JICA Social Bond Impact Report for FY2022 bonds

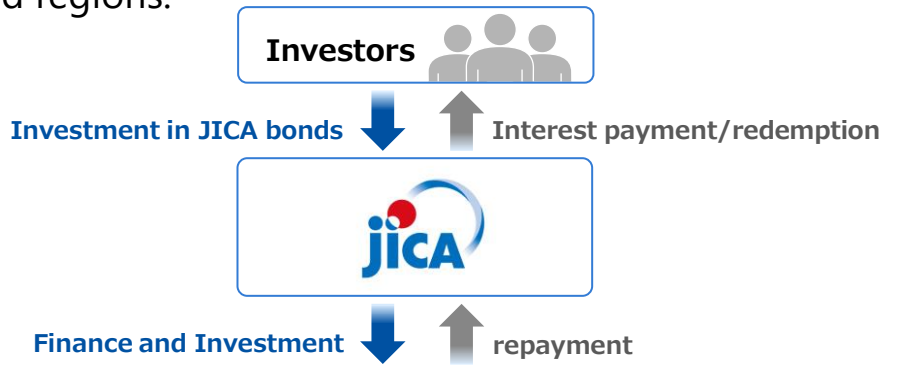
SUSTAINABLE DEVELOPMENT GOALS

Japan International Cooperation Agency

JICA Bonds for Sustainable Development

Use of Proceeds of JICA bonds

Proceeds of JICA bonds are allocated to JICA's Finance and Investment activities and utilized for the socioeconomic development of developing countries and regions.



Proceeds of JICA Bonds are used for basic needs such as infrastructure development, health and education, climate change response, etc.

Issuance Record (as of March 2023)

Total amount of FILP Agency Bonds (Note 1)	**870 billion yen**
Of which are Social Bonds	**420 billion yen**

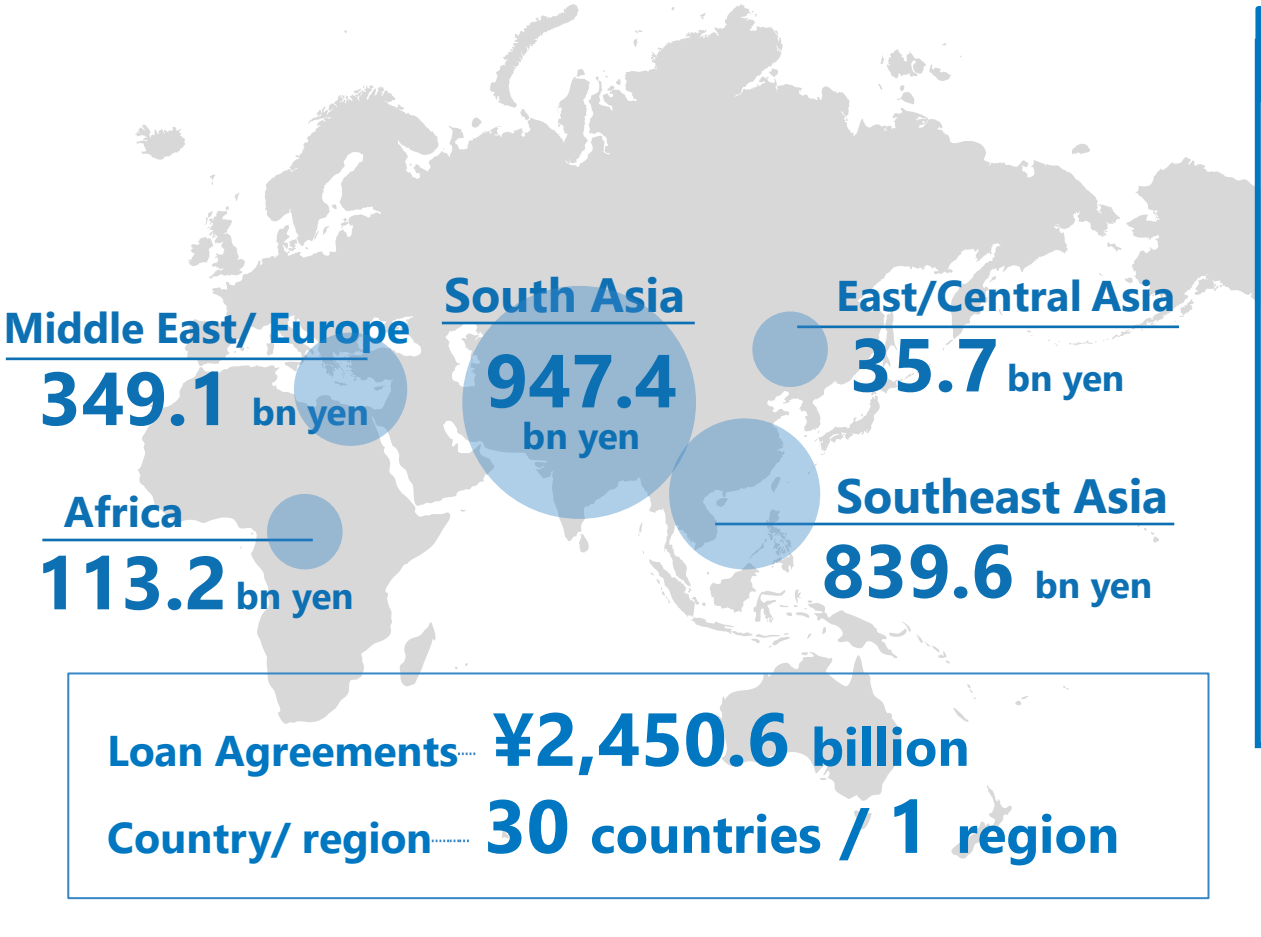
Major impacts and achievements (Note 2)

