



Expanding Japanese Companies' Technologies to Partner Countries - JICA SDGs Business Supporting Survey -

OKUMOTO Yasuyo,
Private Sector Partnership and Finance Department,
Japan International Cooperation Agency (JICA)

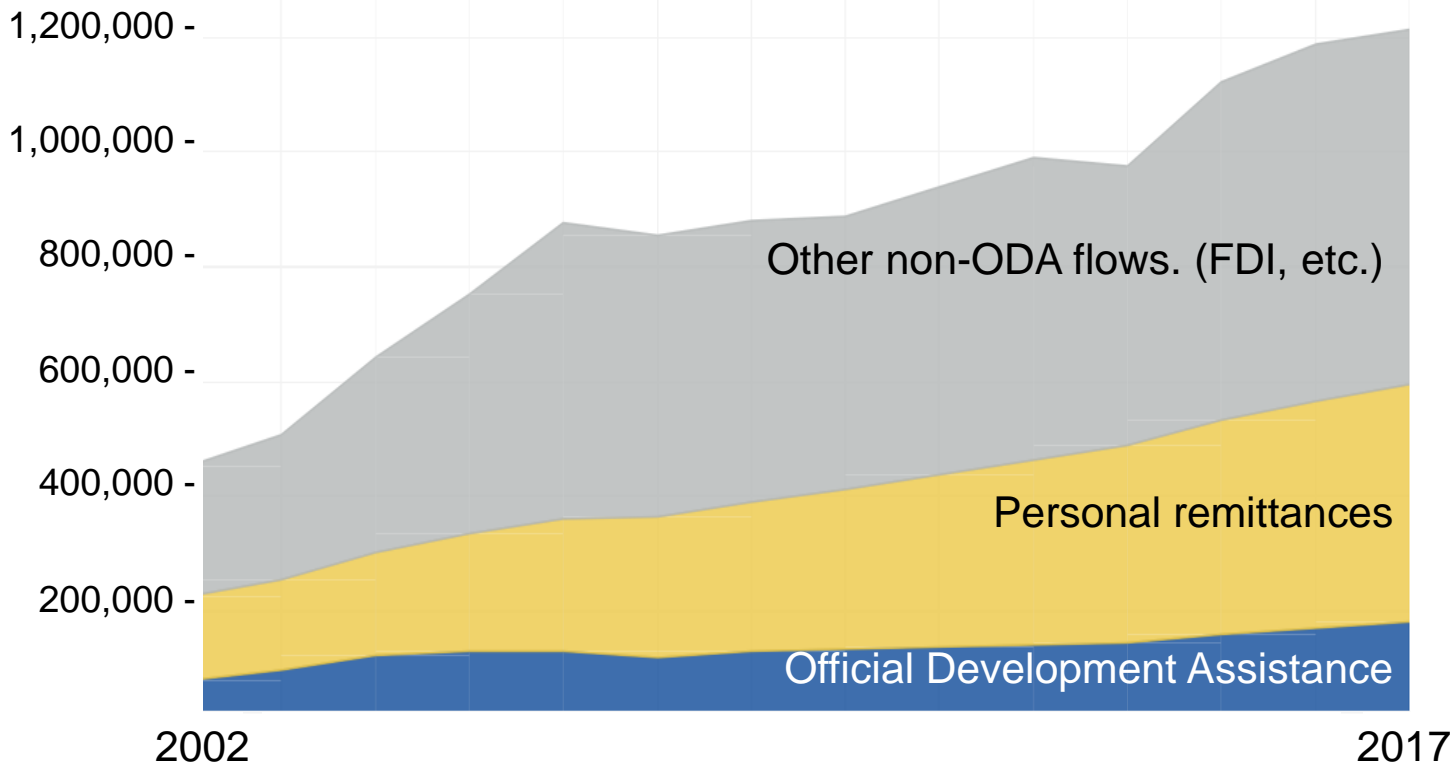
Index

1. Background and Concept
2. Introduction of “JICA SDGs Business Supporting Survey”
3. Examples
 - Tobe Shoji co., Ltd. : Cleaning and Recycling of used PET bottles
 - JAPAN CLEAN SYSTEMS co, Ltd.: Efficient and Hygienic Waste Storage System
 - Sugawara Industry co, Ltd. : Pavement Recycling Technology with Asphalt Waste

