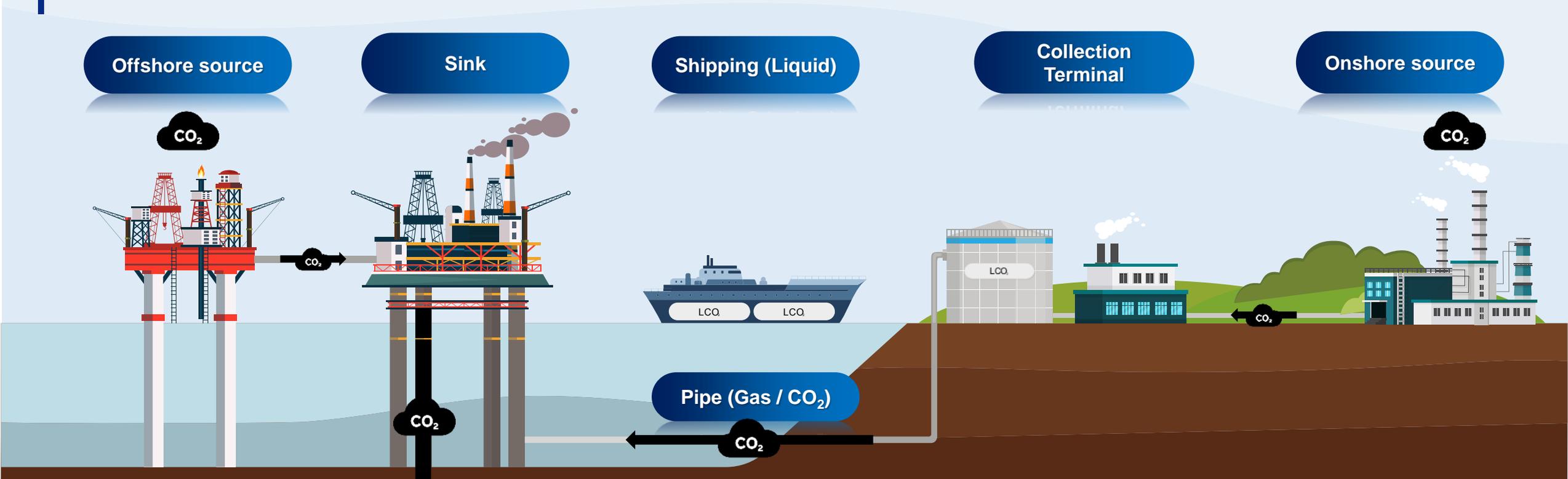




# PTTEP Technology & Innovation



# Eastern Thailand CCS Hub model



1 Storage

2 Transportation from collection site

3 Capture from industrial sources

Upstream

Midstream

Downstream / Industrial Sectors

# VARUNA NATURE-BASED SOLUTIONS

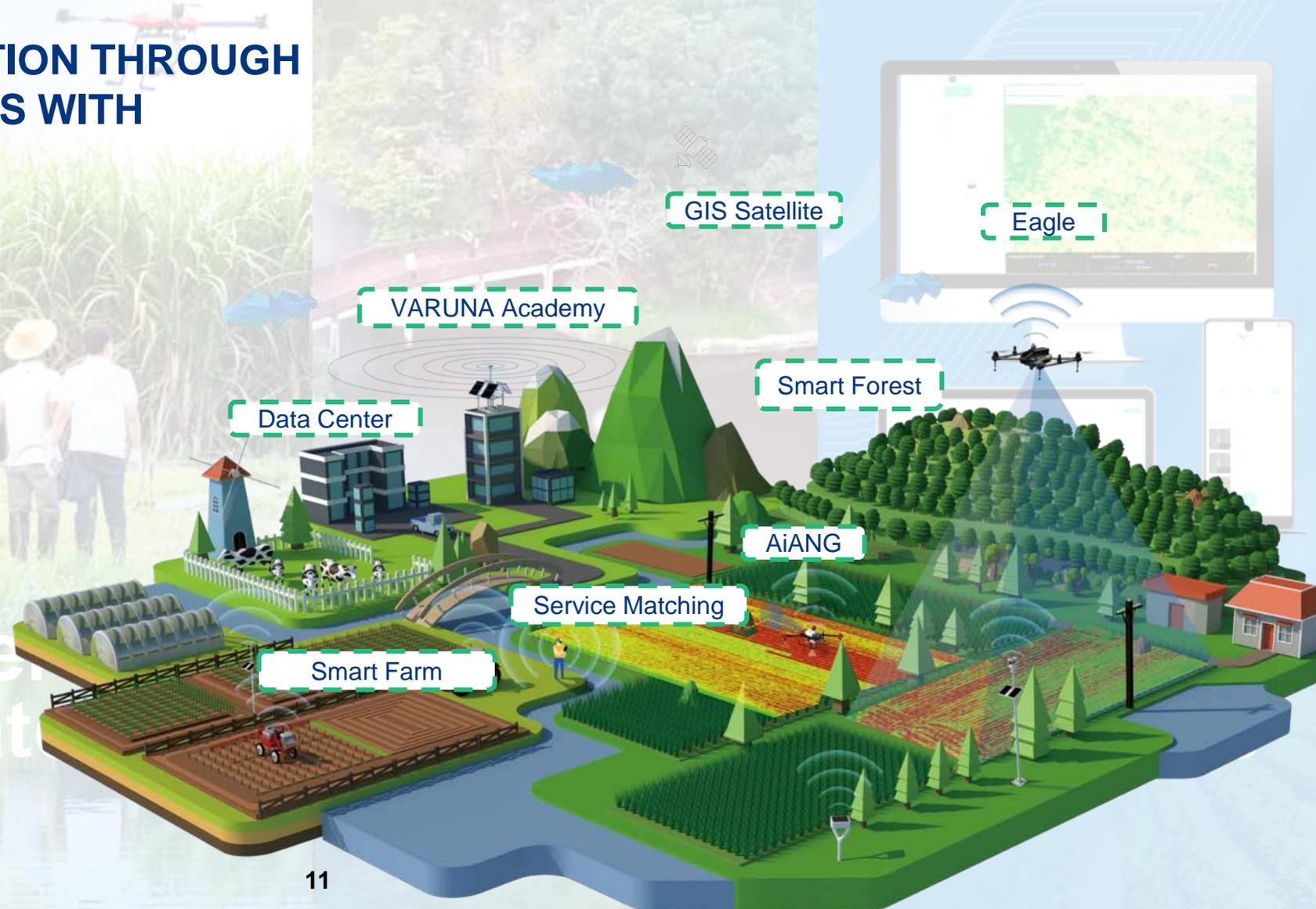
Seeding the sustainable future

