
Introduction of Adaptation policy by Ministry of Economy, Trade and Industry

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Ministry of Economy ,Trade and Industry
Global Environment Partnership Office
Industrial Science and Technology Policy and
Environment Bureau

Nomura Research Institute, Ltd. Consulting Division.

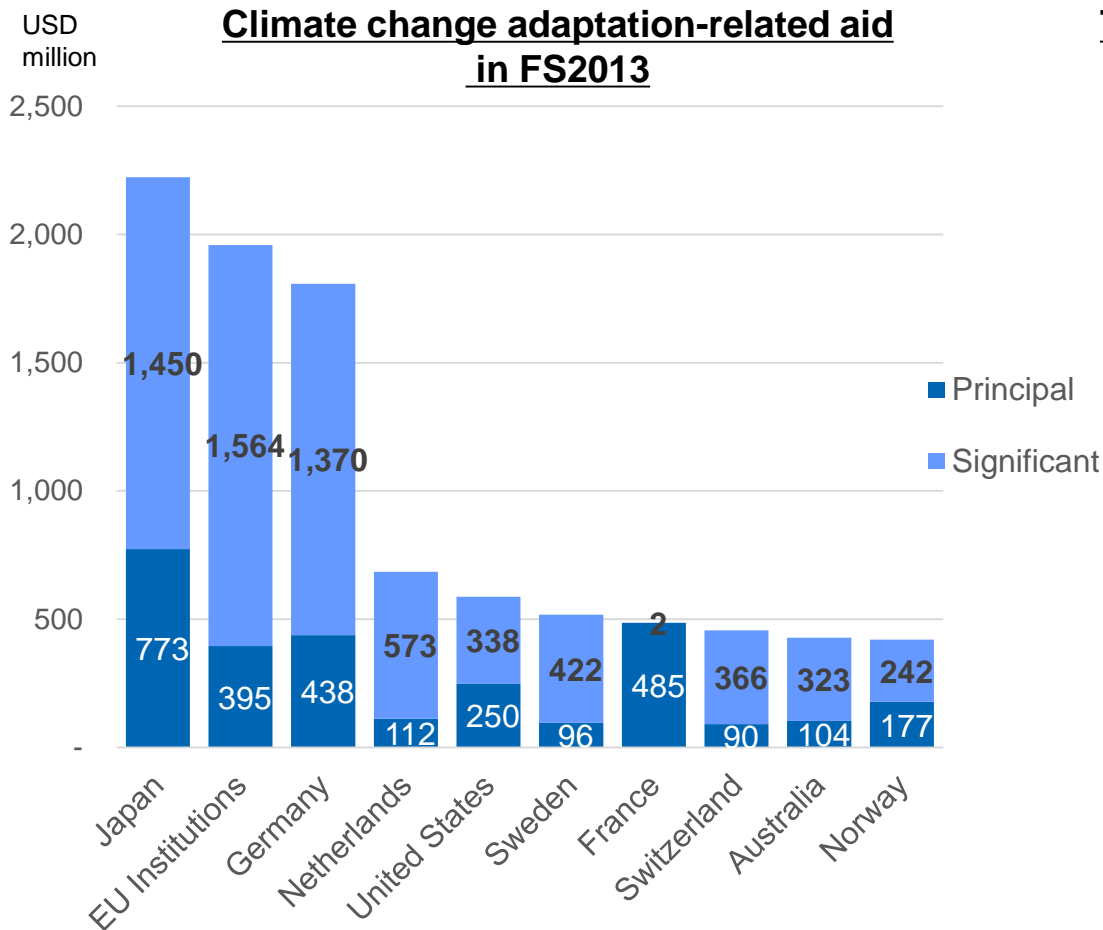
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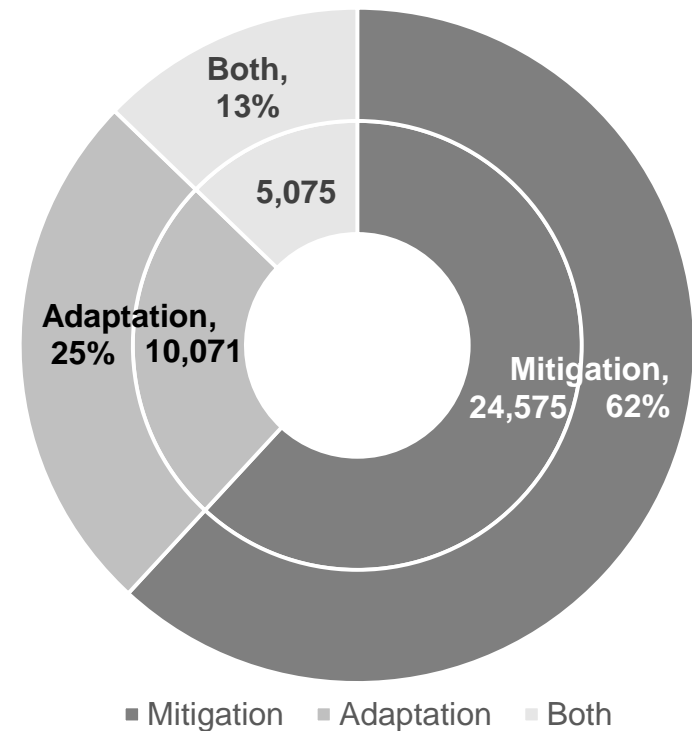
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According to OECD, Japan is the biggest sponsor in the field of “adaptation” among developed countries, proactively accommodating rising demands from developing countries.

