

APEC Low Carbon Model Town (LCMT) Promotion through Eco-Point Program (LCMT-EPP)

“EPP Implementation Guideline for APEC & Samui”

Co-Sponsored by



Asia-Pacific
Economic Cooperation

Project Overseer



Department of Alternative
Energy Development and Efficiency

MINISTRY OF ENERGY

Project Consultant

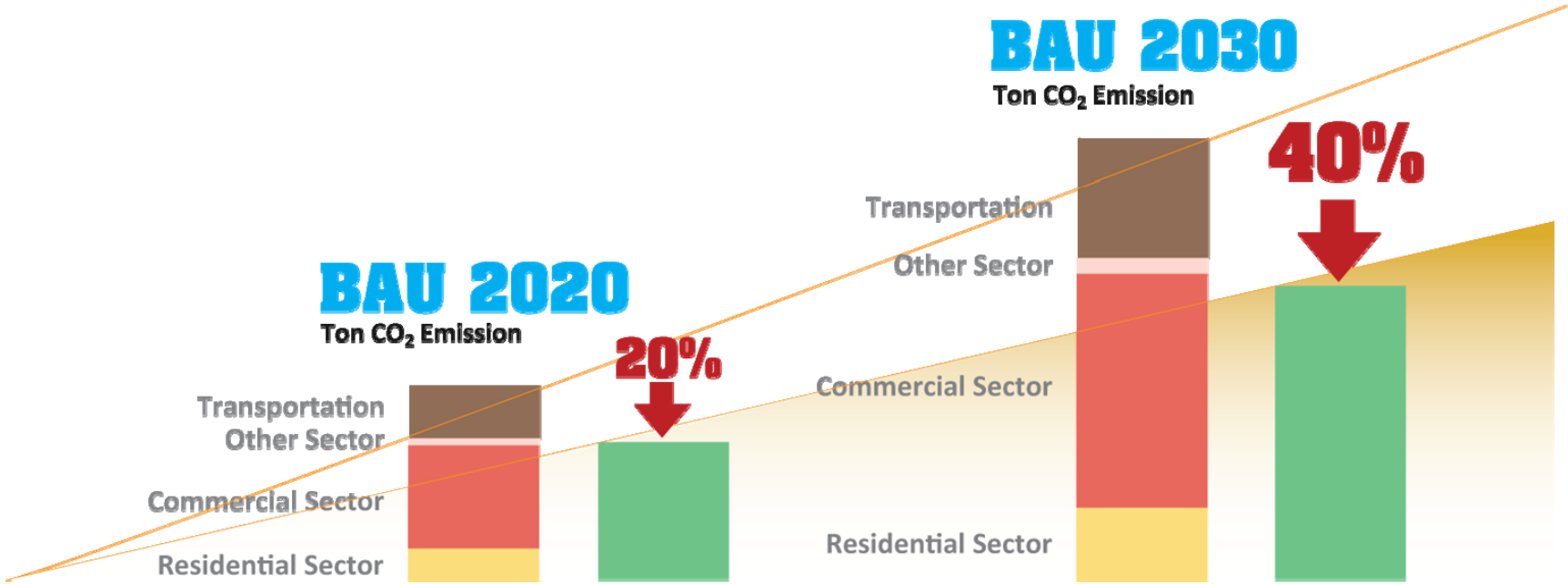


Background

Samui LCMT Phase 2 completed in 2012



SAMUI low carbon target



LCMT Measures for SAMUI Island



1. Town Structure Planning
2. Transportation Planning
3. Area Energy Planning
4. Area Energy Management
5. Renewable Energy
6. Untapped Energy Use Planning
7. Low Carbon Building
8. Eco-Lifestyle
9. Environmental Planning



9 BASKETS of LCMT Measures

Eco-Point Program Objectives

1. To create a **guideline of an eco-point program** for supporting the implementation of low carbon measures in the APEC projects.
2. To build up **EPP Forum** through ESCI-KSP, an on-line networking system, for sharing experiences and knowledge on low carbon technologies among the APEC member economies.
3. To enhance understanding of needs and benefits for low carbon society resulting in increased public environmental awareness through **public consultation** during the guideline development via the **on-line network, meetings and seminars**.
4. To develop a recommended **roadmap for effective implementation of the EPP** which will incorporate all low carbon measures into action in APEC economies.

EPP Project Outputs

A Roadmap for the Guideline Implementation Using Samui Island as a Case

EPP Roadmap

EPP Guideline

EPP Forum

Goal & Scope Definition, Certification Criteria, Institutional Framework, Short- & Long-Term Benefits

On-line Networking System for Sharing Experiences and Knowledge

Enhancement on the implementation of all low carbon measures in the APEC

Key Activities Completed

- ✓ **Activity 1. Data Collection** **Mar. 2014**
- ✓ **Activity 2. Initial EPP Guideline; APEC & Samui EPP Guideline** **Jul. 2014**
- ✓ **Activity 3. Establish EPP Forum; web-based via APEC ESCI-KSP** **Aug. 2014**
- ✓ **Activity 4. Develop EPP Roadmap** **Aug. 2014**
- ✓ **Activity 5. Focus Group Meeting** **Sep. 2014**
- ✓ **Activity 6. Dissemination** **Sep. 2014**

What is EPP?

Incentive Program

To promote “**green consumption**” towards low carbon society by giving points and rewards to the consumers who purchase certified eco-goods and services.



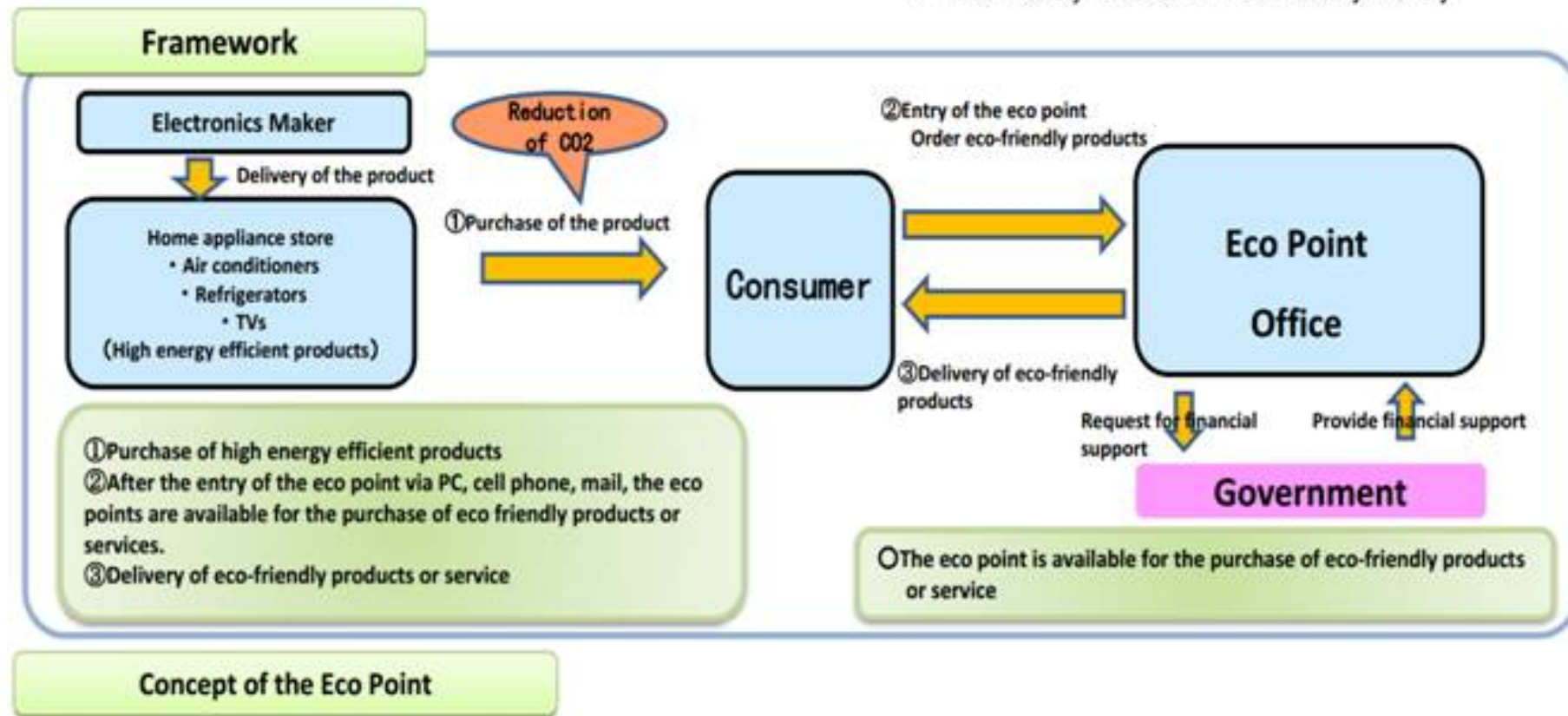
Enhance green consumption and improve energy efficiency and renewable energy use for manufacturing of products, services and transportations as a result, the more advanced technologies will be utilized