Background | Expanding the Role of Business in Development Cooperation

At a time when private sector funds far exceed ODA among the funds flowing into developing countries, collaboration between development and business (private-sector partnership projects) is becoming increasingly important in Japan's ODA as well.

Changes in the Breakdown of Funds Inflows into Developing Countries
USD million (2016 prices)



Source: OECD "Big picture of total resource receipts"

Future Collaboration in Development and Business

- Equal Partnership
- Long-term and organizational relationships
- Flexible market-based development based on strategic analysis

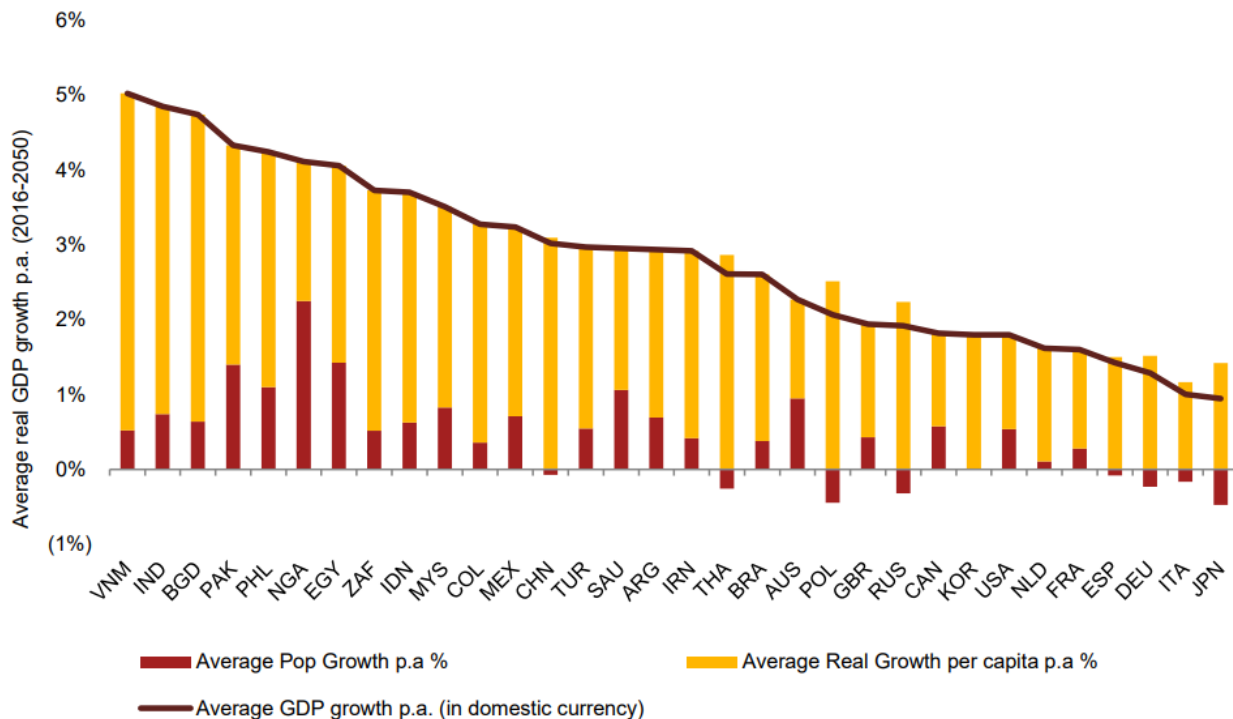


Source: DCED "A summary of innovations and institutional change in donor agencies" (2018)

Background | Market Expansion in Emerging and Developing Countries and Importance as an Innovation Hub

Developing countries, which drive global growth and have various challenges, are becoming increasingly important as hubs for markets, production, innovation, etc.