■ According to OECD Statistics, 1/4 of aid from developed country is for adaptation field.



Total bilateral + multilateral climate-related flows in FS2013



In the adaptation plan approved in the Cabinet meeting on Nov. 27 2015, Japan expressed its decision to establish an industry where technologies of Japanese companies are utilized to solve adaptation issues.

- In the adaptation plan approved in the Cabinet meeting on Nov. 27 2015, a chapter on international contribution is provided.
- Japan expressed its decision to provide supports for adaptation plan development as well as establishment of an industry where technologies of Japanese companies are used to solve adaptation issues.

Excerpt from Japanese adaptation plan (draft of cabinet decision) for the effects by climate change

■ Chapter 4 International measures (Supports for developing countries)

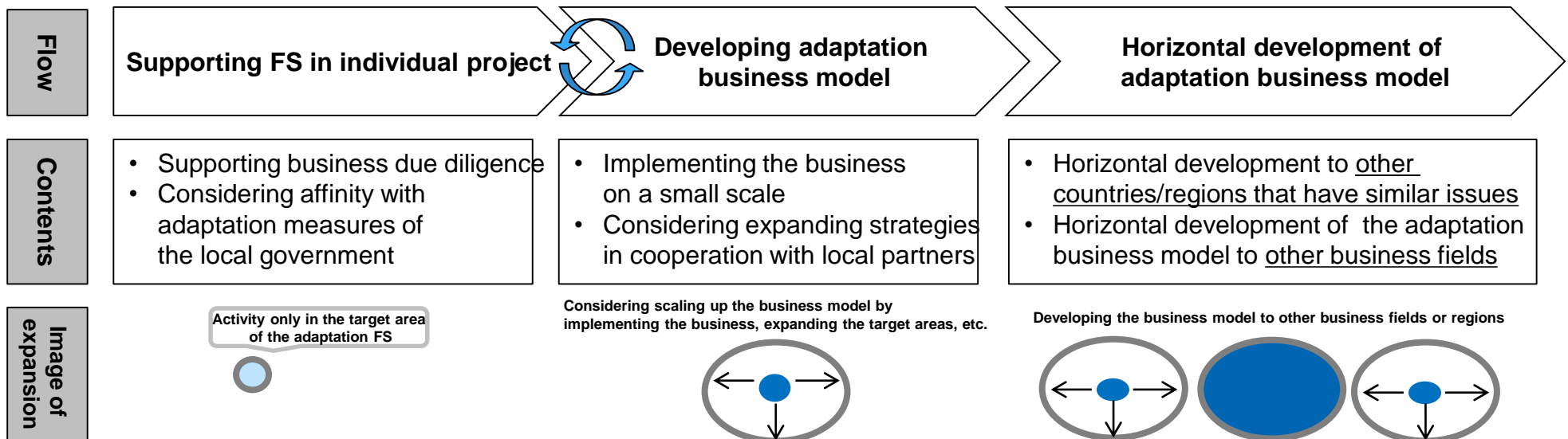
“When providing supports to a developing nation such as a small island state which is vulnerable to climate change, we will cooperate with the country in evaluating the influences by climate change and developing adaptation plans, based on our experiences of adaptation plan development, through building a cooperation framework with the government and authorities, thinking primarily of its needs and preferential policies, and in line with the nation’s guideline and guidance on adaptation plan development based on the decisions by the United Nations Framework Convention on Climate Change, such as attention to gender and promotion of local residents’ participation.