EPP Project in APEC

Japan

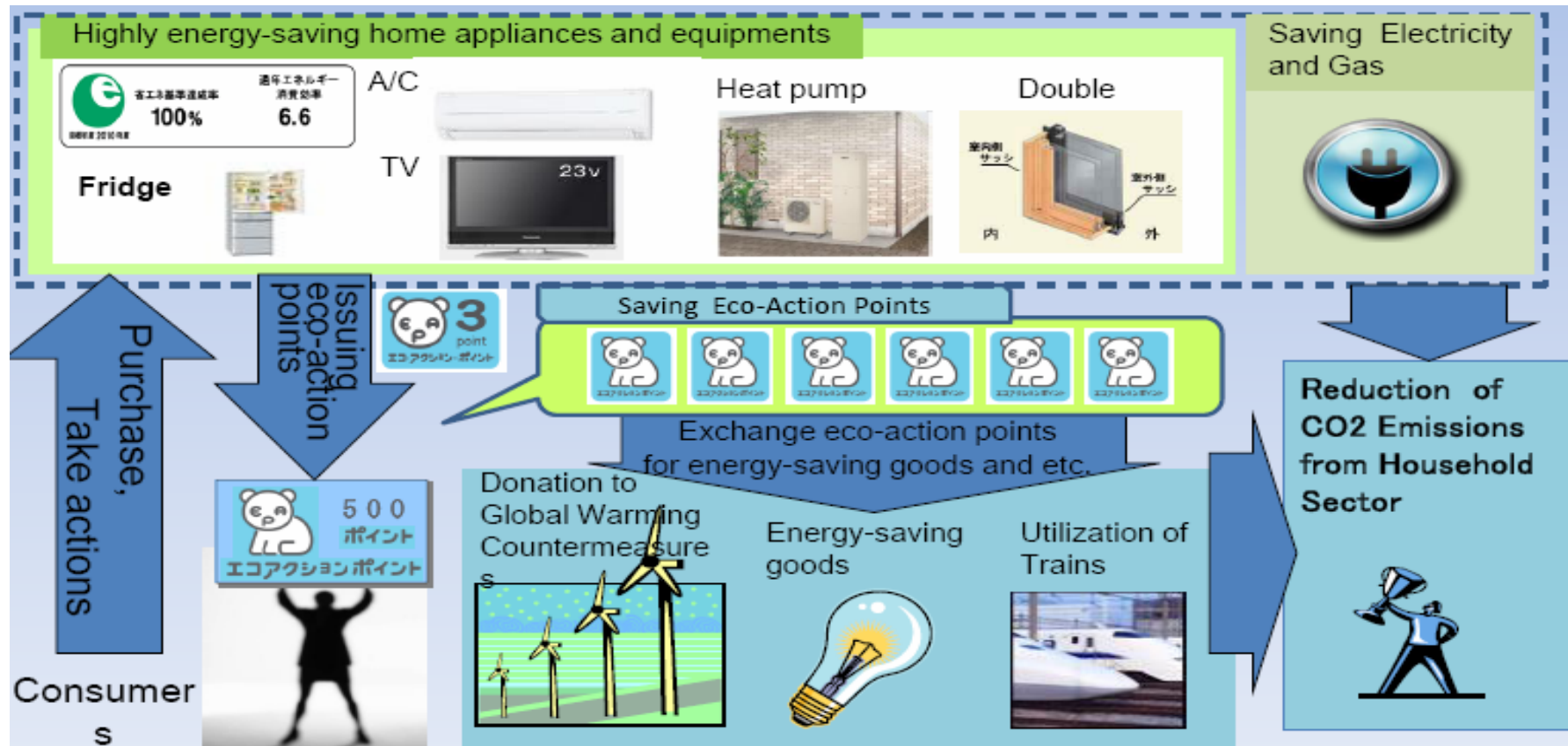


* "Eco-friendly" means "Environmentally-friendly"



EPP Project in APEC

Japan



South Korea



South Korea



How to Gain Points

Save electricity/water/gas at home

Buy eco-friendly products

Additional points at partner stores

Base points when payment is made with the card

Special Benefits

Discount at local cultural/sports facilities

Eco Products & Services Use



Eco-money Point?

The points are rewarded for GHG reduction at home, green product purchase and Green Credit Card use. Buy a product with an eco-money sticker or pay with the Green Credit Card at partner stores.

How to Use Points

Cashback

Point Swap

Use as cash at partner stores

Buy a green product

Pay public transportation fares and local taxes

Pay phone or APT utility bills

Donation (for environmental causes, etc.)