Forecast of Average Annual Real GDP Growth (2016-2050)



Source: PwC "The World in 2050: How will the global economic order change?" (2017)

Examples of Innovation Born in Developing Countries



◀ M-Pesa (Kenya):
Use your mobile device to send money or You can pay utility bills, tuition, etc. It quickly spread to the unbanked poor.
(Source: JETRO)

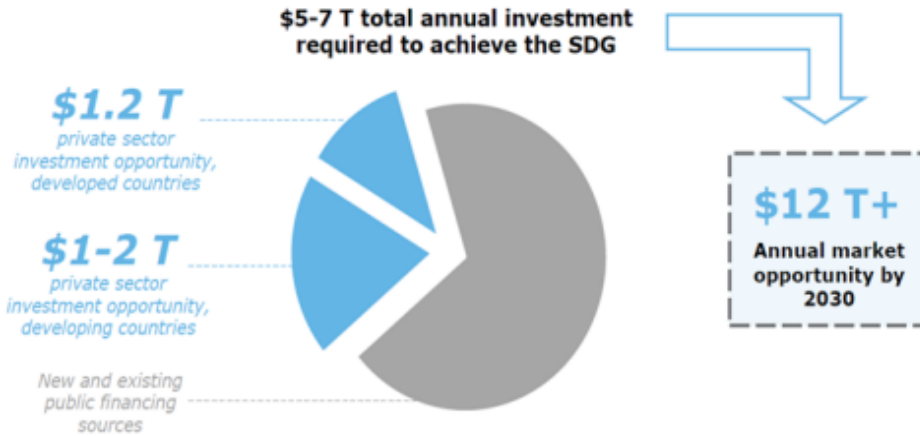


◀ Zipline (Rwanda):
Rapid blood transport by drones has helped reduce infant deaths and malaria-induced anemia, which is common in children.
(Source: Drone News)

Background | Business Impact Orientation

The recognition that contributing to the SDGs is indispensable for business sustainability and profit expansion is also spreading to companies, and an increasing number of companies are incorporating the SDGs into their management, and financial institutions are emphasizing ESG investment and impact investment.

Markets created by the SDGs



Source: UNDP, Ministry of Economy, Trade and Industry "SDGs Management Guide" (2019)

Trends in Japanese Firms

Company

- Japan Business Federation (Keidanren) Clearly Stipulates in its Charter of Corporate Behavior that Companies Will Drive the Realization of SDGs
- 55.1% of large companies and 36.6% of small and medium-sized enterprises answered that they are active in SDGs (Teikoku Databank Survey, 2021)