In addition, we will promote the efforts to support for establishing a sustainable industry and maintaining people’s livelihood by overcoming the vulnerability to climate change through the use of technologies of Japanese companies. One example is to improve productivity by breeding crops in the coastal areas damaged by seawater in Asia.”

METI tackles Adaptation Issue through Business

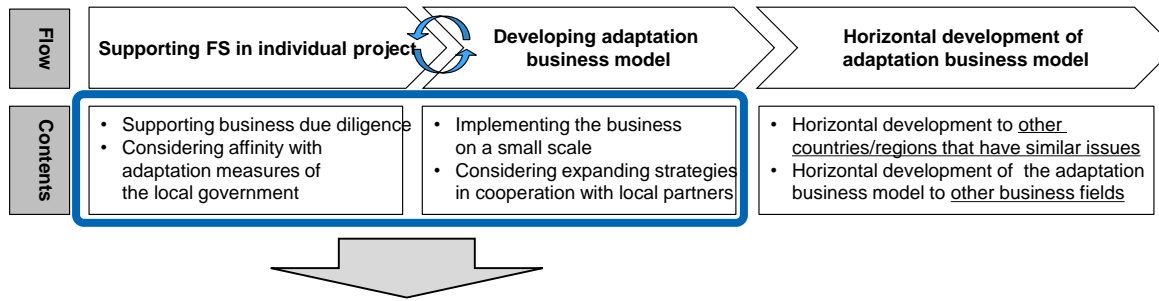
- Regarding climate adaptation, demands for technology transfer and funding support are increasing, and there are more requests for the support from developing countries, by way of NAPA, National Adaptation Programmes of Action.
- On the other hand, acute shortage of funds has been pointed out because there is a limit on public funds that developed countries can provide. Therefore, it is said expanding know-how and funds from the private sector is crucial.
- Based on these backgrounds, METI is nurturing climate adaptation industry and supporting the framework building that can solve issues of adaptation through business.

Steps of METI's climate adaptation business



Ministry of Economy, Trade and Industry (METI) has been building the framework that can solve issues of adaptation through business.

Steps of METI's climate adaptation business



• Supporting business due diligence in individual project

Items to be considered in a normal business project

- ✓ Market evaluation (market prediction, superiority, comparison with competitors)
- ✓ Consideration of the system (system development including procurement, development and sales)
- ✓ Consideration of the foundation (such as procurement and sales channels)
- ✓ Consideration of various risks (such as political risks and various commercial risks)
- ✓ Others

• Considering affinity with adaptation measures of the local government

- ✓ Seizing the international trends on adaptation
- ✓ Seizing the adaptation needs of developing countries (seizing NAPA and the priority of those countries)
- ✓ Seizing technology seeds of developed countries including Japan and seizing affinity with each country's NAPA and the possibility of contribution

• Implementing the business on a small scale (Small start project)