Eco Point Redeeming System



Main Elements

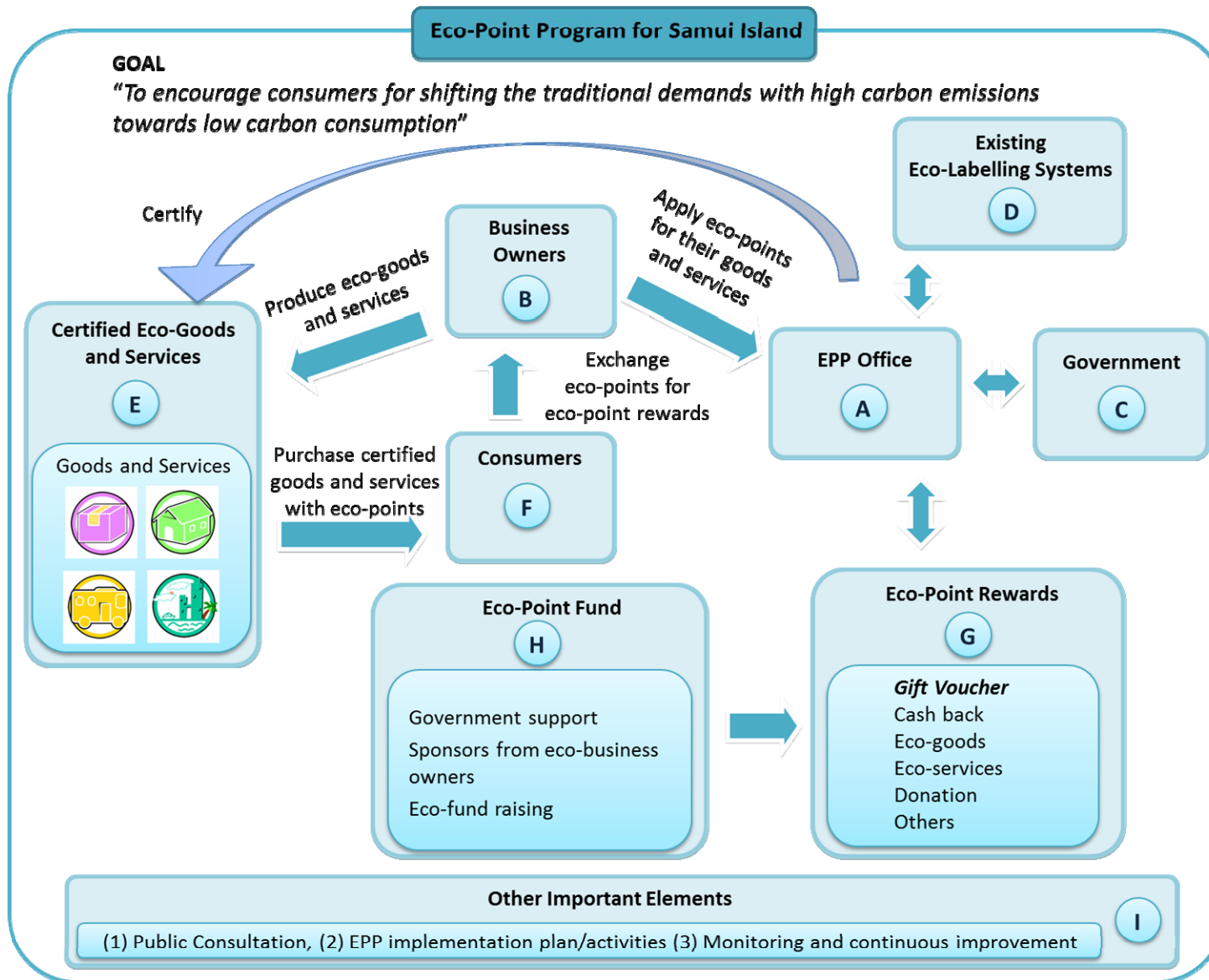
Eco-point Valuation Approaches

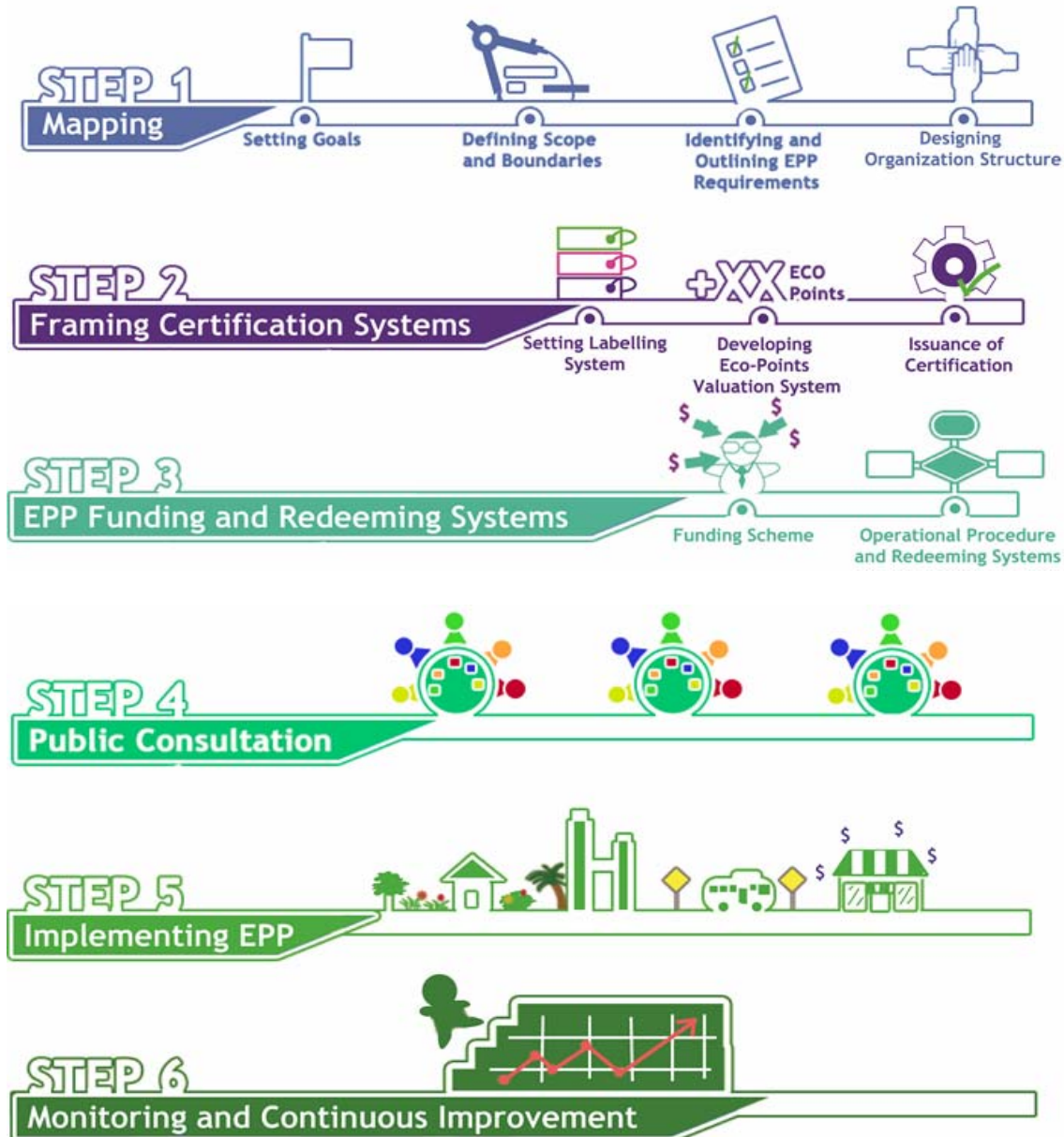
EPP Office

Eco-products (Goods & Services)

Eco-point Funds

Eco-point Rewards







1. Setting goals:

Defining general and specific goals and specific targets

2. Defining scopes and boundaries:

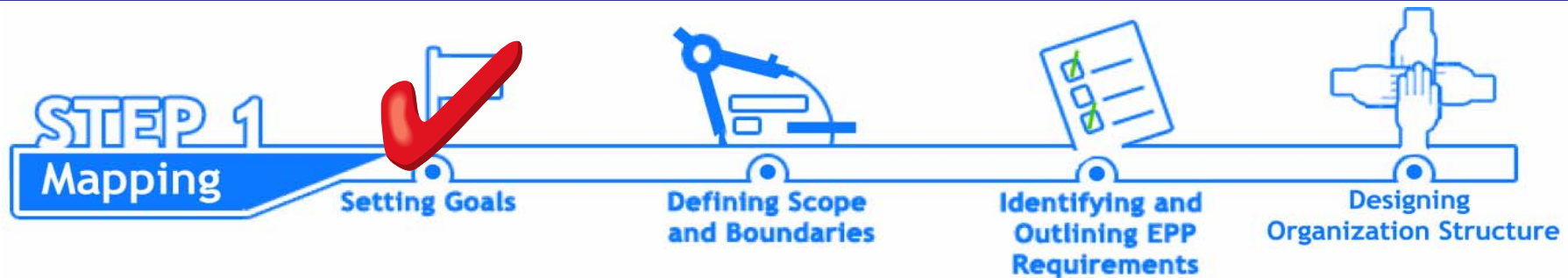
Identifying geographical, temporal and sectoral specific scopes and carbon emission boundaries

3. Identifying and outlining EPP requirements

Identifying status of low carbon policies and the existence of eco-point systems in the country or town

4. Designing organization structure:

Specifying roles and responsibilities of and relationships among stakeholders



The General EPP goal:

To encourage consumers for shifting the traditional demands with high carbon emissions towards low carbon consumption.

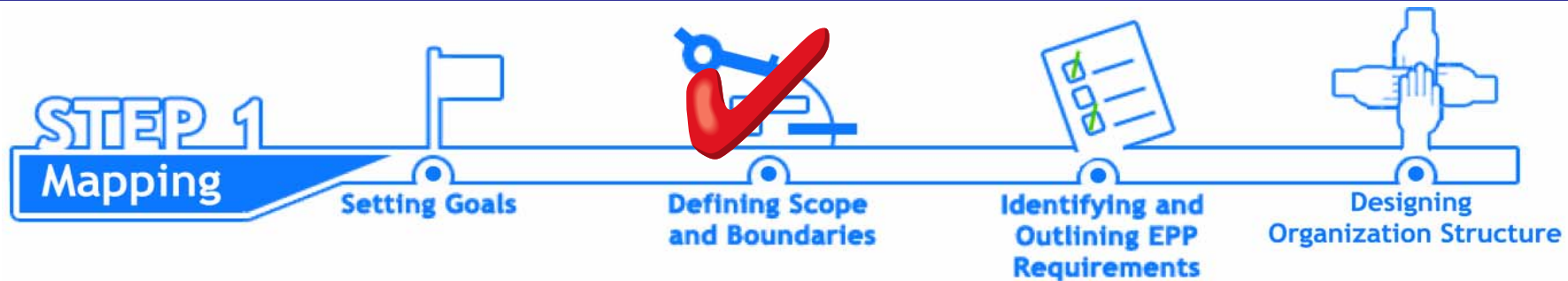
The Specific goal:

Direct Goal: Carbon Emission Reduction

- Select an overall carbon reduction target of the implementing area (i.e. national or local GHG targets depending on the availability)
- Set a specific carbon reduction target for the eco-point program

Indirect Goal: Carbon Emission Reduction by stimulation of Low Carbon Consumption

- Percentage of market share increase of specific types of certified eco-goods and services
- Market growth rate in comparison with business-as-usual growth rate



- EPP scope and boundaries to which extent the program will cover is very crucial for an effective implementation
- The scope should include geographical, temporal, sectoral aspects



Geographical:

- Town, City, National and Regional
- This relate to which stakeholder is the EPP office
- The level of geographical will affect the difficulty of implementation

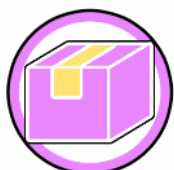


Temporal:

- Specific
- Non-specific
- Depending on the available eco-point funds and resources for EPP office establishment



SECTORS



Consumer goods:

Definition: Physical goods or tangible consumable items

Examples: Books, electric devices, tissue papers, and etc.



Household utility services:

Definition: Relating to, or used in a household

Examples: Electricity, water, gas, and etc.



Transportation services

Definition: Business or system of transporting goods or people

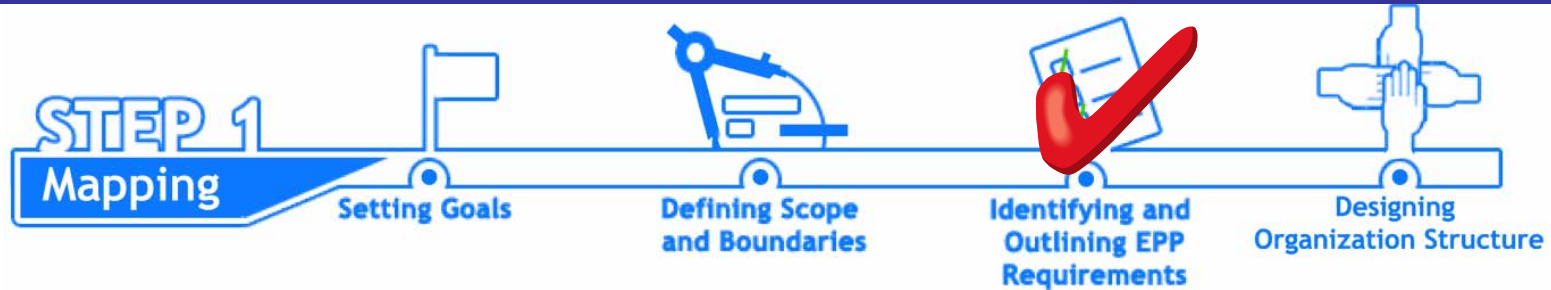
Examples: Airlines, railroads, trucking companies, public transport, and etc.



