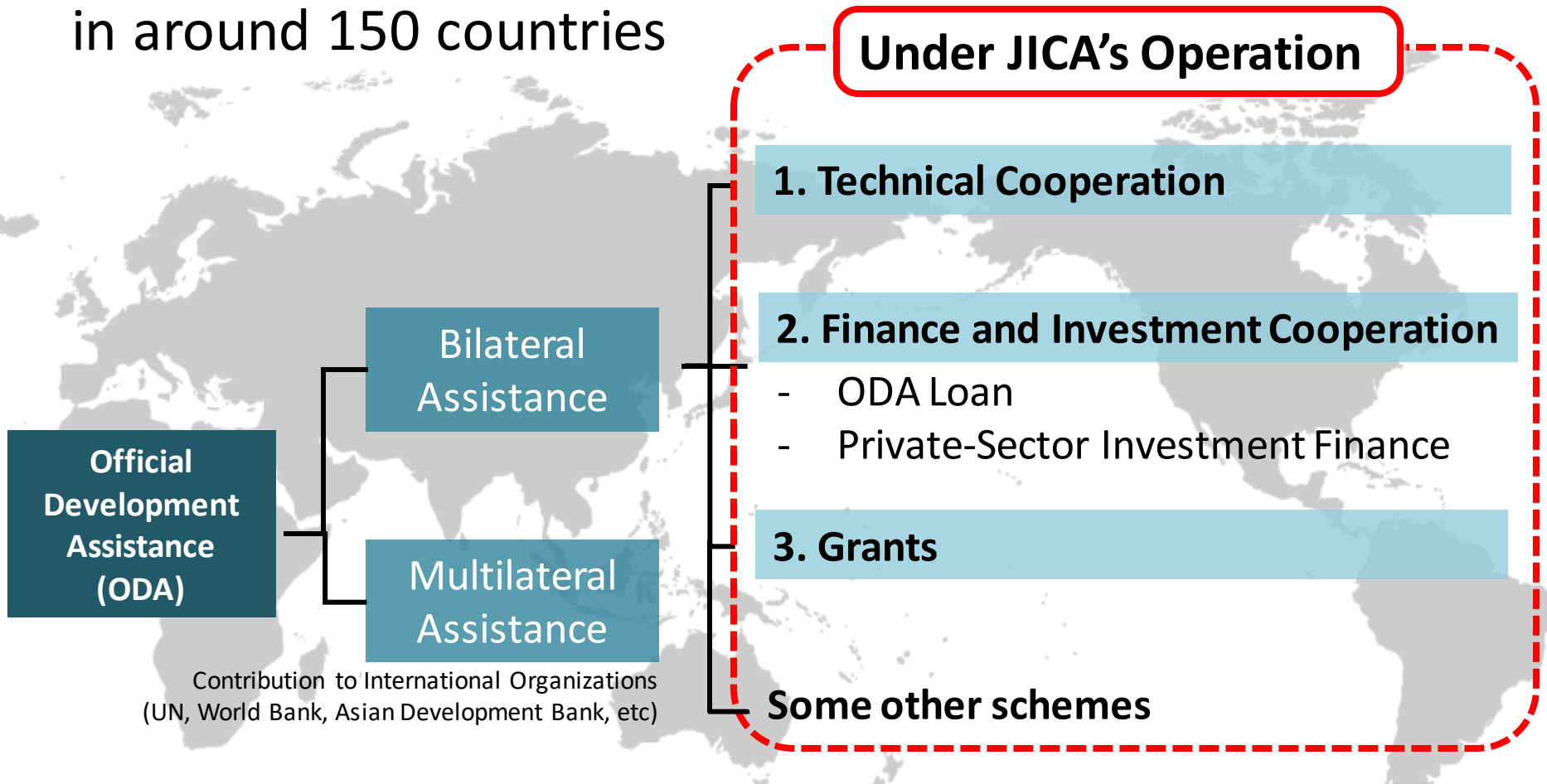


JICA: Delivering Japan's ODA

JICA is an implementing agency of Japanese ODA works in around 150 countries



Our main cooperation of waste management focuses on capacity development for...