**WE OFFER DECARBONIZATION THROUGH NATURE BASED SOLUTIONS WITH MEANINGFUL IMPACT**

  **Changes in Food Demand**

  **Climate Change**

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Mat



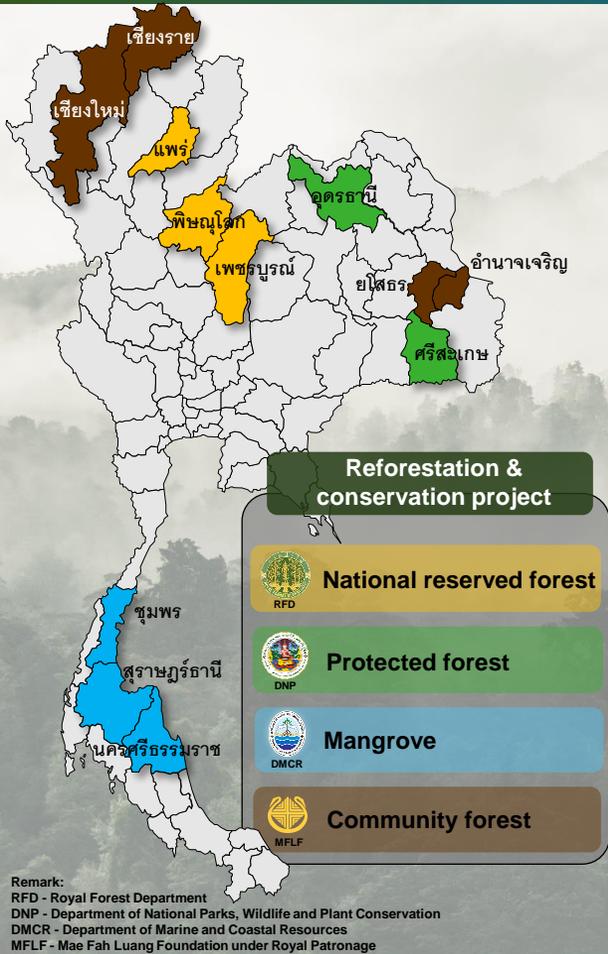


# Carbon Sequestration Projects

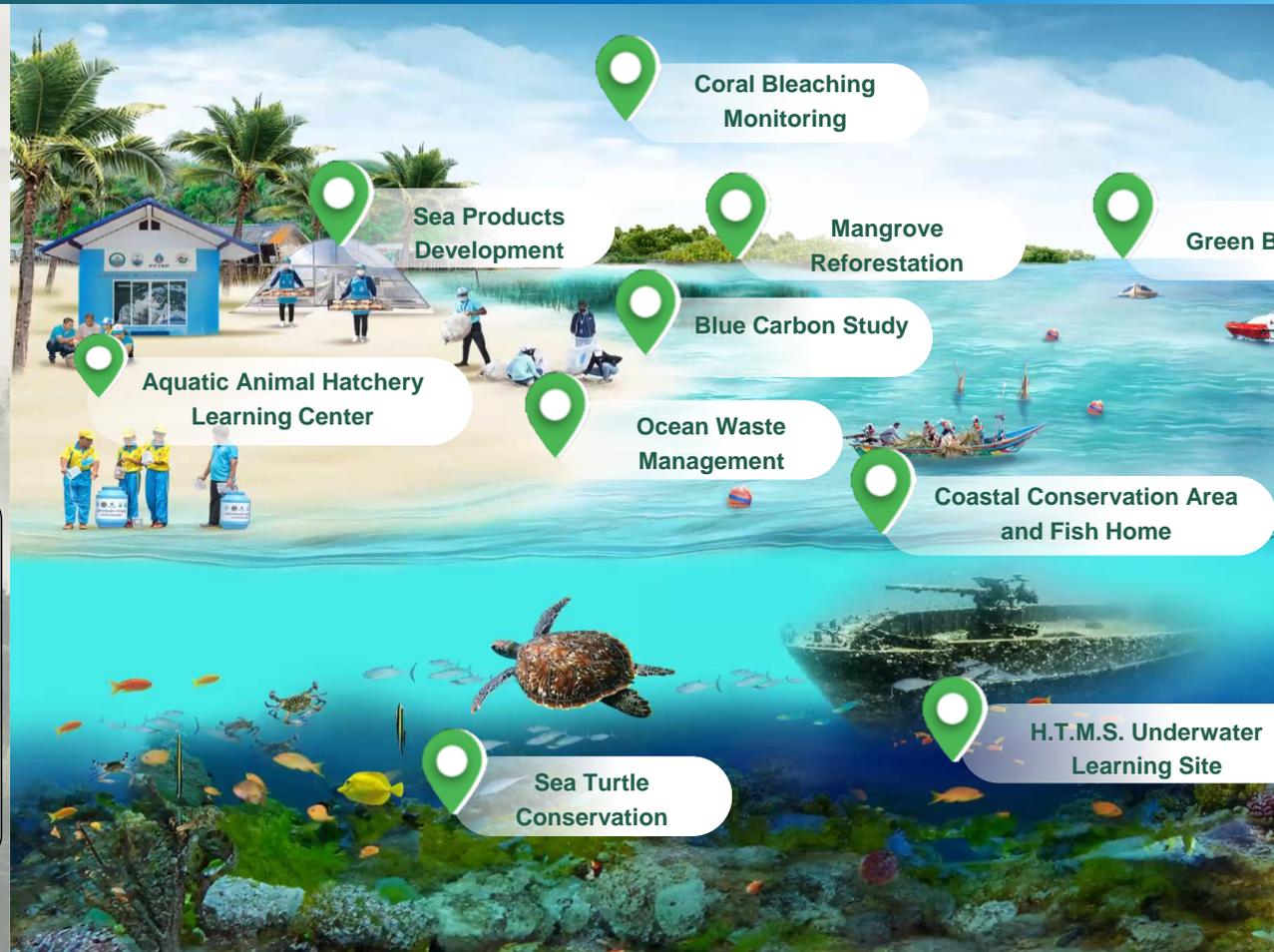


# CO<sub>2</sub> Sequestration and Biodiversity Preservation

## Onshore