Tourist accommodation services

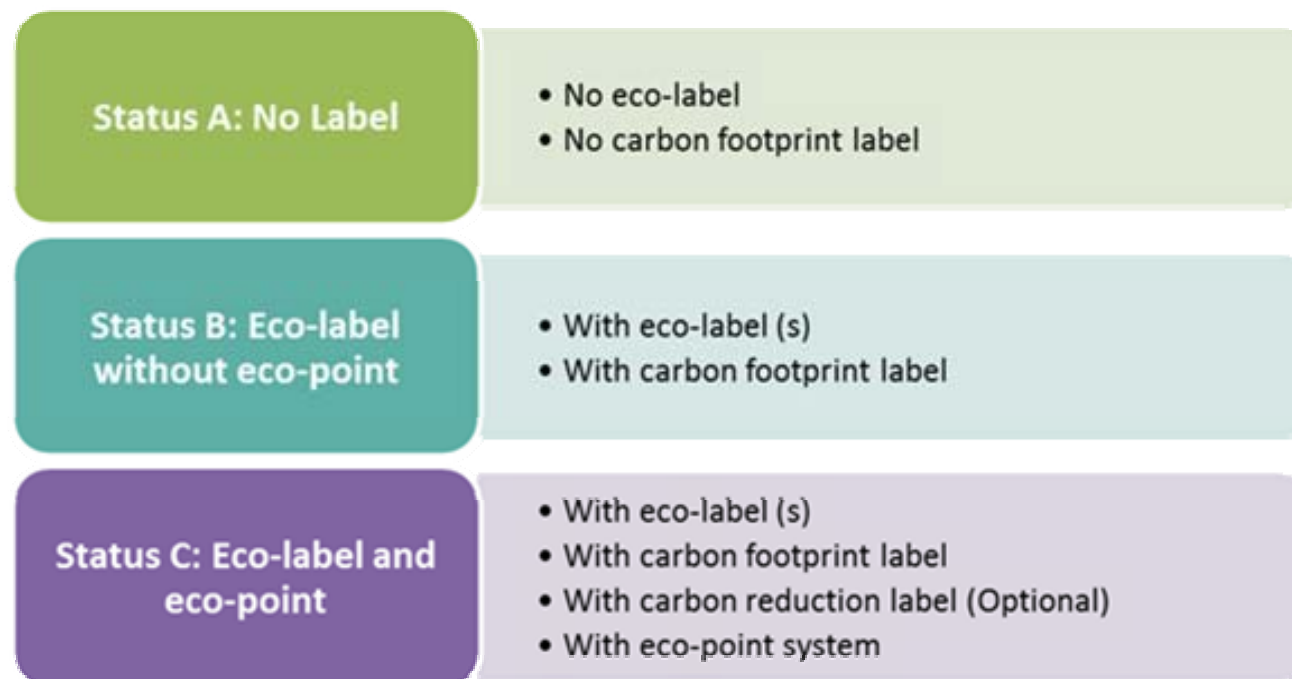
Definition: Any establishment operated by a person who offers for rent to tourists, in return for payment

Examples: Hotels, tourist villages, guesthouses, hostels, and any other tourism accommodation



The existing low carbon programs and EPP need to be evaluated

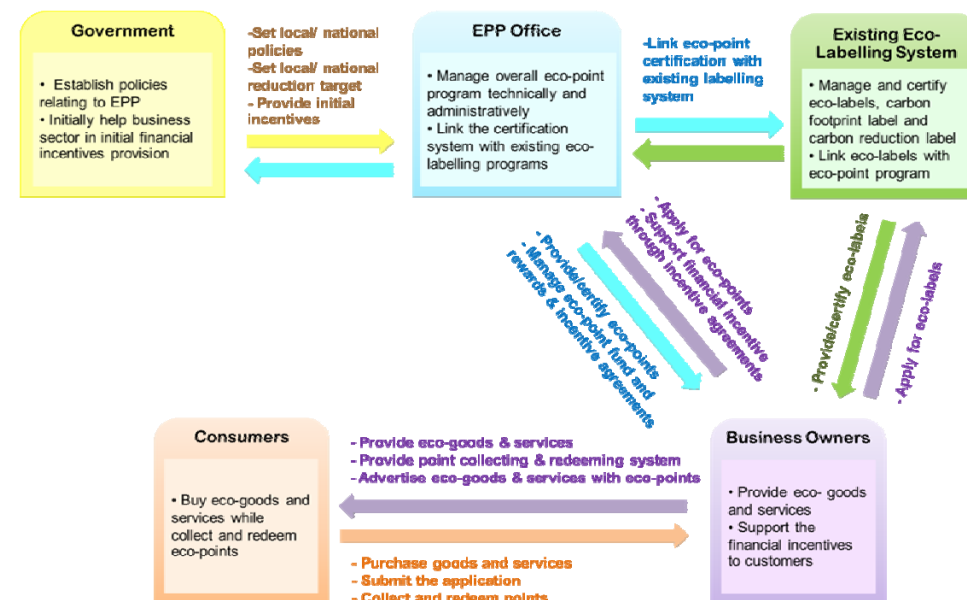
- the current status of low carbon policies
- the existence of eco-point systems in the country or town.
- It can be categorized into three main statuses





The organizational structure of EPP principally consists of five components:

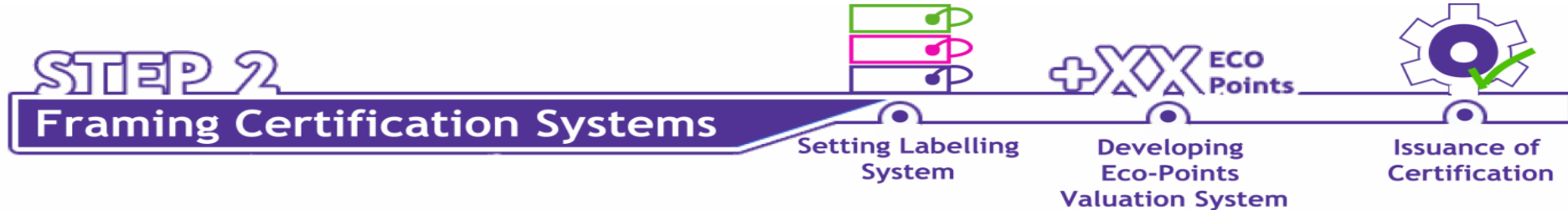
- Eco-Point Program Office
- Business Owners
- Existing eco-labeling systems (and their corresponding institutions),
- Local/national governmental agencies and
- Consumers