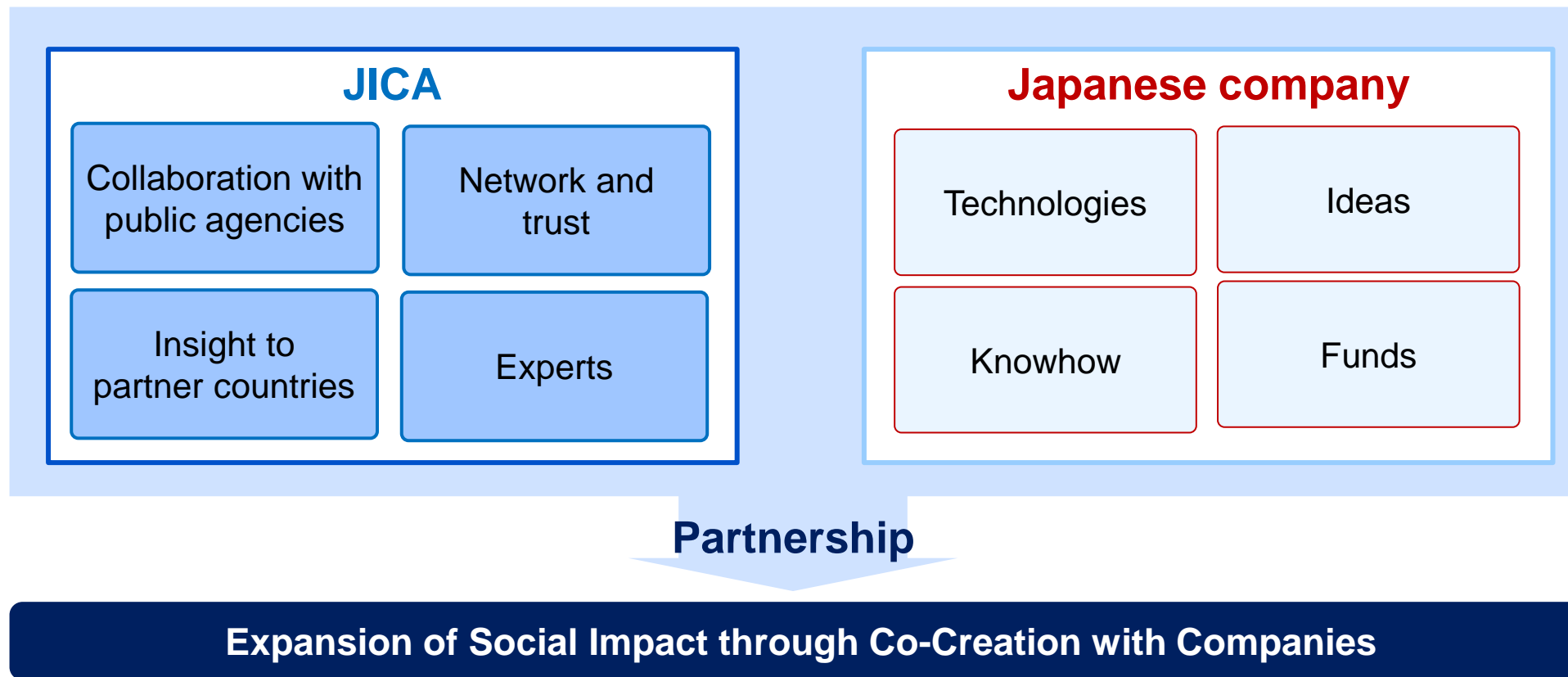
Financial institution

- 27 Financial Institutions Signed the Japan Impact-driven Financing Initiative, and JICA participated in this Initiative as one of the supporters. (As of February 2022)
- Of the 64 banks belonging to the Japan Regional Bankers Association, 46 banks, or about 70%, have announced their SDGs declarations (Japan Research Institute / September 2020)