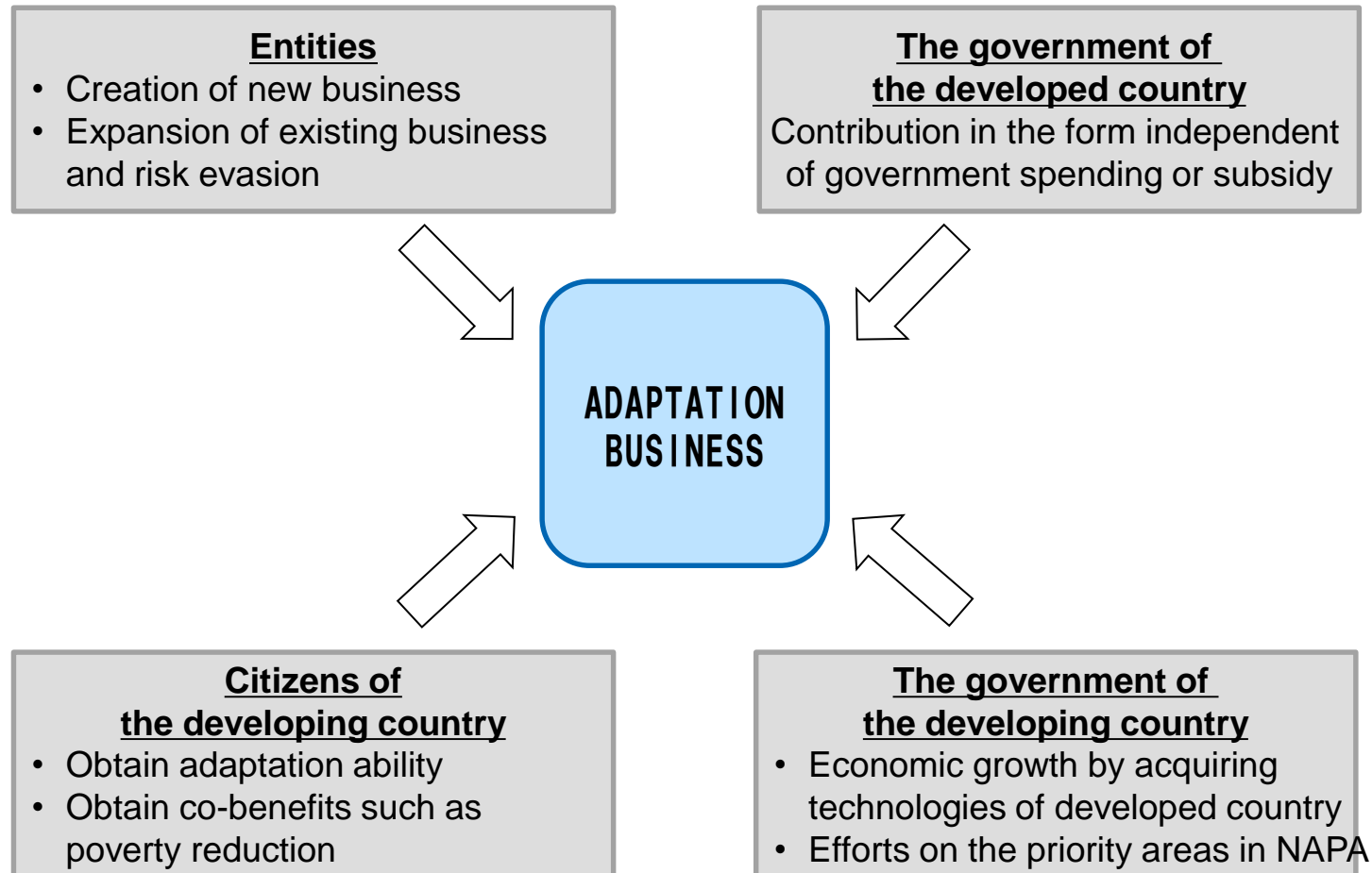
- ✓ Turn the PDCA cycle and obtain necessary TIPS for expansion