1. Collection and Transportation
2. Recycle and Intermediate treatment
3. Final disposal

Cooperation approach on waste sector

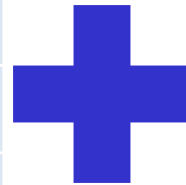
Integrated Waste Management

Integrated WM through 3Rs with “Diagnostics” and “Prescription”

- Strengthening of implementation framework/system

7 Aspects

1. Legislation and Institution Improvements
2. Organization Improvements
3. Finance Improvements
4. Private Sector Involvement
5. Waste Producer Initiative
6. Citizen Participation
7. Cultural and Social Consideration



Process-wide Improvements

(1) Production/Consumption

(2) Generation, Segregation, Disposal

(3) Collection and Transportation

(4) Intermediate Treatment/ Reuse/Recycle

(5) Final Disposal

JICA's approach for marine plastic waste

80% of total marine plastic waste inputs from LAND.*

Most of marine plastic produces estimated from developing countries, especially ASEAN countries. **

Promotion of appropriate waste management

Assistance for developing countries who occupy a large amount of emissions

JICA's Policy

JICA will contribute to solutions of marine plastic waste issues mainly through support of waste management in the land for developing countries, who are estimated to occupy a large amount of emissions.

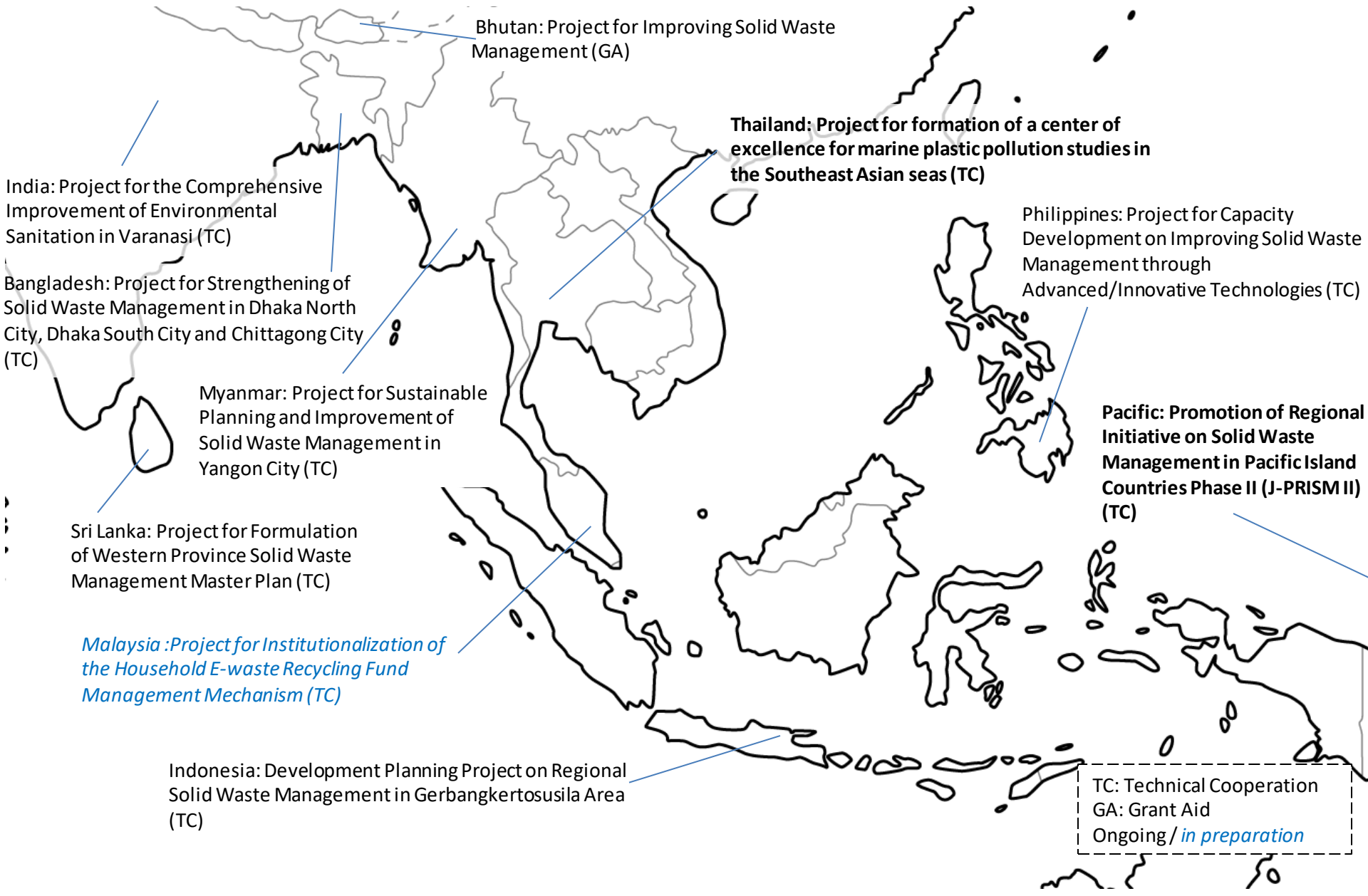
Source:

*Ocean Conservancy & McKinsey & Company (2015) Stemming the Tide: Land-based strategies for a plastic-free ocean

**Jambeck et al.(2015) Plastic waste inputs from land into the ocean, Science



JICA's Project map on solid waste management in Asia & Pacific (as of April 2020)



How can JICA tackle marine plastic issues?

1. Developing robust waste management system

- Proper collection and disposal
- Pursuing circular economy: “3R + Return” concept

2. Evidence-based Approach

- Research for practical utilization, business based dissemination

3. Introduce alternative material/ reduction of use

- Introduction of Biodegradable material

4. Encourage networking and co-learning

- African Clean Cities Platform (ACCP)

1. Proper collection and disposal

Bangladesh: Clean Dhaka Project (2000-)

Cooperation for Dhaka

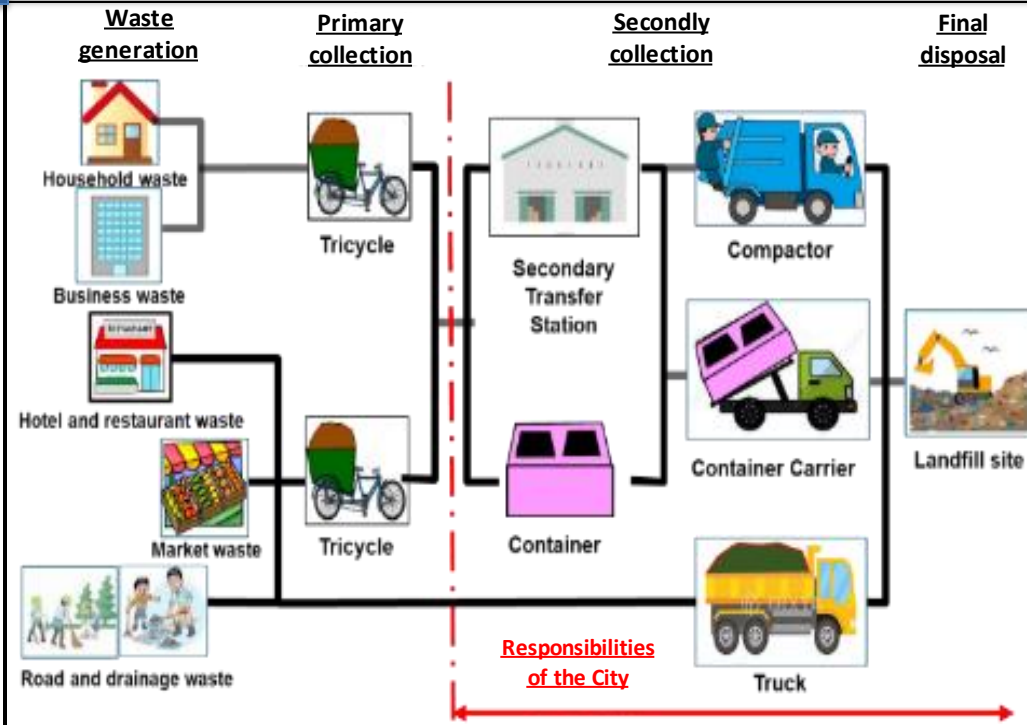
- Expand district authority and improve collection system [T/C]
- Supply compactor, improve final disposal [Grants]
- Awareness raising for citizens [JICA Volunteer]



