Dissemination Session

Preliminary Study on the Formation of a Decarbonization Model

Thailand Tourism Sector, Event Industry and MICE

March 17, 2026

2:00–3:00 PM

AGENDA

This session aims to present the key findings from the study, including the proposed decarbonization model for the tourism and MICE sectors and the concept of potential pilot projects to support its implementation. The session also seeks to gather feedback, insights, and recommendations from stakeholders

Time	Agenda	Speaker
14.00 – 14.05	Welcome Remarks	JICA Representative
14.05 – 14.15	Project Overview & Key Findings	Research Team
14.15 – 14.30	Conceptual Decarbonization Model	Research Team
14.30 – 14.45	Pilot Project Concept	Research Team
14.45 – 15.00	Open Discussion &Feedback	All Participants

CONTENT

Project Overview

Project Name:	**Preliminary Study on the Formation of a Decarbonization Model for Tourism Sector, Event Industry and MICE in Thailand**
Objectives:	Develop a preliminary decarbonization framework and pilot concepts for Thailand's tourism-related sectors
Research Period:	February – March 2026
Research Team:	This study was funded by Japan International Cooperation Agency (JICA)

- Zeroboard (Thailand) Co., Ltd.
- Green & Blue Planet Solution Co., Ltd.

Project Overview

Approach and Methodology:

The study adopts a structured approach based on literature review, combining policy analysis, market assessment, stakeholder interviews, and technical evaluation to develop a decarbonization model for Thailand's tourism and MICE sectors.

1. Secondary Research

Review and synthesize existing published information and policy documents to establish the analytical foundation for the decarbonization model.

2. Primary Research

Conduct **face-to-face and online interviews** to gather data and assess operational readiness and barriers across the industry value chain in order to gain market insights

3. Technical Analysis

Technical analysis to understand sector-specific characteristics , and an integrated framework for decarbonization model development.

Policy & Market Assessment

Technical & Case Study Analysis

Decarbonization Model & Pilot Concept Development

Strategic Recommendations

02
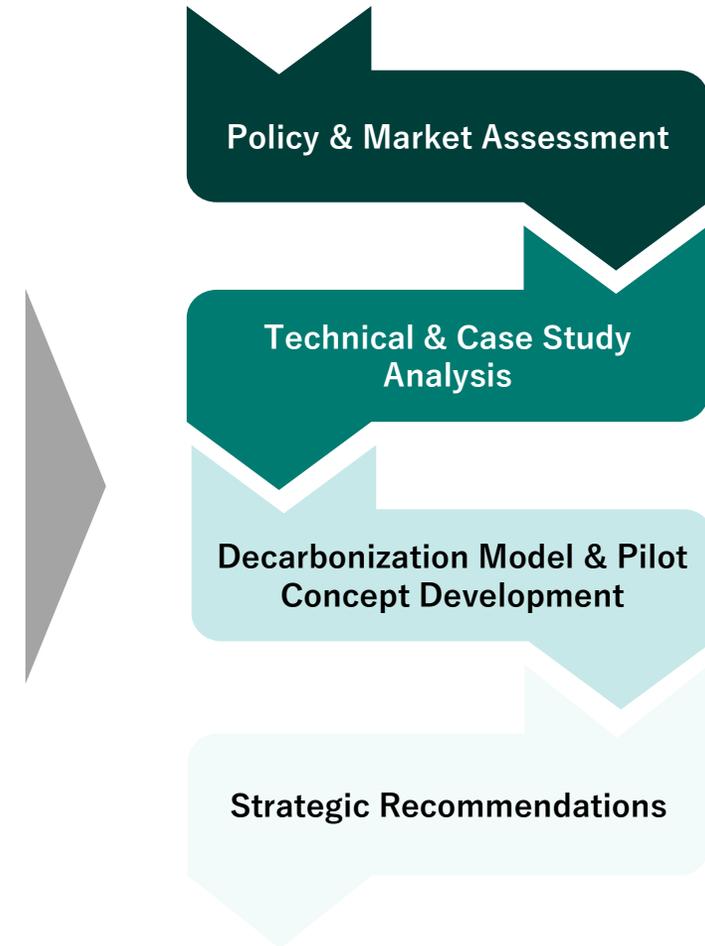
Key Findings

Key Findings

Travel & Tourism Landscape

Global Trend

Global tourism is shifting toward sustainable, resilient, and high-value growth, with stronger integration of ESG principles. The MICE industry is also advancing sustainable and data-driven events to enhance destination competitiveness and economic impact.

SUSTAINABLE DEVELOPMENT GOALS

Glasgow Declaration
Climate Action in Tourism

Thailand's Strategic Direction

Thailand is shifting toward high-value and sustainable tourism and MICE by focusing on quality experiences and environmental sustainability.