• Considering expanding strategies in cooperation with local partners

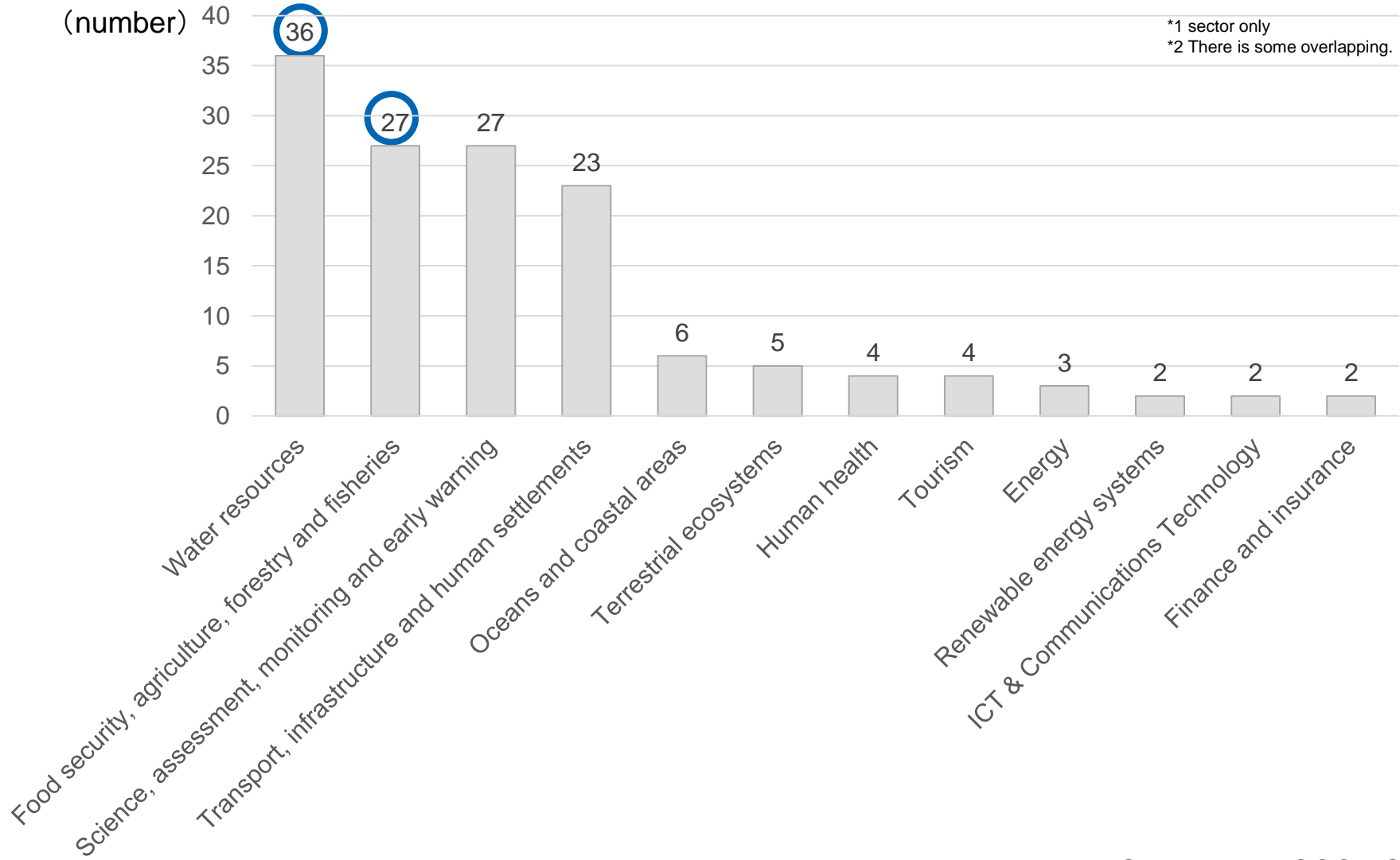
- ✓ Authorization as a NAPA
 - ✓ Obtain a project authorization as NAPA (authorization for expansion by the local authority)
- ✓ Access to the funding mechanism
 - ✓ Grasp the process to acquire external funds, for expanding the business to the scale in which it can survive and have an impact of the adaptation measures. In addition, make efforts for application.
 - ✓ Index the adaptation levels and develop the monitoring methods
- ✓ Partnering
 - ✓ Seek a cooperation with local partners (companies, NGOs) for expansion
- ✓ Additional R&D
 - ✓ Based on the PDCA of the small start project, change specifications necessary for further expansion, catering to local needs

WHY BUSINESS?

It is a sustainable method which is beneficial to all stakeholders including governments and entities of both developed and developing countries.