Next Step

Formulate Master Plan by 2032, consider further support including investment

System of collection and disposal



Waste collection rate : 44% (2004) → **80%** (2017)

Amount of waste collection per day : 1,400t (2004) → **4,948t** (2017)

1. Pursuing circular economy

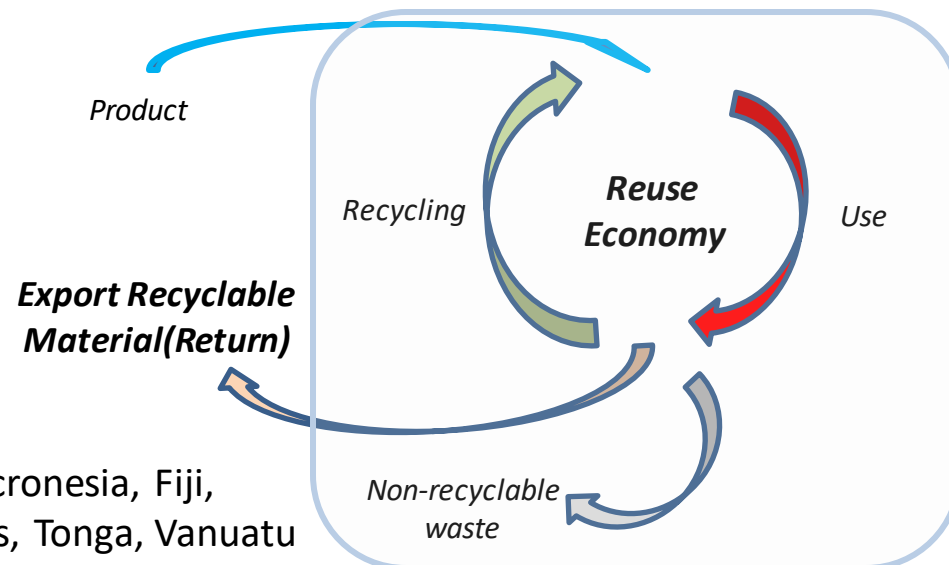
'J-PRISM' Project in Pacific Island Countries (2011-)*

Common features of Island countries related to SMW

1. **Isolation**: Inconvenience of transportation
 2. **Narrowness**: Small population, size of economy
 3. **Remoteness**: Far from large & matured market
 4. **Dependency**: Foreign aid, imported goods
- + Lifestyle change, urbanization, population growth
⇒ Challenges for SWM, proper recycling