Thailand green Tourism Plan 2030

THAILAND MICE MEET THE MAGIC | TCEB

Market Statistic In 2024	Tourism GDP **14.71%** of Thailand's total GDP
Tourism Sector	▲ No. of Visitors **357,108,948** | ▲ Market Value **2,924** Billion THB Both domestic and international
MICE Sector	▲ No. of Visitors **25,897,693** | ▲ Market Value **140** Billion THB Both domestic and international

Thailand in Global Rankings

GLOBAL DESTINATION SUSTAINABILITY MOVEMENT

The GDS-Index 2025 Top 40 Global
Ranking **28**
Songkhla, Thailand

Asia-Pacific
Ranking **10**
Bangkok, Thailand

ICCA

From 160 Countries
Country Ranking **25**
158 Meetings in 2024

Travel & Tourism Landscape

Tourism
Global In 2018

8%

of the world emissions

Tourism
Thailand In 2018

11.7%

of Thailand's emissions
(30.6 Million tons CO_2)

Thailand - Travel & Tourism's contribution to total greenhouse gas emissions

% of total GHG emissions (World Travel & Tourism Council, 2025)

Line chart:
- 2019: 17.5% (Thailand)
- 2020: 6.3%
- 2021: 3.2%
- 2022: 7.1%
- 2023: 11.4%
- 2024: 12.8%

Legend: Thailand, Asia-Pacific, World

Donut chart:
- 42% Transportation
- 6% Others
- 11% Fuel
- 12% Manufacturer
- 14% Agricultural &Food
- 15% Utilities

GHG Emission Profile

Scope 1
Direct Emission
Fuel Combustion, Fugitive Emissions

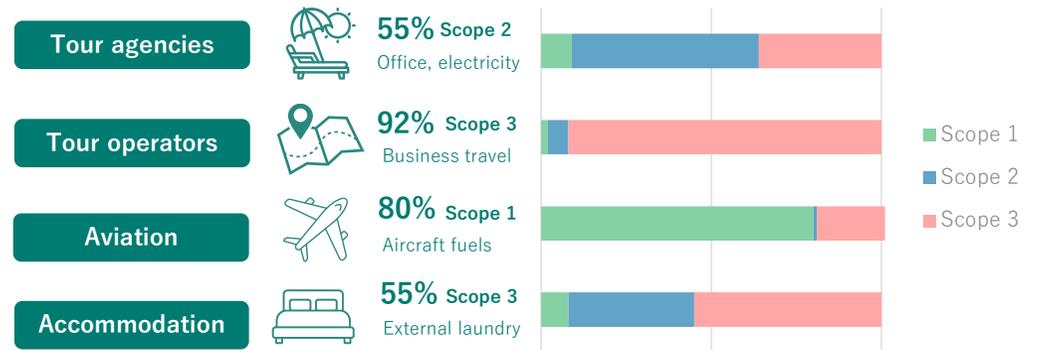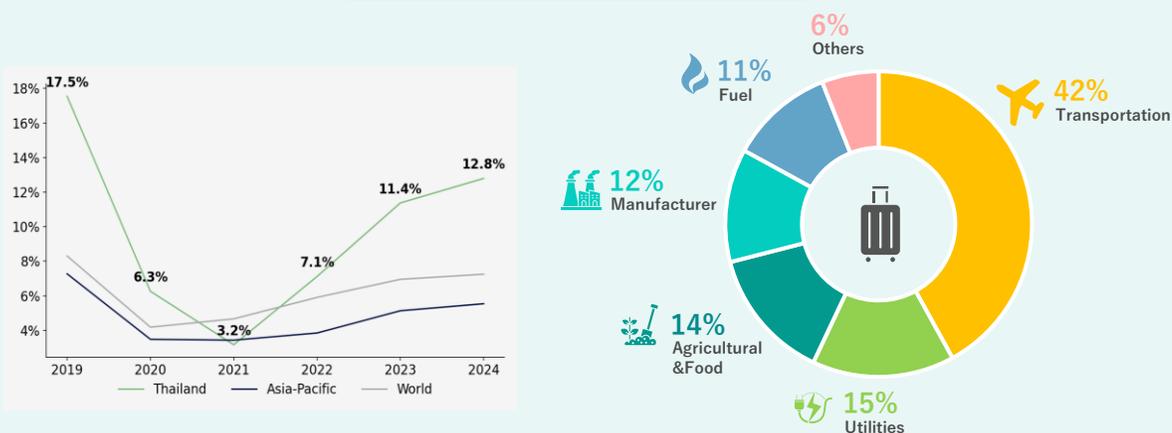**Scope 2**
Indirect Emission
Electricity

Scope 3
All Other Indirect Emission
Purchased Goods, Waste generated, Business Travel