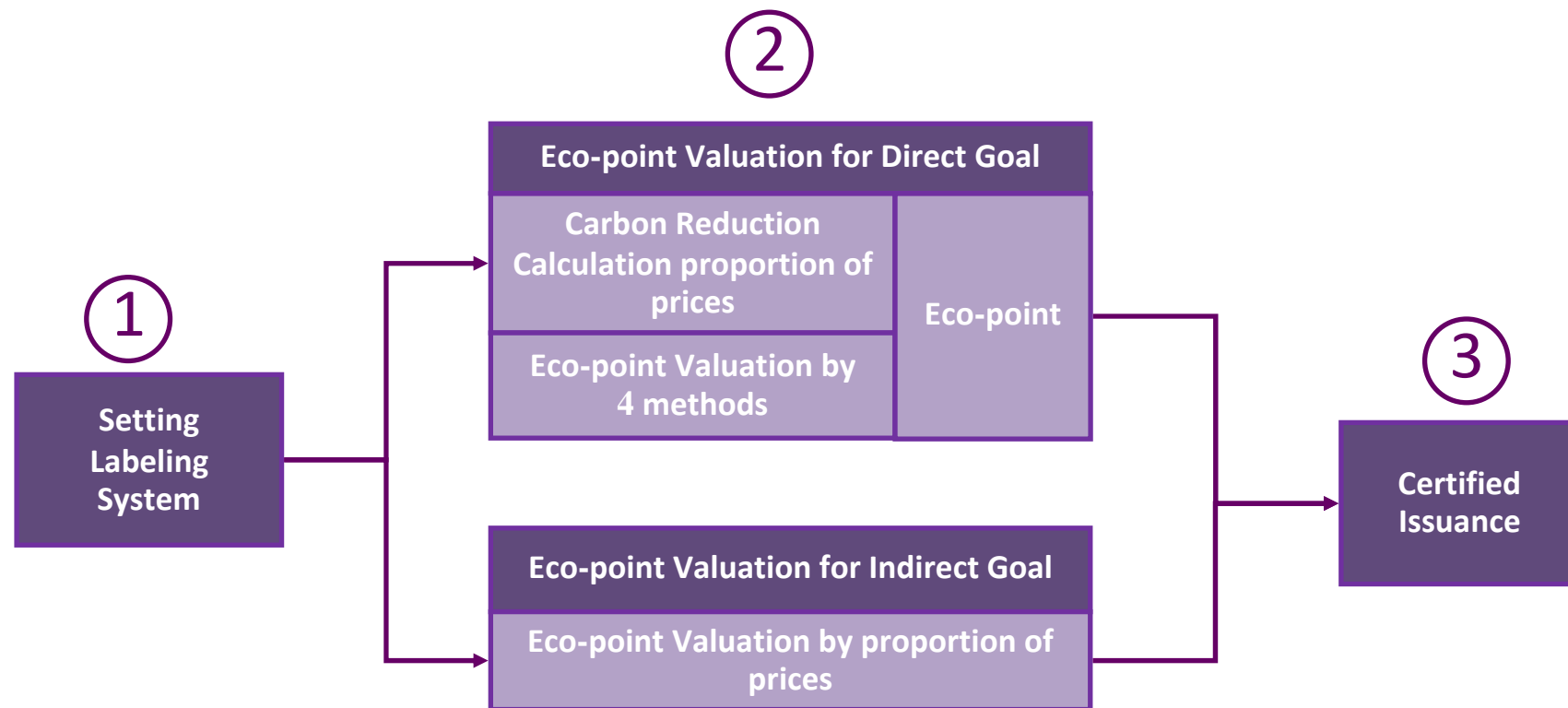
Existing-eco label in Thailand



Label	Logo	Certified Products/Services
Energy Label No. 5 <i>Responsible organization:</i> EGAT		168 million labels (cover over 20 types of electric equipment, updated July 2011)
Green Label <i>Responsible organization:</i> TEI		544 models (under 24 Products Category 73 companies, updated May 2014)
Carbon footprint of products <i>Responsible organization:</i> TGO		834 products (under 184 companies, January 2014)
Carbon footprint for Organization <i>Responsible organization:</i> TGO		26 organizations (updated January 2014)
Carbon Reduction Label <i>Responsible organization:</i> TEI and TGO		82 products (under 27 companies, updated January 2014)
CoolMode <i>Responsible organization:</i> TGO		13 Products (under 4 companies, updated October 2013)
TREES <i>Responsible organization:</i> TGBI		23 buildings (updated March 2014)
Green Leaf <i>Responsible organization:</i> Green Leaf Foundation		203 hotels (updated March 2014)



This step (framing certification system) is divided into 3 sections; Setting labeling system, Developing eco-point valuation system and Certified issuance.





Direct Goal: Carbon Emission Reduction

Consumer Goods Sector:

- EPP technical committee might choose the labels that can directly relate to CO₂ emission calculation to participate in the EPP

Households:

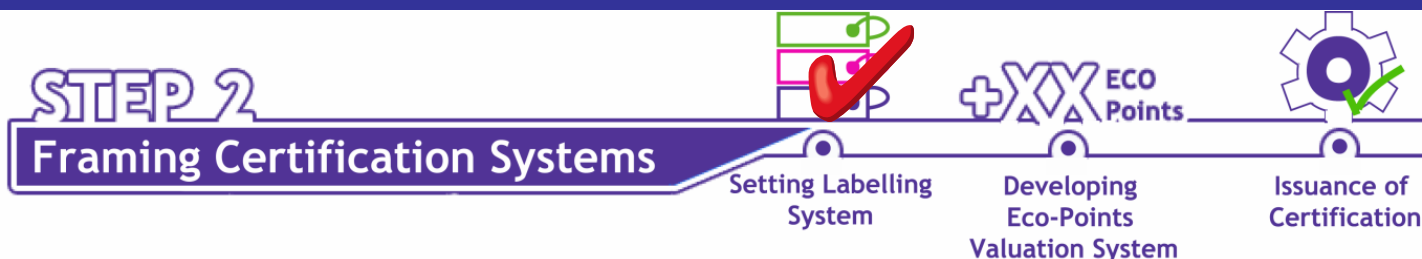
- EPP will trace back the reduction of consumption of utility usage.
- The eco-label may not be necessary.
- Finding the relation of utility consumption that can directly relate to the amount of CO₂ emission

Transportation:

- switch modes of traveling from private cars to public transport
- Comparing CO₂ emission between public and private transportation

Tourist Accommodation Services:

- Finding the relationship of the existing eco-label tourist accommodation and CO₂ emission.



Indirect Goal: Carbon Emission Reduction by stimulation of Low Carbon Consumption

Consumer Goods:

- Any kind of eco-label
- The Eco-labels may not necessarily reach the carbon footprint or carbon reduction label.

Household:

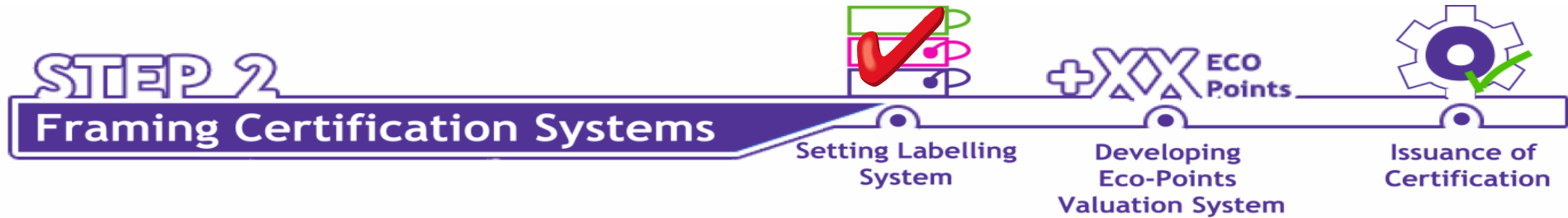
- Aiming firstly to reduce energy/resources consumption in household's sector
- It requires only previous records of utilities bills.

Transportation:

- The aim of indirect goal is also to switch modes of traveling from private car to public transportation.

Tourist Accommodation Services:

- Any kind of eco-label or any environmental-friendly claim.



- To determine appropriate economic value of eco-point.
- This section suggests the methods of
 - quantifying the amount of CO₂ reduction
 - monetary value of CO₂.
- The methods are depending on the selected EPP goal
 - Direct Goal
 - Indirect Goal
- Two main questions should be taken into consideration
 - What are the requirements for awarding an eco-point?
 - How much should an eco-point be?

STEP 2

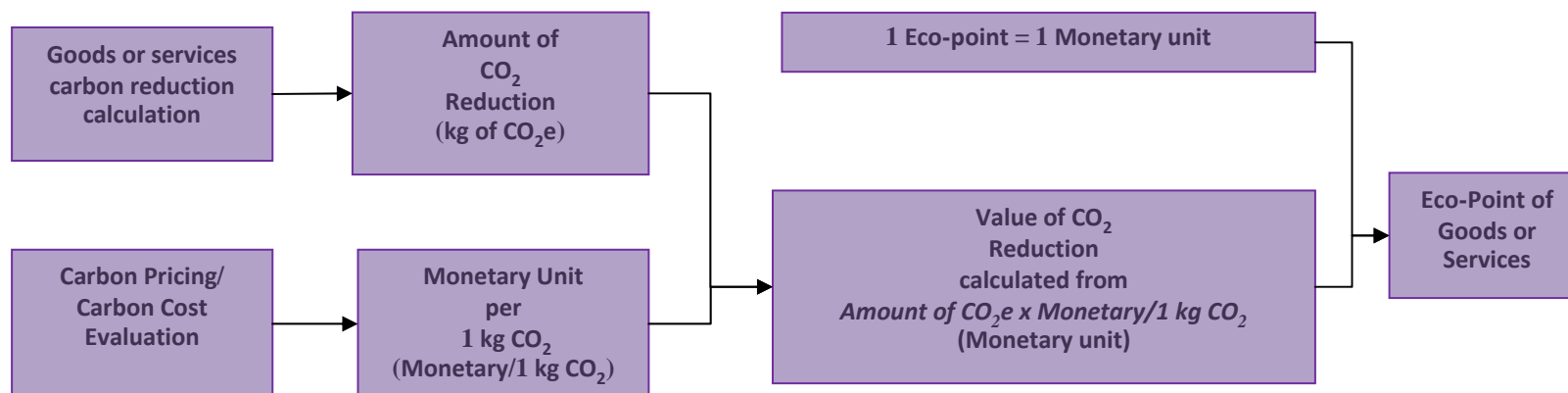
Framing Certification Systems



Concept of eco-point valuation:

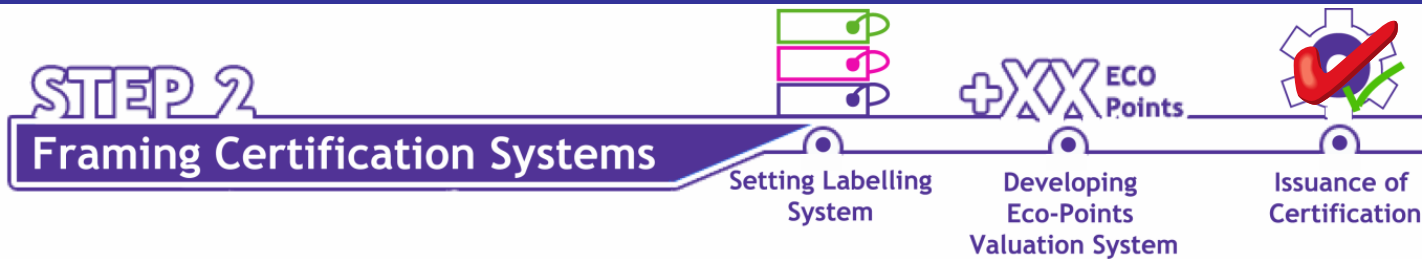
1 eco-point = 1 appropriate monetary unit of each country

Direct Goal: Carbon Emission Reduction



Indirect Goal: Carbon Emission Reduction by stimulation of Low Carbon Consumption

- the eco-point of goods or services as a **proportion of their sale prices** (this method has been used in both Japan and Korea)
- The proportion of eco-point awarding can **vary from 1-10%** of goods or services price



The certification process comprise of 4 steps:

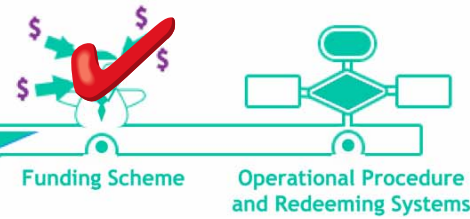
- 1 Business owner submits the application form
- 2 EPP Office checks the minimum requirements of the products
- 3 EPP Office estimates the appropriate eco-point for the products
- 4 EPP office awards (certifies) the eco-point to the products



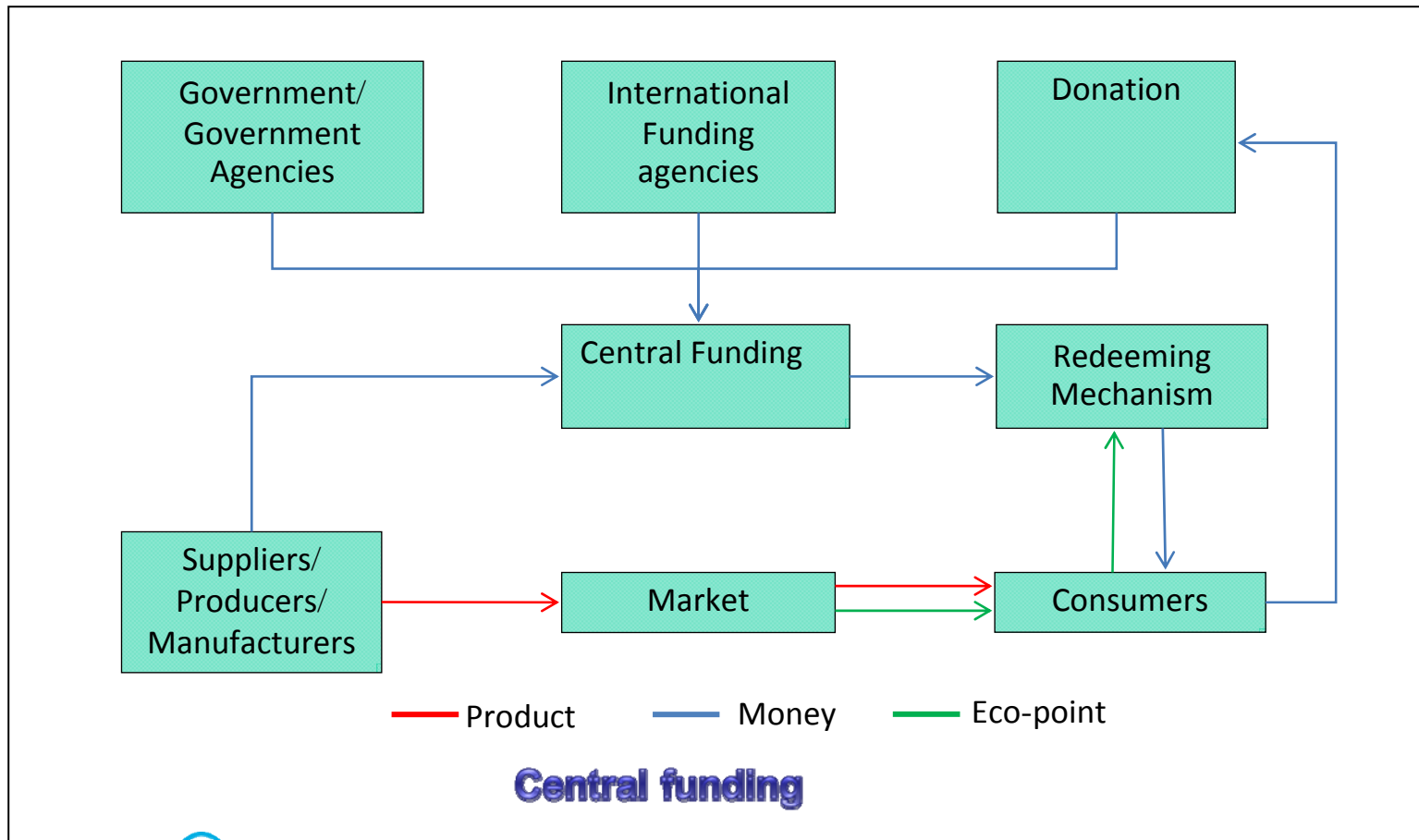
- This step, EPP redeeming procedure and funding will focus on the operational aspect of the Demand Side or consumers
- This step proposes possible ways of redeeming, the mechanism of eco-point distribution and redeeming system
- This step is divided into two main components
 - Funding Scheme
 - Operational Procedure and Redeeming System

STEP 3

EPP Funding and Redeeming Systems

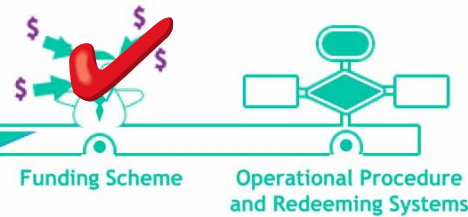


This guideline proposes two patterns of funding systems:

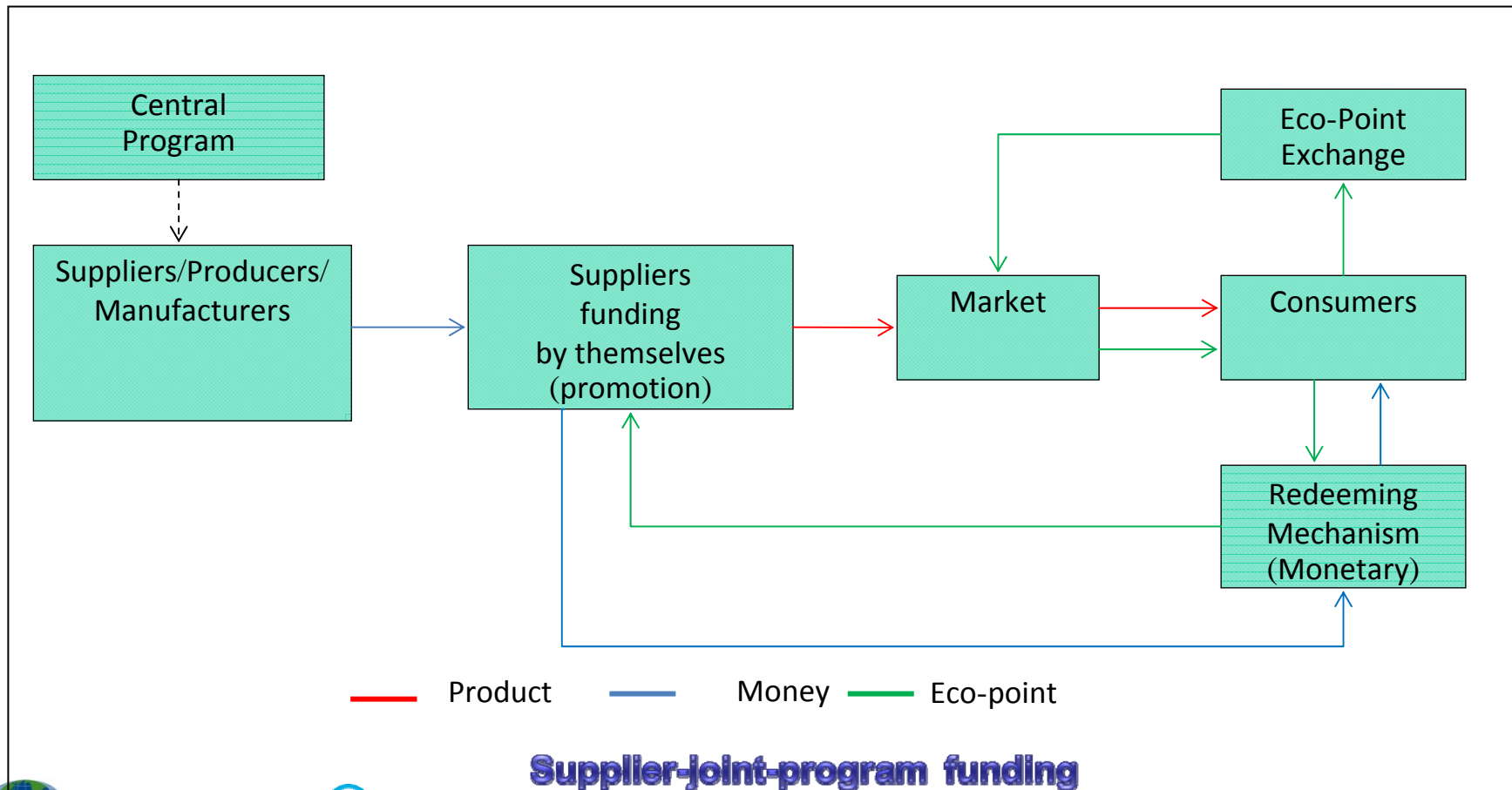


STEP 3

EPP Funding and Redeeming Systems



This guideline proposes two patterns of funding systems:



STEP 3

EPP Funding and Redeeming Systems



Point Collection & Redeeming Systems

Hardcopy System



Online System



Mixed System



STEP 3

EPP Funding and Redeeming Systems



Registration Process: 2 steps processes

- Filling Application: either online or application form
- Obtaining Eco-card

Point Collection Process

- Households:
 - Collecting the past record
 - The system may not give the eco-point but provide the discount for next billing
- Other sectors
 - Collecting the eco-point in the card system

Redeeming Process

- The eco-points should be used as discounting or exchanging the eco-products and services in market, simultaneously and continuously. However, the eco-points can be used for redeeming a cash-back or a donation for carbon reduction funds, EPP fund, public health and safety, environmental funds, etc.

STEP 4

Public Consultation



Public Consultation Techniques

- Focus Group
- Individual interviews
- Paired Interviews
- Public Meeting
- Electronic/Internet based forum
- Telephone
- Face-to-face

Combinations and all stakeholders coverage

STEP 4

Public Consultation



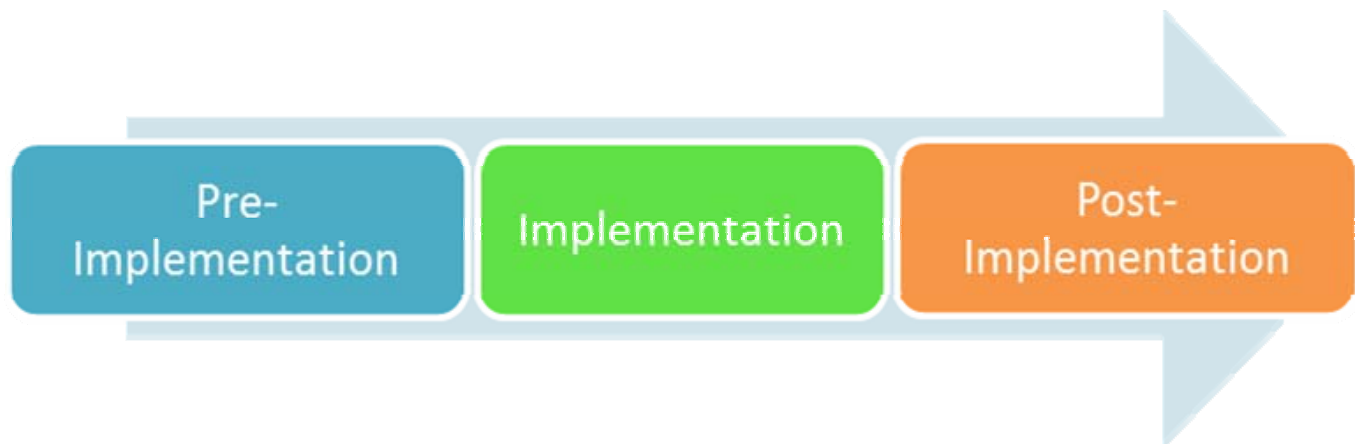
Selecting the Public Consultation method for EPP implementation

1. Availability of process and timeline
2. Adequate notice
3. Awareness rising
4. Multiple channels
5. Breadth of consultation
6. Documentation and feedback
7. Consultation during implementation





EPP Implementation is the way to promote EPP to the consumers and business owners for persuading them to turn their attention in eco-goods or services. Moreover, the way to implement EPP effectively is described in this step. The implementing of EPP can be divided in to 3 stages which comprise of: Pre-implementation, Implementation and Post-implementation.



EPP Step-by-Step

STEP 5

Implementing EPP



Pre-implementation phase:

- **Project planning:**
Activities planning, Time planning, Human resource planning Budget planning
- **Contingency planning**

Implementation phase:

- **Project implementation:**
Campaign/Advertising, Marketing events, Updating situation and data
- **Human resource management implementation**

Post-implementation Phase:

- **Monitoring and Evaluating**
- **Reporting**



STEP 6

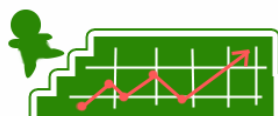
Monitoring and Continuous Improvement

- **Monitoring and evaluation system is a critical part to execute a program effectively**
- **The design of a monitoring program should be done by providing clear statement of the objectives.**
 - Defining monitoring types and indicators
 - Planning monitoring process
 - Planning reporting process
 - Planning continuous improvement





STEP 6

Monitoring and Continuous Improvement

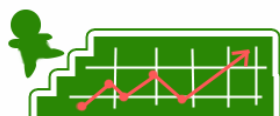


Monitoring types and indicators




Monitoring type	Indicators	Description
Results Evaluation 	<ul style="list-style-type: none"> • Carbon reduction (direct goal) • Market share and Market growth rate (indirect goal) 	<p>To track effects and impacts of the program after completion.</p> <p>To determine if the EPP is on target towards its intended results and whether there may be any unintended impact (positive or negative).</p>
Time monitoring 	<ul style="list-style-type: none"> • Time for implementation of the EPP 	<p>To track the progress of activities periodically for both timing and budget spending in order to make corrective actions. It examines how activities are delivered – the efficiency in time and resources.</p>

STEP 6

Monitoring and Continuous Improvement

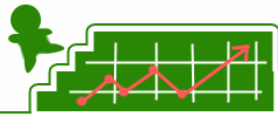


Monitoring types and indicators

Monitoring type	Indicators	Description
Satisfaction monitoring 	<ul style="list-style-type: none"> • Satisfaction of stakeholders 	Beneficiary monitoring tracks perceptions of program stakeholders. It includes satisfaction or complaints with the EPP. It often includes stakeholder complaints and feedback mechanisms.
Financial monitoring 	<ul style="list-style-type: none"> • Budget for implementation of the EPP 	Accounted for costs by input and activity within predefined categories of expenditure. It is often conducted in conjunction with periodically review. For example, participating enterprises may monitor the eco-point awarded and redeem, and ensure implementation is according to the budget and time frame.
Human resource monitoring 	<ul style="list-style-type: none"> • Skill of human resource 	Human resource monitoring tracks skills of the stakeholders in order to implementation of the EPP smooth and sustain.

STEP 6

Monitoring and Continuous Improvement



Reporting process

- **Defining the reporting objective:**
- **Planning the report:**

The report planning requires decisions on the following areas:

- 1) Implementation related issues,
- 2) Information to report,
- 3) Gathering and collecting information

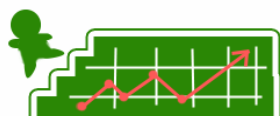
- **Constructing the report:**

This stage is divided into 2 different activities performed in parallel: 1) Collection, aggregation and analysis of data, Writing and layout