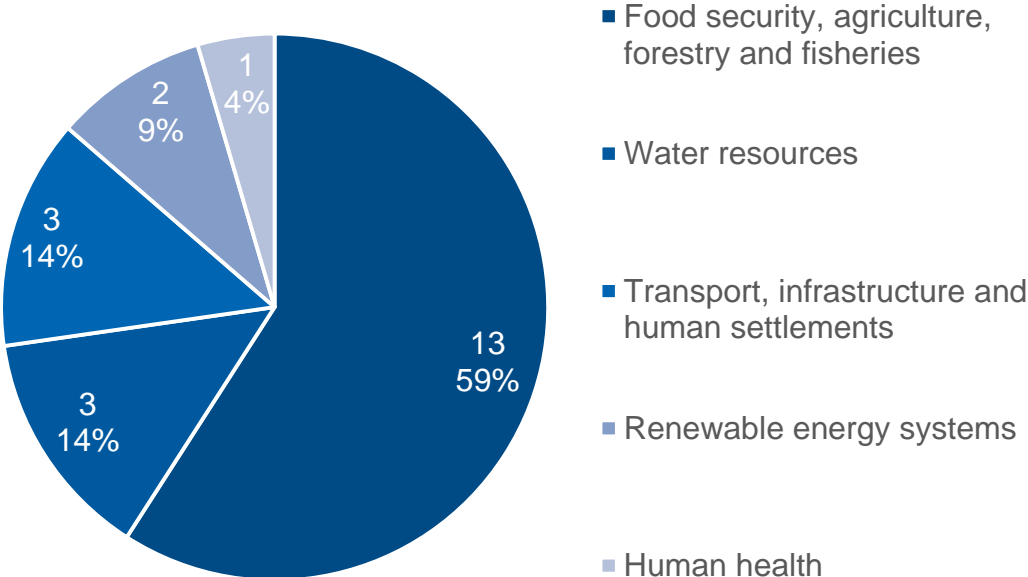


Analysis of world adaptation business by category show demands are concentrated in two categories of food security, agriculture, forestry and fisheries and water resources, and local demand is high in these categories.



Many of METI's FS supports are provided in the categories of agriculture/food and water, which consists with the international trend.

Number of FS by sector



Number of FS by county and region

Region	Country	Number of FS
Africa	Ghana	3
	Kenya	2
	South Africa	2
	Tanzania	2
	Cote d'Ivoire	1
	Etiopia	1
Asia	Bangladesh	4
	Vietnam	3
	Cambodia	3
	Myanmar	1
	Thailand	1
	Maldives	1
	Indonesia	1

Cacao Production of high value in Low-rainfall Region by Climate Change

Investigated by: Dari K

Purpose of investigation

For the cacao farmers expected to have less harvest due to the reduction in rainfall, we will introduce agroforestry centering on cacao species that are thought to be more tolerant to dry air, improving the tolerance against climate change. In the meantime, we will train farmers to grow value-added cacao and promote a vertically integrated business from purchases of cacao beans to sales of final products in Japan. By doing this, we intend to have farmers not only adjust themselves to the influence by climate change but also improve their income levels regardless of climate change.

Issues host countries face due to climate change

- In the areas which rely on the primary industry, such as Indonesia and Bali, the crop production has been decreasing and the harvest timing has been delayed, due to lower rainfall caused by climate change
- Economic weakness or poverty of the area is the partial reason for the difficulties in adjusting to climate change

Direction of issue resolution

- To adjust to the effects of climate change through spreading cacao based agroforestry that is more dry resistant
- To develop an economically sustainable framework for both local farmers and Japanese buyers, through dispersing cacao cultivation techniques to local farmers and making a value chain from cacao beans to final products



Investigated items

1. Hearing investigation to the existing cacao farmers and the agricultural ministry on the influences of climate change
2. Investigation and data collection, including the scale (cultivated area), crops, harvesting cycle, income, expenditure and borrowing of the existing cacao farmers
3. Consensus building with the related agencies including local agricultural ministry
4. Training to cacao farmers

Expected policy effects

- Reduction in the damage of decrease in cacao production
- Promotion of cacao farming adapted to the soil and the environment
- Diversification of incomes that do not depend on one cash crop
- Formation of market that evaluate cacao not by the amount but the quality
- Diversification of procurement channels of cacao which demand and supply is tight globally

Concept of the evaluation methodology

The evaluation methodology of this business is shown below:

	Inputs	Outputs	Outcomes
Evaluation index	Instruction of cacao cultivation techniques (on-site instruction)	<ol style="list-style-type: none"> Expansion of cacao harvest Alleviation of damage of water shortage and drought Stabilization of income by stabilizing the amount of crop 	<ul style="list-style-type: none"> Solving the weakness of farmers who suffer from lower rainfall.
	Instruction of cacao management and value-added technology (postharvest instruction)	<ol style="list-style-type: none"> Harvesting value-added cacao beans Increase in income by value-adding farming. 	<ul style="list-style-type: none"> Improving living standards of poor farmers Establishing the market that evaluate cacao by the quality
	Promotion of stakeholders' understanding	<ol style="list-style-type: none"> Establishment of value chain of cacao beans made in Indonesia 	<ul style="list-style-type: none"> Stabilizing local cacao farmers

Characteristics of the techniques used in this investigation

- Cultivation methods as well as postharvest maintenance and value adding techniques are instructed centering on the following technique elements.

On-site (farm maintenance)	Post harvest
<ul style="list-style-type: none"> Growing nursery trees Grafting Countermeasures against pest (securing organic cultivation by using fruit covering bags, instead of chemical pesticide) Organic compost Pruning Nitrogen fixation of soil by mixed planting pea plants and other fruit plants 	<ul style="list-style-type: none"> Fermentation (anaerobic alcohol fermentation, aerobic lactic fermentation, acetate fermentation) Desiccation (less than 7% moisture) Storage Traceability system

Grafting technique, the core technique to increase the amount of harvest



COCOA EXPRESSIONS & CHOCOLATE INNOVATIONS IN THE SPOTLIGHT FOR THE 2015 EDITION



PARIS
FROM 28TH OCTOBER
TO 1ST NOVEMBER 2015
PORTE DE VERSAILLES



“The Wisdom of Forest Project”

Wisdom of Forest (from far east Co., Ltd., Cosmic Co., Ltd, IKTT (Institute for Khmer TraditionalTextile))

Objective

There are many floods in Cambodia especially in near river area. In these years, forest has been decreasing and vulnerability. To deal with this problem, we sell the cosmetics used planted trees for preventing flood.

Issues the host country faces caused by Climate Change

Cambodia has many forests. The forests have been preventing floods. However, the forests are decreasing, increasing vulnerability to flooding. ‘Vegetation Planting for Flood and Windstorm Protection’ is one of the priority issues of NAPA. The plan is to prevent floods in Cambodia caused by the frequent typhoons by planting trees.

Direction to solution

Prevent frequent flood by planting trees and improve forest and farming area.
 Sell the cosmetics made by planted trees (also leaves, seeds, and oil) and reinvest the part of sales.
 By vertical integration of ingredient cultivation, processing, and selling in Japan, decrease material cost and increase customers.



Survey Items

1. Consideration of way to increase efficient effect by rebuilding vegetation
2. Consideration of expand target area
3. Develop stable material procurement system
4. Searching possibility of cooperation with local government
5. Consideration of the sales technique and business plan

Efficient expected

- Expansion of cultivated lands which can have sustainable farming
- Increase of the crop yields per land by using a soil conditioner
- Decrease of flood damage by tree planting
- Stable purchase of crops for the manufacturing hair coloring and soaps for Japan and local markets

Program Evaluation Method

	Input	Output	Outcome
Evaluation index	Number of trained farmers	Amounts of crops	Farmers income
	Land with soil conditioner	Amounts of yields per area	Forest area with sustainable farming
	Forest area with soil conditioner	Forest area	Forest area with agro forestry

Product Features in This Project

- This project uses organic soil conditioner which is manufactured by oyster shells and charcoals.
- This soil conditioner works as an improvement of the damaged soil with pesticide and chemical fertilizer and raise the vitality of the plants.



Soil Conditioner
In this project

- Groceries like shampoos are without chemical additives procedure, and only with natural ingredients. They are good for environment and human health.
- These groceries are made by materials from plated trees like moringa, coconut and almond.



Products in this project

Contact

- Kai Yoshimoto, Consultant
Global Infrastructure Consulting Division
Email: k-yoshimoto@nri.co.jp