The distribution of emissions in the tourism sector differs markedly across business segments in the value chain.
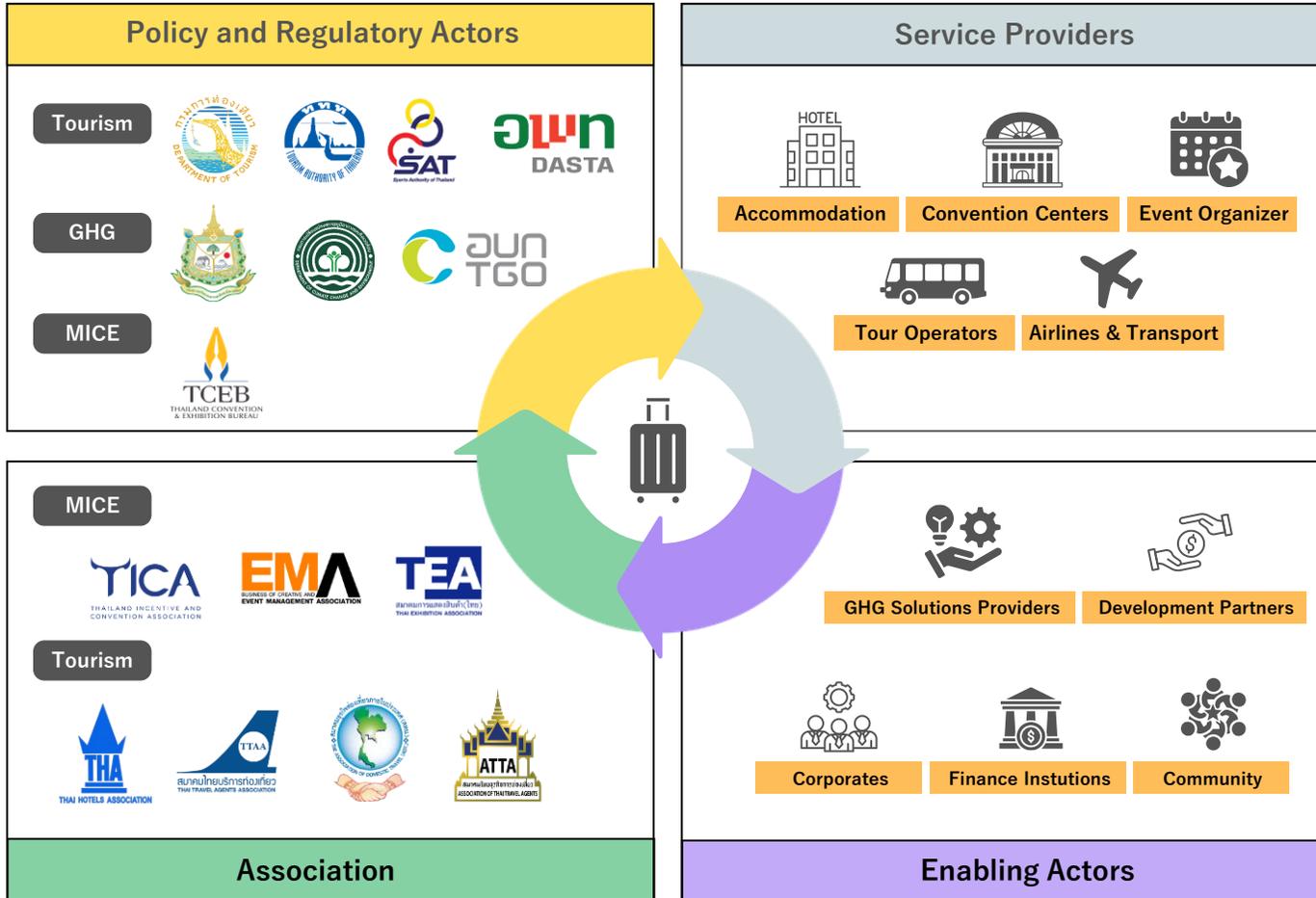
Tour agencies — 55% Scope 2 — Office, electricity

Tour operators — 92% Scope 3 — Business travel

Aviation — 80% Scope 1 — Aircraft fuels

Accommodation — 55% Scope 3 — External laundry

Legend: Scope 1, Scope 2, Scope 3

Stakeholder Relations and Initiatives

The stakeholder mapping below illustrates the institutional ecosystem influencing decarbonization in Thailand's tourism, event, and MICE sectors

Policy and Regulatory Actors
- Tourism
- GHG
- MICE

Association
- MICE
- Tourism

Service Providers
- Accommodation
- Convention Centers
- Event Organizer
- Tour Operators
- Airlines & Transport

Enabling Actors
- GHG Solutions Providers
- Development Partners
- Corporates
- Finance Instutions
- Community