Promotion of 3R + **Return**
Return recyclables
 to large markets outside region



*Phase 1: 2011-2016, Phase 2: 2017-2022

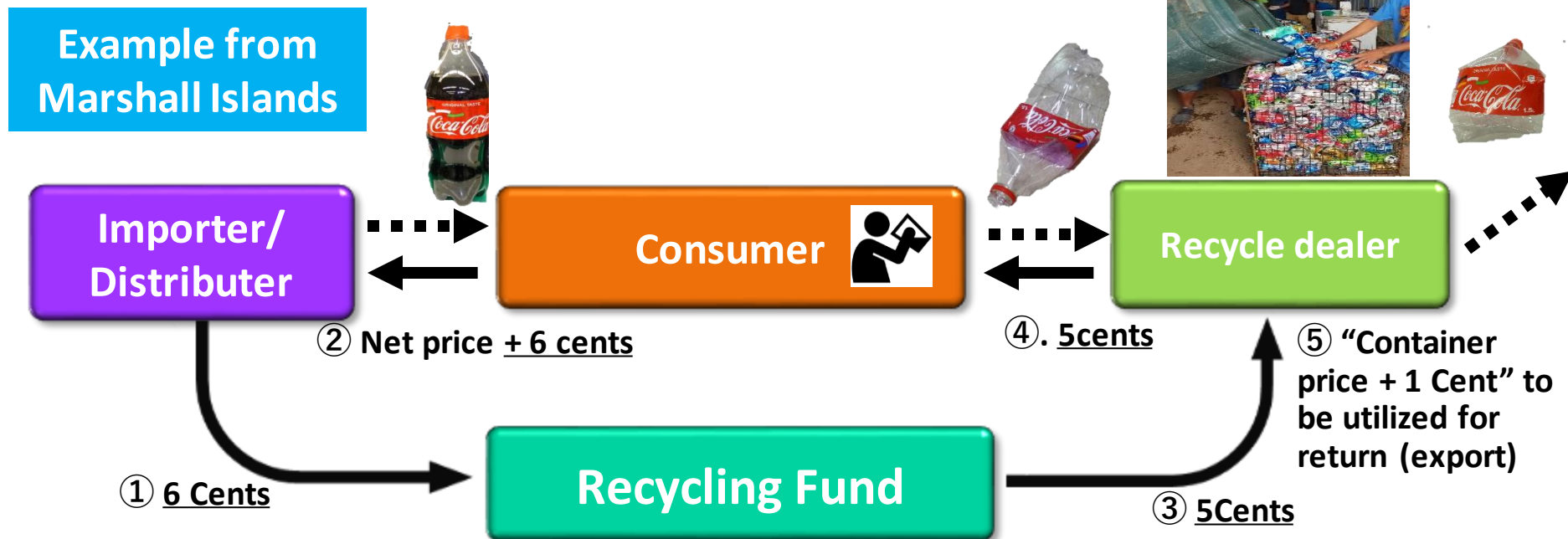
Phase 2 target countries (9) : Federated States of Micronesia, Fiji, Marshall Islands, Palau, PNG, Samoa, Solomon Islands, Tonga, Vanuatu

*(Japanese) Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries

Add economic incentive: Container Deposit Legislation (CDL)

'J-PRISM' Project in Pacific Island Countries (2011-)*

- In small island countries, containers need to be "Returned". For sustainable CDL system, the mechanism involving importers and create management fund for collection center are crucial. → **Promotion of 3R+Return**
- Deposit is included in the price, and redeemed once the container is returned to collection center. It increases container collection rate, and **prevent outflowing marine plastic litters.**



Add economic incentive: Reuse waste as energy

Philippines: Pilot survey for Resource recycling in Cebu City (2014-2015)

Development Needs of Philippines

Matching

Technologies of Japanese Company (Gunn Co., Ltd)

Promote recycling business, reduce landfilling

- Increase of waste, insufficient final disposal capacity

Limited recycling activities of waste plastic

- Target of Cebu city: Reducing landfill waste by 50%, but progress is slow due to limited capacity

Waste recycling technology

- Manufacturing plastic 'fluff' fuel
- Sold as alternative fuel to paper companies
- Produced by 1/3 cost comparing with RPF(Refuse Paper and Plastic Fuel)

Know-how of intermediate processing

- Using optimal segregation methods such as manual (hand sorting), air flow etc.

Pilot Survey(JICA Project)

- Establish a new facility to produce fluff fuel adjacent to the final disposal site
- Extend landfill capacity through waste reduction, assess feasibility for future business development
- Propose optimized recycling system in coordination with recycling business enterprises and Cebu city

Business Development

- Increase recycling line to achieve commercial scale capacity
- Expand their business in neighboring cities of Cebu city
- **Signed fluff fuel supply contract with CEMEX, the world's second largest cement producer**

2.Evidence-based Approach: Research towards practical utilization

Thailand: Establish a center of excellence for marine plastic pollution (2020-2025)

Purpose

- Propose formation of a center of excellence for marine plastic pollution studies in Thailand
- Develop action plan for Thai government, which is expected to be a model for other ASEAN countries

Representing Researcher of Japanese side

- Prof. Atsuhiko ISOBE, Center for Oceanic and Atmospheric Research, Kyushu University

C/P of Institution of Thai side

- Chulalongkorn University

Activities

- Analyze current/future amount of plastic litter, conduct environment and social impact assessment
- Develop Action plan for Sattahip District and identify prioritized action to be conducted with a lot of local stakeholders
- Develop draft action plan for Thai government, which expects to become “Model Plan” for other ASEAN countries.