## Nearshore



## Offshore



OCEAN FOR LIFE INITIATIVES



EP Net-zero target

Biodiversity target

2050

Net zero emissions of operational control scope 1 and scope 2

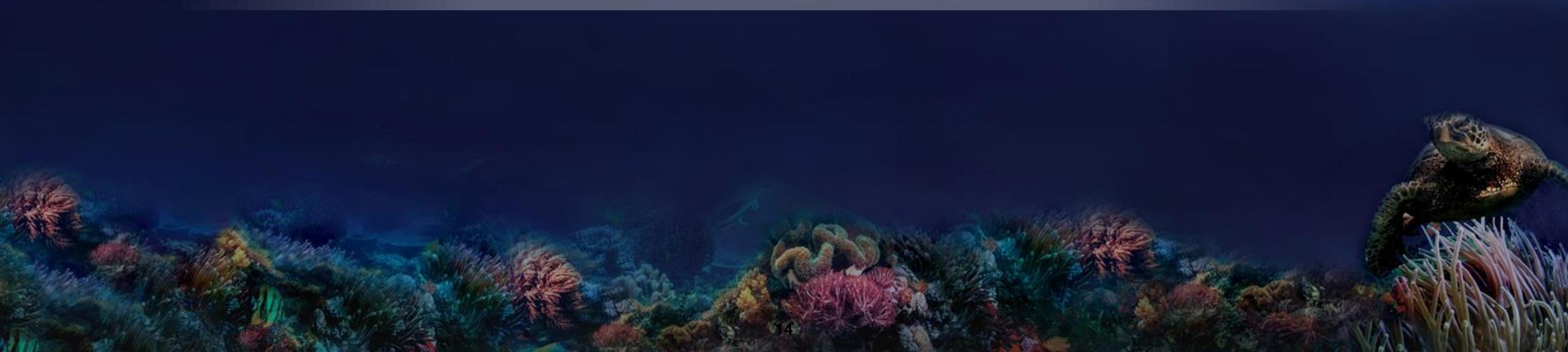
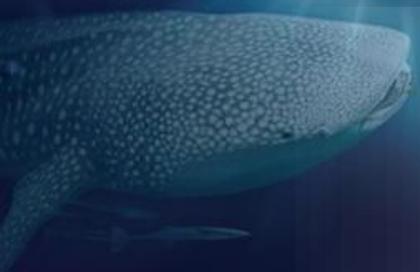
**Net Positive Impact (2030)**

of Biodiversity & Ecosystem Services (BES) Value in Offshore Operations (2019 Baseline)