Platform and Tools

Low-carbon Activities
- Low-carbon Tourism

Standard and Guidelines

Certification and Labels
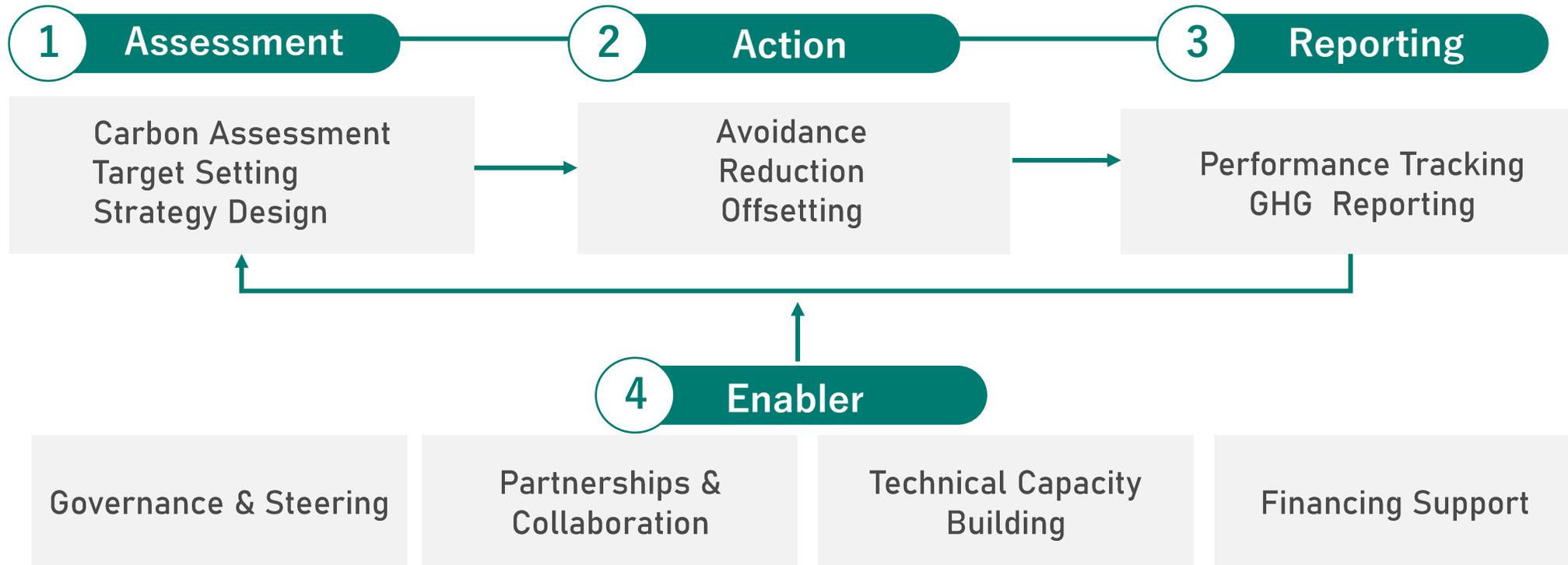
Conceptual Decarbonization Model

Conceptual Framework of Decarbonization Model

Decarbonization Action Framework

1 Assessment

Carbon Assessment
Target Setting
Strategy Design

2 Action

Avoidance
Reduction
Offsetting

3 Reporting

Performance Tracking
GHG Reporting

4 Enabler

Governance & Steering

Partnerships &
Collaboration

Technical Capacity
Building

Financing Support

Conceptual Framework of Decarbonization Model

1 **Assessment**   In Thailand, the government and related agencies provide several **guidelines and tools** to support tourism, MICE, and event businesses in conducting greenhouse gas (GHG) assessments.

Carbon Footprint Calculation
To understand the current GHG emission status.

Setting Climate Targets
To establish clear GHG emission reduction goals.

Developing Decarbonization Strategies
Implement GHG reduction actions aligned with national or international guidelines.

Guideline/Manual

National

- Guideline for developing zero-carbon tourism businesses
- Carbon footprint manual for MICE
- Carbon footprint manual for organization
- Carbon-neutral event guideline

Tool

National

Guideline/Manual

International

- Greenhouse Gas Protocol
- ISO 14064-1, 14067, 14068-1
- Science-based Targets

GREENHOUSE GAS PROTOCOL   ISO 14064   SCIENCE BASED TARGETS

Tool

International

- Hotel carbon measurement initiative (HCMI)
- SME climate hub

SME Climate Hub

Conceptual Framework of Decarbonization Model

2 Action

AVOID

REDUCE

OFFSET
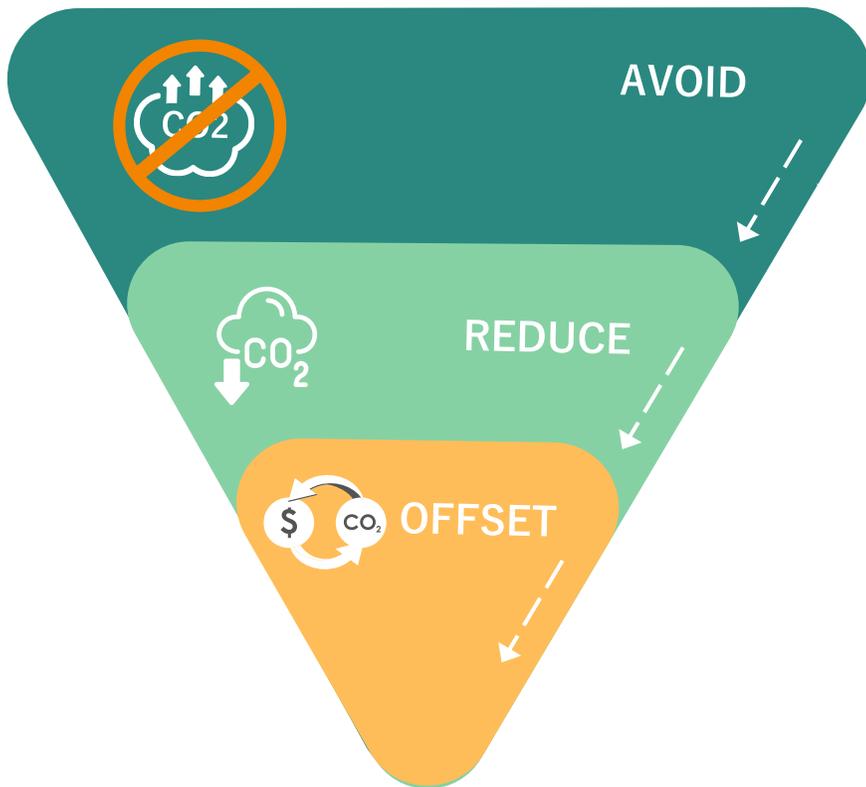
01 **Prevent emission at sources**
- Sustainable Procurement
- Low-Carbon Design