Overview of JICA's Partnership with Private Sector



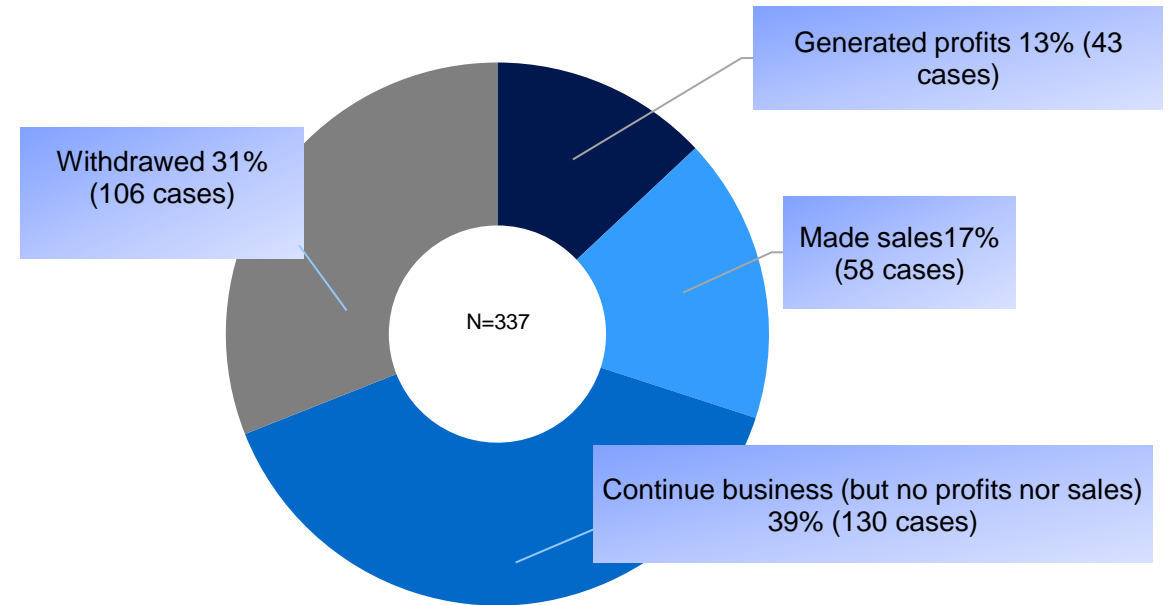
JICA has increased the efforts to enhance the partnership with private companies with co-creation, rather than simply ordering the business that align with JICA's priorities and designs as conventional ODA.



Background | Achievements of “JICA SDGs Business Supporting Survey”

Achievements to date

- In the 12 years since the start of the Program, 1,389 projects (including 1,065 small and medium-sized enterprises) have been adopted (companies in all prefectures have joined the Program).
- 70% of companies that have completed the survey are continuing to develop their business



Source: JICA "FY2021 Post-Mortem Monitoring Survey: Analysis Report of Questionnaire Survey Results"

Overview of SDGs Business supporting Survey



New Needs Confirmation Survey

- Gather basic information and needs in developing countries
- Verify compatibility with products and services
- Develop an initial business plan
- Duration: About 8 months

Up to 10 million yen + consulting service (About 4 person-months)

SMEs and SU

SDGs Business Verification Survey

- Through verification and dissemination activities of technologies, products, and business models, develop a business plan
- Duration: About 1~3 years

Up to 100 million yen / 150 million yen / 200 million yen (Consultant-related expenses included)

SMEs and SU

Up to 50 million yen (Consultant-related expenses included)

Large company

New SDGs Business Validation Survey

- After confirming the customer's acceptability of the product/service, secure local partners, formulate a business model, verify profitability, and develop operations to provide products/services.
- Develop a more sophisticated business plan
- Duration: about 1 year and 4 months

Up to 20 million yen + consulting service (About 8 person-months)

SMEs and SU

Large company

※SU
Start Up Company

※SME
Small and Medium-sized Enterprises

Corporate Co-Creation Platform

The "Corporate Co-Creation Platform" is a place for private companies, financial institutions, universities and research institutes, local governments, various support organizations, overseas donors, NGOs, and JICA to share information, know-how, and experience and gain opportunities for co-creation and collaboration in order to promote businesses that can contribute to solving the problems of developing countries.

Outline of Activities

- (1) Sharing knowledge and know-how for creating business and development impacts in developing countries
- (2) Provision of networking opportunities such as exchange events between companies utilizing the system
- (3) Provision of support for commercialization, such as matching between companies and brushing up on business ideas

E-mail magazine distribution

We are distributing e-mail magazines (in Japanese), covering the following contents.

Event information, public announcement information, corporate network building, overseas expansion, etc

Scan here to subscribe to our e-mail magazine>>>



Merits to use the scheme

1



JICA's Trust and Network Utilization

Users can conduct surveys with utilizing the trust that JICA has built up with developing countries.

- Users can access wider local partners which private companies can hardly reach.
- JICA can introduce key local partners such as central governments, local governments, industry groups, etc.

2



Professional Business Advisory

Users will get professional advisory from experienced consultants.