***SATREPS** is one of JICA's technical cooperation scheme to promote international joint research which targets global issues, by collaboration with the Japan Science and Technology Agency (JST) and JICA. SATREPS projects are expected to lead to outcomes with potential for practical utilization, and to enhance research capacity in the developing countries.

3. Introduction of alternative material

Kenya: Biodegradable Shopping Bags (2018-)

(Collaboration with the Private Sector for Disseminating Japanese Technology)

Development needs in Kenya

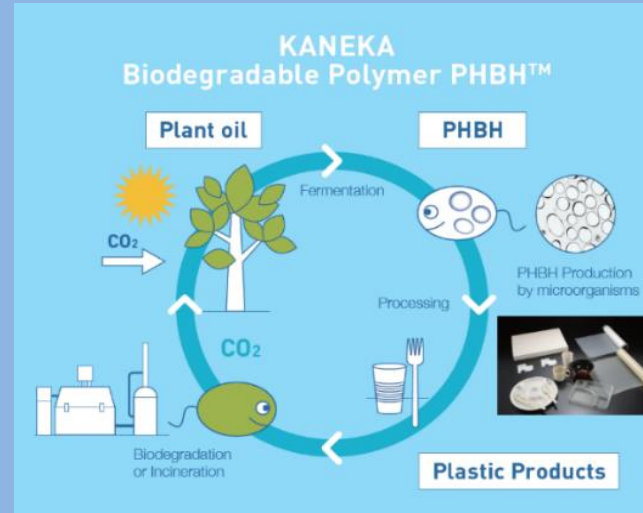
- Increase of the use of plastic bags along with rapid economic development
- Insufficient capabilities of waste disposal
- Secure effectiveness of Law on Plastic Bag Ban
- Reduce generation and promote recycling

Outline of the project

- Support introduction of certificate and labeling system of degradable polymers
- Training to local processing manufacturers of biodegradable polymer shopping bags
- Conduct tests of biodegradation
- Promotion and dissemination of use of biodegradable polymers shopping bags

Technologies and products (KANEKA CORPORATION)

Biodegradable Polymer PHBH



- ✓ Plant-based material from which microorganisms ingested vegetable oil and stored in the body as a polymer
- ✓ Conforming to the strengthened European regulations, capable of various shapes such as bags for fruits, vegetables and composts
- ✓ Certified to be biodegradable even in seawater
- ✓ Expect increase of demand for various range of use

4. Encourage networking and co-learning: African Clean Cities Platform (ACCP)

Overview

1. Background

During the Waste Management Seminar at the 6th International Conference on African Development (TICAD VI), the need to establish a platform to share knowledge and promote SDGs on waste management in Africa was recognized.

2. Mission

By 2030, African countries realize clean and healthy cities and achieve the SDGs on waste management.

3. Vision

To provide an open platform to support African countries and cities to find their own measures and solutions for appropriate waste management and the achievement of SDGs.

4. Objectives

- Sharing of knowledge and networking
- Promotion of SDGs targets on waste management
- Promotion of investment in waste management

5. Expected activities

- Annual knowledge-sharing seminar and meeting
- Training programs/visits in Japan (from Feb. 2018)
- Support SDG monitoring and publish Country Profiles
- Advocacy and information sharing

6. Operational structure

- Membership
 - African **37 countries and 65 cities** of Waste management dept.
 - UNEP, UN-HABITAT, MOEJ, JICA, City of Yokohama
 - Participation of other countries and cities, donors, NGOs, research institutes, private sector is welcome
- Secretariat: MOEJ and JICA (initially)
Email accp@jica.go.jp

Main Activities

1. Annual knowledge-sharing meeting

- Preparatory Meeting in Maputo, Mozambique (25-27 April, 2017)
- 1st General Meeting in Rabat, Morocco (26-28 June, 2018)
- 2nd General Meeting in Yokohama, Japan (26-27 Aug, 2019)



3. SDGs Monitoring, data survey



2. Training Program in Japan

- Capacity development for SWM policy making and planning



4. Information Sharing, networking



SDG Targets and Indicators on waste management



Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management



Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

ACCP Website
<https://africancleancities.org/>

Facebook
facebook.com/ACCP2017