02 **Reduce emissions through operational improvement**

- **Transportation**
  - EV Adoption
  - Public transportation
  - Low-emission transport options
- **Energy**
  - Energy efficiency
  - Renewable energy
- **Resource & Waste Management**
  - Resource Efficiency
  - Waste Management

03 **Compensate for remaining emissions**

▸ **Carbon offsetting mechanism**
- **Emission reduction**
  Renewable energy projects
  Waste management initiatives
- **Emission removal**
  Forestry and ecosystem restoration projects

Carbon Credit Schemes

National | International

T-VER | PREMIUM T-VER | Gold Standard | Verified Carbon Standard A VERRA STANDARD | GLOBAL CARBON COUNCIL

▸ **Use of Renewable energy attributes**
- International Renewable Energy Certificate (I-REC)
- ISCC Credits Transfer System

I-REC STANDARD

ISCC International Sustainability & Carbon Certification

Decarbonization Model – Emission Reduction

Transportation ▶ **Energy** ▶ **Resource & Waste Management**

Electric Vehicle (EV)

Scope 1 : Company-owned vehicles

- Promote the use of electric vehicles (EV)

Low–Carbon Transportation

Scope 3 : Attendees Travel

- Biofuel powered transportation
- Public Transportation
- Shared transportation

- **SAF Credit**

ISCC Credits Transfer System

ISCC International Sustainability & Carbon Certification

Energy Efficiency

Scope 2 : Electricity used in conference centers or hotels

- Light Emitting Diode (LED) Lighting
- Heating, ventilation, and air-conditioning (HVAC) optimization
- Regular energy monitoring and audits

Renewable Energy

Scope 2 : Energy consumption in Accommodation

- Installation of Rooftop Solar System - Power Purchase Agreements (PPAs)
- Renewable Energy Certificates

I-REC STANDARD

Resource Efficiency

Scope 3 : Event Materials, Water Resources, Food

- **Reducing single-use materials** Reusable bottles, biodegradable containers, electronic registration, and digital materials
- **Water conservation** - Water-Efficient Fixtures
- **Sustainable food procurement** - sourcing local food, vegan menu options

Waste Management

Scope 3 : Waste, Food waste, Packaging

- Clear waste separation
- Composting, Procurement of Food Waste Digesters

DECARBONIZATION GOALS

Low-Carbon Transportation | Green Tourism Infrastructure | Sustainable Event Management

Conceptual Framework of Decarbonization Model

3 **Reporting**

In Thailand, there is currently no centralized national database specifically dedicated to tourism and MICE sector emissions. However, several visualization platforms have been developed by government agencies and through public–private partnership initiatives to display emission-related information from different types of tourism activities and organizations.

Recommend key indicators
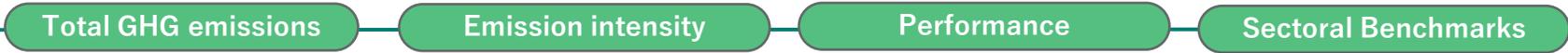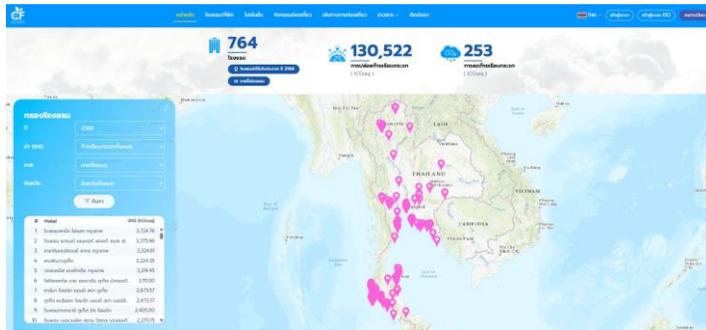
Total GHG emissions **Emission intensity** **Performance** **Sectoral Benchmarks**

CF Hotels

Low Carbon City

Smart CBT

DASTA

Carbon Neutral Event

TGO

Conceptual Framework of Decarbonization Model

4 Enabling Environment

Achieving decarbonization in the tourism and MICE sector requires not only operational actions but also a supportive enabling environment.