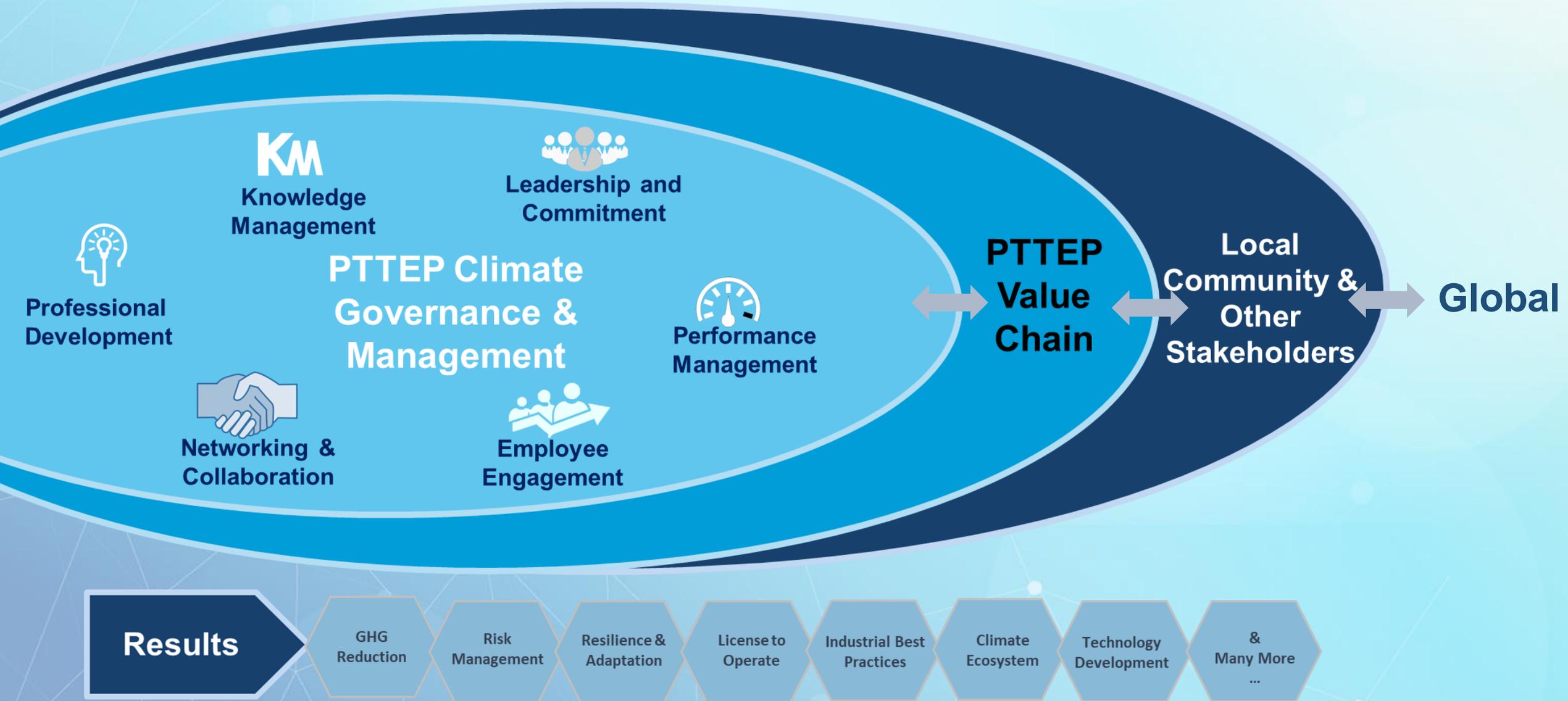
2050



# Competency Build Up

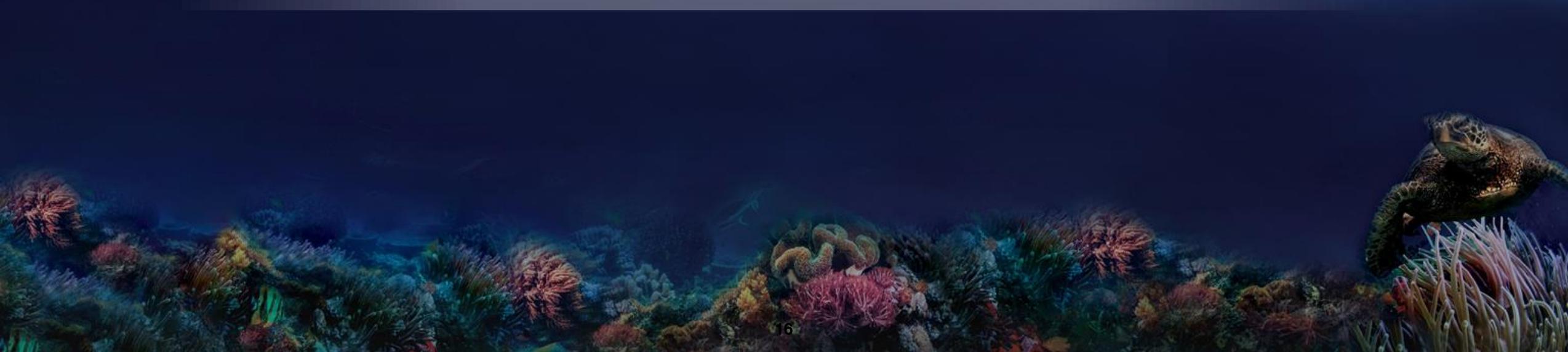


# Climate Competency Build Up





CSR



# Social Development



> **140** Projects  
(Thailand & International)

### 3 WORKSTREAMS OF OCEAN FOR LIFE

1. Sustainable Ocean-Friendly Operations
2. Sustainable Ocean Health and Blue Carbon Solutions
3. Sustainable Community around the Ocean

### Ocean for Life

**Sustainable Community around the Ocean**

### Well-being for Life

**Domestic and International Assets**

Beneficiaries **870,933**  
Persons  
(accumulated number until 2022)

2023 Social Investment **15**  
MMUSD

SROI **3.55 : 1**

CSR Awards since 2014 **76**  
awards

# Achievement of CSR Projects



## 2030 Target

- Achieve net positive impact
- Increase 50% of community income
- Achieve 16,000 conservation networks

## Achievement (2020 - 2023)

- 27.42 MMUSD** accumulative BES value
- ≥ 27.5%** community income increase
- 5,259** conservation networks

## PROTECT



### Ocean Waste Mgmt.

- Collected waste **187 Tons**
- Waste product development **4 Products**
- Learning center **2 Centers**



## PRESERVE



### Mangrove Forestation

- Planted **5,007 Rai**
- Survival rates **87 %**
- Benthic species increased **15 %**



### Aquatic Animal Hatchery Learning Centers

- New center **12 Centers**
- Aquatic animal released **>25,000 MM Larvae**
- Visitors **4,121 People**



## PROVIDE

### Sea Product Development

- Sea Product Group **11 Groups**
- FDA Certificate for New recipes **9 Recipes**
- FDA Certificate for Sea Product Development Center **1 Center**



### Coastal Conservation Area & Fish Home

- Conservation areas **14.8 KM<sup>2</sup>**
- Conservation groups **29 Groups**



### Sea Turtle Conservation

- Survival rates **83 %**
- Sea turtles released **>11,000 Turtles**





Thank You