- **Distributing the report:**
- **Collecting and analyzing feedback:.**

STEP 6

Monitoring and Continuous Improvement



Continuous improvement

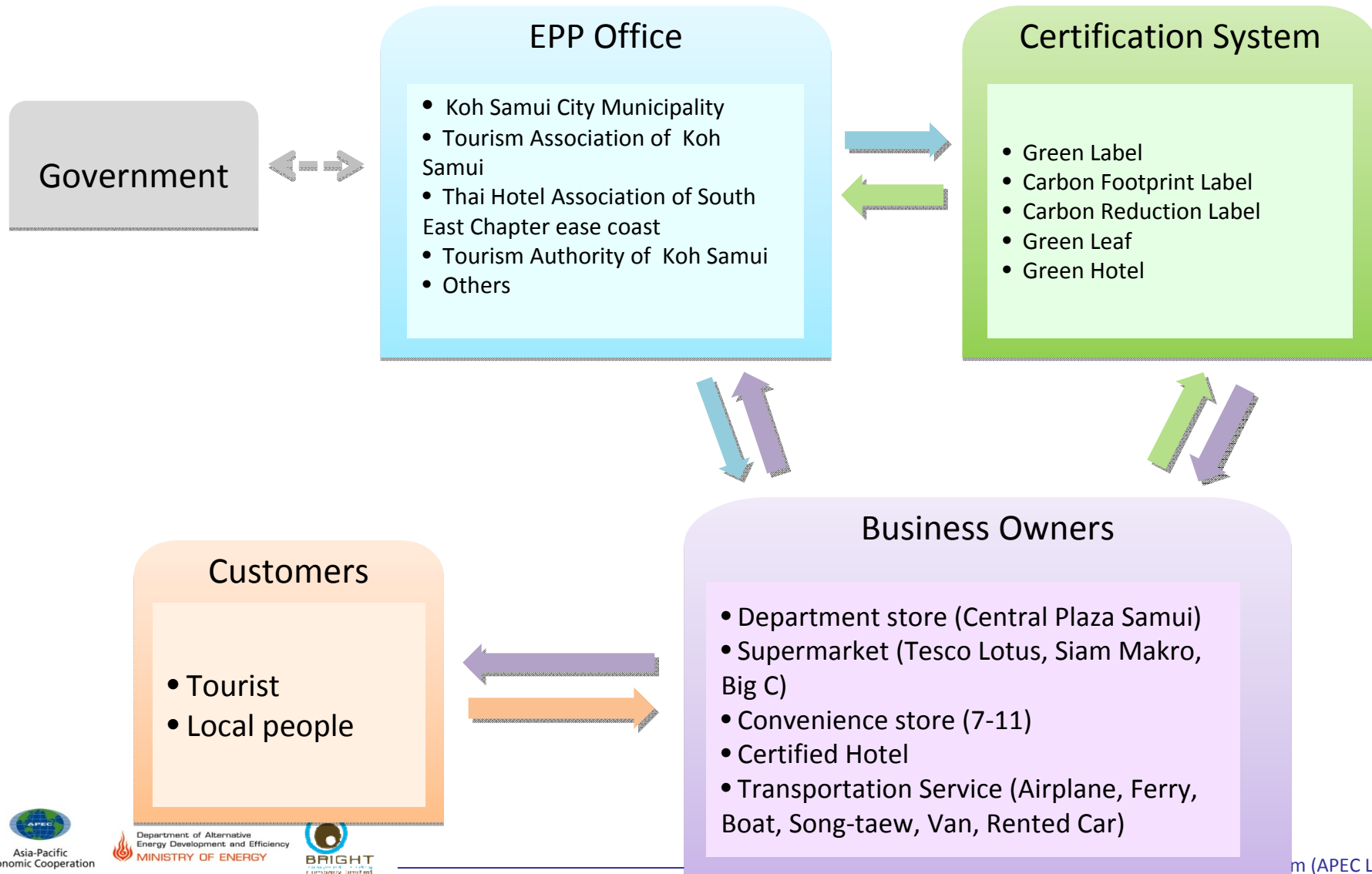
- **The significance of the EPP improvement**
 1. Correcting the problem of the EPP and making the EPP more complete
 2. Enhancing the EPP implementation more efficiency
 3. Developing the EPP more successfully and sustainably
 4. Persuading the stakeholders to participate in the EPP
- **The process for the project improvement**
 - Plan-Do-Check-Act
- **Success factors of the EPP**

Specific Goal	Successful factors
Indirect Goal	<ul style="list-style-type: none"> • Amount of eco-goods and services in market • Cooperation of private sector and government and EPP office • Financial incentive constraints • Communication and promotional process • Operational procedure for business owner and customer
Direct Goal	<ul style="list-style-type: none"> • Benchmark of carbon emissions of eco-goods and services • Existing intensive schemes

SAMUI EPP Preparation



Designing organization structure





Eco fund raising



Example of Eco-Funding proportion from relevant stakeholders

Phasing Period (Based on Roadmap)	Proportion (%)		
	Government Agency	Business Owner	Other Funding
Phase 1 EPP Preparation	100	0
Phase 2 Implement of Indirect Goal	80	20
Phase 3 Preparation for Direct Goal	50	50
Phase 4 Implement of Indirect Goal	0	100

SAMUI EPP Preparation



Selecting the labeling system and frame the certification system

Goods and Services	Goods and Services Certification	Eco-Point Valuation	Eco-Point Redeeming
<p><i>Consumer Goods</i></p> <ul style="list-style-type: none"> -Certified Products -Local Products 		<p>5-10 % of products' price (Japan)</p> <p>1-5 % of products' price (Korea)</p>	<ul style="list-style-type: none"> • Cashback • Use as cash at partner stores as follows: <ul style="list-style-type: none"> - Buy an eco product - Buy a local product - Pay for public transportation fares - Pay for green hotel - Pay for green menu - Pay for green activities and green attractions - Pay for green spa • Donation • Tax Reduction
<p><i>Tourist Accommodations</i></p> <ul style="list-style-type: none"> -Hotel -Attractions -Restaurant -Spa 		<p>5-10% of Accommodations' or services' rate</p>	

Goods



Certified products



Consumer goods in
Department store,
Supermarket,
Convenience store
and others

Local Products



OTOP (One Tambon
One Product),
Organic vegetable
or fruit

Services



Hotel, Resort, Spa, Restaurant, Food



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<p>Name: _____</p> <p>Address: _____</p> <p>Phone no: _____</p> <p>E-Mail: _____</p> <p>Activity Start Date: _____</p> <p>Expiry Date: _____</p>	<p>1. ๒๐๑๖</p> <p>STAMP</p>	<p>2. ๒๐๑๖</p> <p>STAMP</p>	<p>3. ๒๐๑๖</p> <p>STAMP</p>	<p>4. ๒๐๑๖</p> <p>STAMP</p>	










Green Destination, Green Attractions, Green Activities

APEC LCMT Promotion through EcoPoint Program (APEC LCMT-EPP)

Existing Eco-labels

Example of existing eco - labels in Thailand and Samui Island

Label	Certified Products/Services	
	Thailand Level	Samui Island
Thai Green Label 	544 models (under 24 Products Categories, 73 companies, updated May 2014) - Category: Consumer products	Similar to Thailand Level
Thai Energy Efficiency Label 	168 million labels (cover over 20 types of electric equipment, updated July 2011) - Category: Consumer products	Similar to Thailand Level
Carbon footprint of products 	834 products (under 184 companies, January 2014) - Category: Consumer products	Similar to Thailand Level
Carbon Reduction Label 	82 products (under 27 companies, updated January 2014) - Category: Consumer products	Similar to Thailand Level
CoolMode 	13 Products (under 4 companies, updated October 2013) - Category: Consumer products	Similar to Thailand Level
Green Leaf 	203 hotels (updated March 2014) - Category: Tourist Accommodation	19 hotels
Green Hotel 	309 hotels (updated June 2014) - Category: Tourist Accommodation	99 hotels



Designing redeeming system

1 Eco-points = 1 Baht
 Number of Eco-point = Percentage of goods' and services' price

Example of eco-point valuation

Products or Services	Price/Fare/Fee (Baht)	Proportion (%)	Eco-point	Calculation
Consumer Goods	500	1%	5	- Product Price x Proportion
Electricity/ Water Supply	2,500	10%	250	- consumption < Average from previous year usage
				- Billing tariff x Proportion
Transportation	100	5%	5	- Ticket Fee x Proportion
Accommodation	1,500	10%	150	- Rental Fee x Proportion

Redeeming System

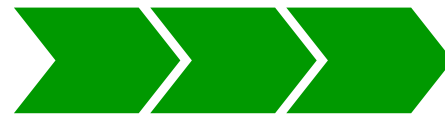
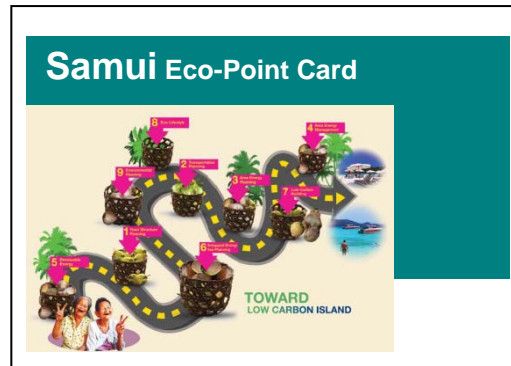
Point collecting from goods and services

Consumer Goods

- Certified Goods
- Local Products

Tourist Accommodations

- Hotel
- Attractions
- Restaurant
- Spa



Eco-Point will be collected
in Card
or Coupon
or Stamp

Point Redeeming

- Cashback
- Use as cash at partner stores as follows:
 - Buy an eco product
 - Buy a local product
 - Pay for public transportation fares
 - Pay for green hotel
 - Pay for green menu
 - Pay for green activities and green attractions
 - Pay for green spa
- Donation
- Tax Reduction

**Thank You
For
Attention**