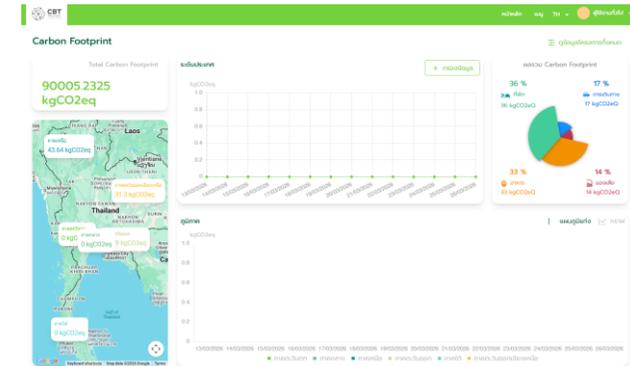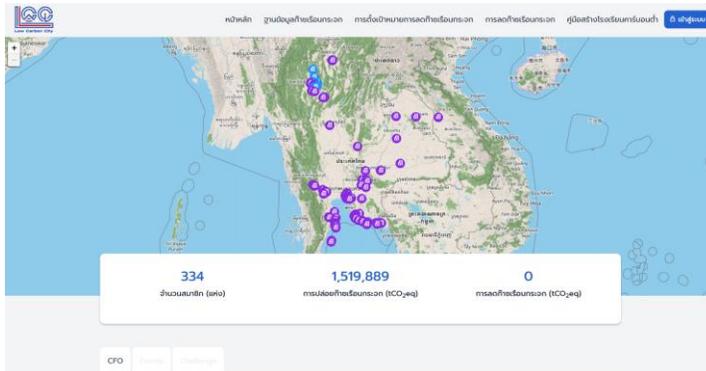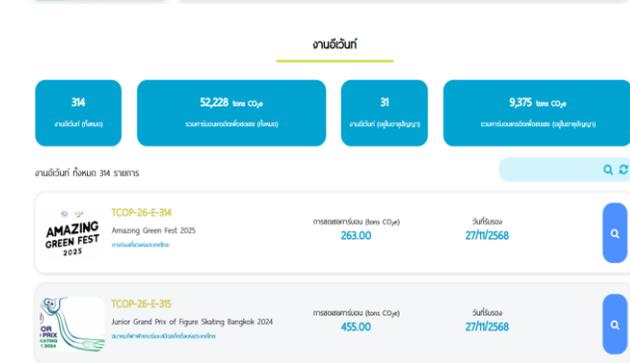| Governance and Steering	Partnerships and Collaboration	Technical Capacity Building	Financing Support
Government agencies play a central role in setting policy directions and coordinating sustainability initiatives.	These partnerships and collaboration help share knowledge, align actions, and scale practices across the sector.	Technical knowledge and advisory support are critical for enabling businesses to implement decarbonization measures.	Financing support to invest in low-carbon technologies and climate mitigation initiatives.

Banks
Borrowers (Hotels) can access long-term funding with preferential conditions.

MUIC supports the program through academic expertise and capacity building.

CMU supports platform by providing academic collaboration and knowledge resources related to the MICE and hospitality industry.

EIC providing internationally recognized training and certification for MICE professionals, helping enhance industry standards in Thailand.

Certificate

Capacity Building

Tools and guidance

Technical knowledge and advisory

Government Funding

Government budgets
MOTS and MNRE support projects and initiatives that promote low-carbon development in the tourism sector

Private Sector Funding

Financial Institutions
Commercial banks provide green loans or sustainability-linked loans to support investments in low-carbon technologies

International Cooperation

Green Hotels Support under ThaiCI Fund by GIZ
Grant support for hotel SMEs to support low-carbon tourism

04

Pilot Project Proposals

Pilot Project Proposals

Pilot Project: 1. Low-Carbon Support Desk Project

Background

Decarbonization of the tourism, event, and MICE sector requires coordinated action among multiple stakeholders. In Thailand, however, responsibilities related to tourism, events, and climate policy are distributed across several agencies, leading to fragmented initiatives and limited coordination.

Organizations such as TGO, TCEB, TAT, and DCCE are implementing various sustainability initiatives. The parallel initiatives across government agencies make it complicated for stakeholders to access guidance, tools, and support for decarbonization.