- Get professional advisories for commercialization in developing countries
- In support of JICA and consultants, scenario for solving problems in developing countries (Logic model) can be formulated

3











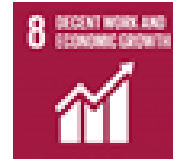

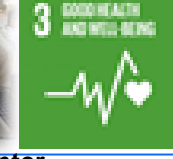



Corporate Recognition Improvement



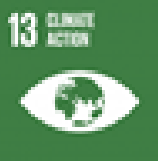




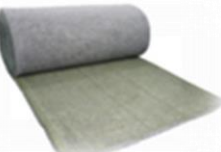

By disseminating the results with JICA, users will have wider recognition both domestically and internationally.

- As a result of the survey, JICA helps dissemination of the realized business development and development impact creation both domestically and internationally.
- It is expected to expand domestic and overseas partners and improve corporate recognition.

Examples of Products and Technologies That May Help Address Developmental Challenges

Example	Area	Possible application
   <p>CO₂ emissions monitoring system</p>	Environment and energy	Power generation with renewable energy, composting toilets, rainfall monitoring system, dam management, etc.
  <p>Plastic liquidation unit</p>	Waste treatment	Organic waste treatment, urban waste landfill recovery, medical waste treatment, conversion of plastic waste into fuel, etc.
   <p>Remotely operated excavator</p>	Water purification and treatment	Water quality measuring equipment, water purifiers, filtering units, purification tanks, etc.
   <p>Tools</p>	Vocational training and industrial development	Molding, enhanced product transport, grinders, machine tools, testing and measuring instruments, etc.
   <p>Braille embossing printer</p>	Welfare	Wheelchairs, rehabilitation equipment, nursing equipment, braille mobile terminals, braille printers, etc.

Examples of Products and Technologies That May Help Address Developmental Challenges

Example	Area	Possible application
   <p>Milling machine for long-grain rice</p>	<p>Agriculture</p>	<p>Rice milling machines, greenhouses, irrigation pumps, harvesting and processing machines, etc.</p>
  <p>Total blood bilirubin measuring instrument</p>	<p>Health and medicine</p>	<p>Electronic health records, medical network systems, X-ray diagnosis units, delivery monitoring units, mobile medical devices, etc.</p>
  <p>Science and mathematics learning aids</p>	<p>Education</p>	<p>Voice pens, e-learning systems, science learning aids, scientific experiment kits, etc.</p>
  <p>Multifunctional filter sheets</p>	<p>Disaster preparedness and response</p>	<p>Alarms, provisional lighting, disaster relief equipment, etc.</p>

Development Issues Concerned in Solid Waste Management Sector

- 90% of produced PET bottles in Kenya are disposed after use.
- Collected used PET resources may also become waste due to international restrictions.

Products/Technologies of the Company

- Cleaning and Recycling System for Used PET Flakes
- The system removes dust, dirt, etc. from flakes of used PET bottles, and produces PET pellets as raw materials for plastic products.

Survey Outline

- Survey Duration: February, 2022~May, 2024
- Country/Area: Nairobi, Kiambu, etc. in Kenya
- Name of Counterpart: Jomo Kenyatta University of Agriculture and Technology (JKUAT)
- Survey Overview: To demonstrate possibility to establish a supply chain for manufacture and sales of recycled PET pellets from locally produced PET flakes and to develop the business plan.



Production line of recycled PET pellets

How to Approach to the Development Issues

Manufacturing and sales of recycled PET pellets

- The company will manufacture recycled PET pellets from locally processed used PET flakes and sell them to plastic manufacturers in Kenya.
- The project will connect the supply chain that is not currently connected in Kenya, and will enable the company to enter the market without competing with other local industries.