Inspired by the sustainability framework for MICE events developed by the Tokyo Convention & Visitors Bureau, this pilot project proposes establishing a **Low-Carbon Support Desk** to provide coordinated support and facilitate decarbonization across Thailand's tourism and MICE value chain.
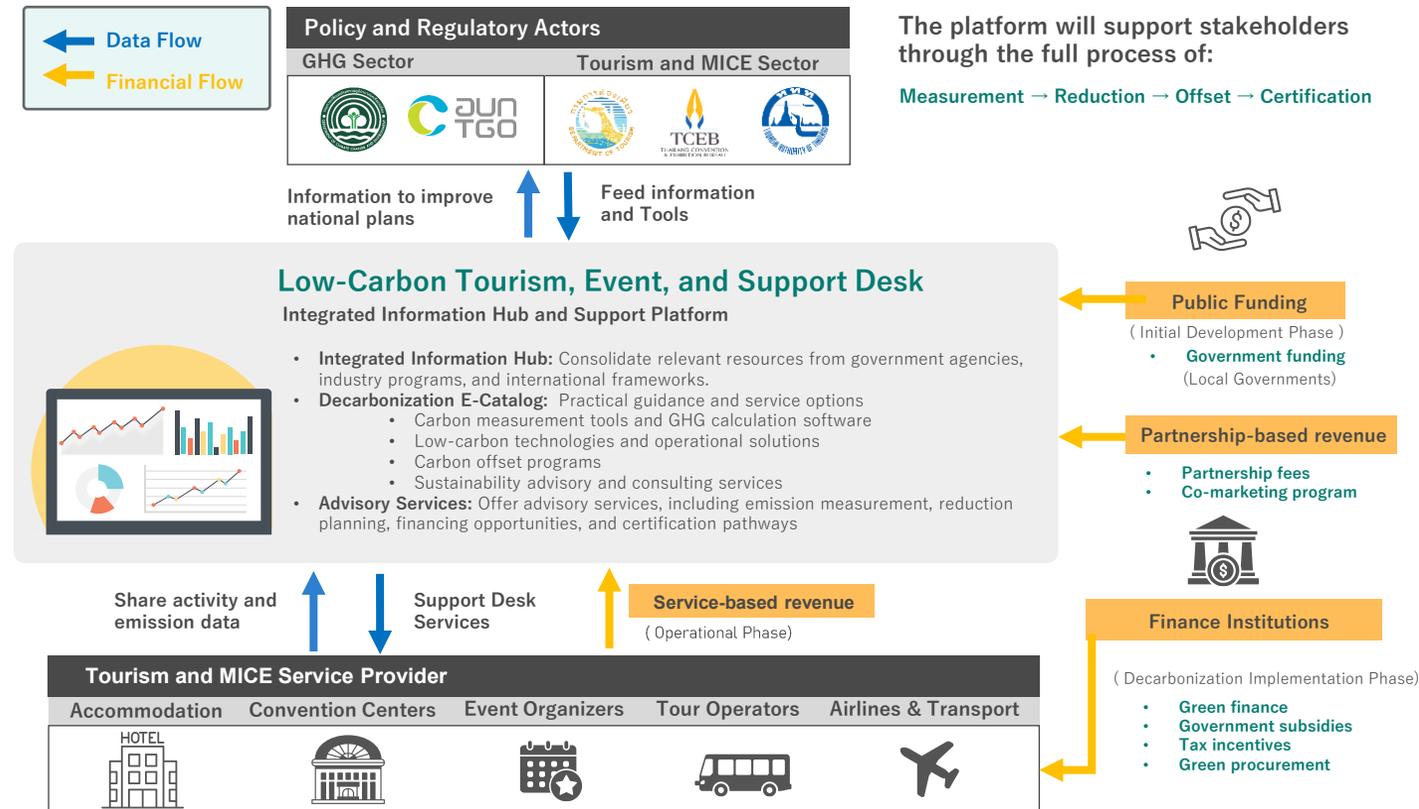
Pain Points

- Lack of standardized carbon measurement frameworks
- Absence of a central coordinating entity
- Parallel initiatives across agencies

Governance Structure: Joint Platform

- A multi-agency platform jointly managed by tourism and climate organizations.
- Day-to-day platform management may be operated by a technical service provider

Proposed Solution: Low-Carbon Support Desk

The Support Desk will act as an **enabling actor**, linking government initiatives, industry stakeholders, and service providers to facilitate the implementation of the tourism decarbonization model.

The platform will support stakeholders through the full process of:

Measurement → Reduction → Offset → Certification

Pilot Project Proposals

Pilot Project: 2. Low-Carbon Tourism in Designated Areas Project

Background

Local communities in designated tourism areas are important destinations with rich natural, historical, and cultural values. These communities play a key role in supporting sustainable and community-based tourism promoted by organizations such as the Designated Areas for Sustainable Tourism Administration.

However, many communities still face challenges in integrating greenhouse gas (GHG) reduction and low-carbon practices into tourism activities due to limited tools, knowledge, and practical implementation approaches.
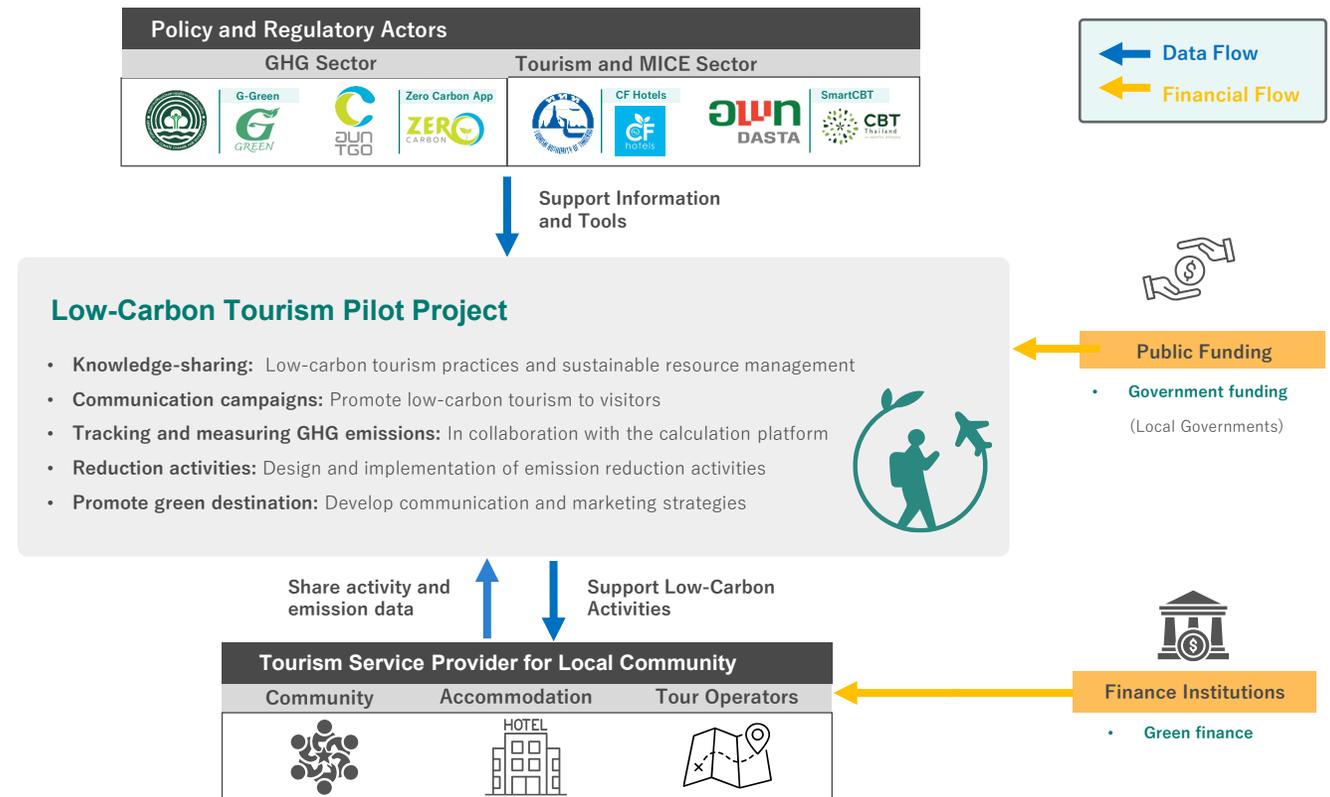
Pain Points

- Tourism communities lack the tools and technical knowledge to assess GHG emissions from tourism-related activities.
- Many tourists still have limited awareness of environmental impacts, resulting in excessive GHG emission-generating behaviors.
- Collaboration among local communities, tourism operators, and relevant agencies is often fragmented, making it difficult to implement collective actions.
- Government policies and climate measures are often not clearly communicated or translated into practical actions for local communities.

Pilot Area

DASTA responsible area 9 area, focus on community-based tourism destination

Proposed Solution: Low-Carbon Tourism for the Local Community

The project will develop a **Low-Carbon Tourism Pilot** in collaboration with *Designated Areas for Sustainable Tourism Administration* and local administrative organizations within designated tourism areas. The pilot aims to demonstrate practical approaches for reducing tourism-related greenhouse gas (GHG) emissions while supporting community-based tourism.

Low-Carbon Tourism Pilot Project

- **Knowledge-sharing:** Low-carbon tourism practices and sustainable resource management
- **Communication campaigns:** Promote low-carbon tourism to visitors
- **Tracking and measuring GHG emissions:** In collaboration with the calculation platform
- **Reduction activities:** Design and implementation of emission reduction activities
- **Promote green destination:** Develop communication and marketing strategies

Public Funding
- Government funding
  (Local Governments)

Finance Institutions
- Green finance

Pilot Project: 3. Reduce Food Loss and Waste Project

Background

The tourism and MICE sector generates significant greenhouse gas emissions related to food procurement, transportation, catering services, and food waste. When food waste is disposed of in landfills, it decomposes and generates methane (CH_4), a greenhouse gas with a much higher global warming potential than CO_2, making food waste an important emission source in the tourism value chain.

Addressing food-related emissions has therefore become a key concern among stakeholders. A pilot project focusing on food systems in tourism and MICE operations could help reduce emissions through improved food planning or surplus food management to reduce food loss and waste of food products.

The project is expected to deliver environmental benefits through greenhouse gas reduction and improved waste management, while supporting Thailand's BCG economy and creating social benefits. To ensure financial sustainability, a **carbon credit mechanism** could be applied with transparent monitoring and collaboration with enabling actors such as greenhouse gas solution providers and project developers.

Pain Points

- Lack of systematic food waste management systems
- Limited economic incentives for waste diversion
- Limited measurement of food waste emissions

Proposed Solution: Low-Carbon Tourism for the Local Community

Policy and Regulatory Actors

GHG Sector	Tourism and MICE Sector	Food Sector

Support Information and Tools

Public Funding
- Tax Incentive

Reduce Food Loss and Waste Project

- **Design Program Activities**:
  - Food Waste Prevention
  - Food bank programs
  - Digital systems to track food waste
- **Support Implementation**: collect activity data
- **Calculate GHG emissions**: calculation of GHG reduction
- **Develop Carbon Credit**: Project design and Verification

Share activity and emission data

Tourism Service Provider for Local Community

Accommodation	Convention Centers	Retailer
Restaurant	Food service in event	Market/shopping mall

Data Flow
Financial Flow
Credit Flow

Stakeholders

Carbon Credit Mechanism

Investors
- Private companies
- ESG Investors

Project Developer

05

Open Discussion

"This study was funded by the Japan International Cooperation Agency (JICA) and conducted by a joint team from Zeroboard (Thailand) and Green & Blue Planet Solutions. The contents of today's presentation represent the views of the survey team and do not necessarily reflect the official views of JICA."

Thank you