Expected Impact in the Country

- Decreasing disposed used PET bottles
- Reducing CO2 emissions from the production of plastic products
- Promotion recycling industry in Kenya
- Creation of employment opportunities for people in Kenya

Development Issues Concerned in Municipal Waste Sector

- Insufficient Management of Waste Collection
- In efficient and unhygienic/unsafe working condition at Secondary Transfer Stations (STS)
- Cost of waste transportation by vehicles
- Environmental and social impact by unpleasant Odor, liquid spills, scattered waste at and around waste storing locations

Products/Technologies of the Company

- Space saving
- Automated waste loading and discharging for efficiency and safety
- Hygienic waste storing / Odor and noise reduction
- Custom-made specification
- High durability (stainless-steel Drum), water proof
- Over 1,500 units sold in Japan and overseas
- Market share of 60 ~70% in Japan.

Survey Outline

- Survey Duration : January, 2021 ~ July, 2022
- Country/Area : Dhaka city and Chittagong city, the People's Republic of Bangladesh
- Name of Counterpart : Waste Management Department of Dhaka South City Corporation and/or Dhaka North City Corporation (To be determined)

Survey Overview: The survey includes analysis of both public and private market, and evaluation of local partners, suppliers and available resources will be conducted for designing a suitable business model and investment plan. The survey also focuses on J-DRUM's positive impacts to the municipalities and other users by studying waste management cost efficiency, operation efficiency, STSs' working environment. J-DRUM's technical compatibility in the context of Bangladesh shall be examined as well, and pilot project may be proposed to the counterpart if there are high necessity and feasibility of such project.



J-DRUM

How to Approach to the Development Issues

- If J-DRUM will be introduced to the municipalities (STSs), and if procured for use at STSs, the development issues can be resolved or mitigated.
- J -DRUM may contribute to the ongoing project under ADB and JICA.
- There are private companies/facilities where J-DRUM may improve waste management and storing.
- J-DRUM can be introduced to other cities who face same issues.

Expected Impact in the Country

- To improve cost efficiency, operation efficiency and working condition at STSs.
- To improve waste management and surrounding private companies/facilities (malls, food court, large facilities).
- To contribute to the ongoing projects implemented by GoB and foreign donors.

Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Projects Indonesia, Feasibility Survey for the Pavement Recycling Technology with Asphalt Wastes

SMEs and Counterpart Organization

- Name of SME : Sugawara Industry Co, Ltd.
- Location of SME : Miyagi, Japan
- Survey Site: West Java State
- Counterpart Organization : Area III (West Java), Directorate General of Highways, Ministry of Public Works



Pavement recycling technology

Concerned Development Issues

- Shortage of the road construction budget
Regional development by improving national connectivity is one of the priority policies in National Medium Term Development Plan (RJPMN2015-2019). However, a half of the budget for the development of infrastructure have not been procured.

- Traffic Safety

The cheap overlay method is generally selected in order to reduce road construction cost. This method causes the step between road and sidewalk, which worsens traffic safety.



A car run off due to overlay method

Products and Technologies of SMEs

- Pavement recycling technology with asphalt wastes
 - Reduce the cost and resolve the shortage of asphalt by regenerating the asphalt. Asphalts would be regenerated from asphalt wastes that has been disposed or has been produced in the process of pavement maintenance.
 - Provide a high quality, road construction management technology adapted under the Japanese standard.
 - Reduce road maintenance cost by implementing appropriate management with Pavement Management System (PMS)

Proposed ODA Projects and Expected Impact

ODA Project : Verification Survey with Private Sector for Disseminating Japanese Technologies

Effect : Verify the manufacturing, constructing, and maintenance cost reduction of pavement recycling technology, Transfer the pavement recycling technology, and Disseminate the superiority of pavement recycling technology

Future Business Development of SMEs

- Promoting the recycling technology of asphalt wastes in Indonesia, and disseminating it as the countermeasure of the development issues
- Transferring the know-how of the pavement recycle technology to other cities in Indonesia (Packaging asphalt recycle, pavement/construction management and PMS)

Thank you

If you have any inquiries, please contact e-mail address below;
sdg_sme@jica.go.jp