6 CLEAN WATER AND SANITATION	**Access to Safe Water**	**72.84 million people**
7 AFFORDABLE AND CLEAN ENERGY	**Access to Energy**	**20.77 million people** (Note 3)
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**Road Network**	**23,490 km** (Note 4)
	Railway Passengers	**1.71 billion people/year**
	Airport	**78.06 million people / year**
	Port (cargo)	**350 million tons / year**
11 SUSTAINABLE CITIES AND COMMUNITIES	**Disaster risk prevention**	**3.88 million people**
15 LIFE ON LAND	**Afforestation**	**2.85 million ha.**

Note 1: Fiscal Invesment and Loan Program. All JICA bonds issued from 2016 September are Social Bonds until March 2023 (end of FY2022).
Note 2: Impacts of Finance and Investment activities that are confirmed from ex-post evaluations conducted between FY2011 and FY2020
Note 3: Calculated based on generation capacity of JICA financed projects against the world data in 2015 for energy consumption and population.
Note 4: JICA financed projects added 5,373km new roads and rehabilitated/improved 18,117km existing roads.

New Commitments in FY2022 (Finance and Investment Projects)

- In FY2022, JICA approved 68 projects worth a total of 2,450.6 billion yen in 30 developing countries.
- In terms of SDGs, many of those approved projects contribute to Goal 8 (Economic growth), Goal 9 (Infrastructure), Goal 11 (Sustainable Cities & Communities), and Goal 13 (Climate action).



FY2022 commitments : SDGs contribution ratio per goal

Loan Agreements ¥2,450.6 billion

Country/ region 30 countries / 1 region

* The total amount of Loan Agreements includes commitments per region shown on this page and commitments for others (international organizations/other regions, i.e. 2 billion yen).
* For each of the projects approved in FY2022, the SDGs contribution ratio per goals are calculated based on the loan amount for the goal targeted in its ex-ante evaluation report etc. For projects that are expected to contribute to multiple goals, the loan amount is divided equally among the pertaining goals.
*Fiscal Year (FY) mentioned throughout the document means the Japanese FY (April to March).

List of projects signed in FY2022 (new commitments) (1/3)

ODA Loans (47 projects)

Region	Country	Project Name	Commitment Amount (million yen)
Southeast Asia	Indonesia	Patimban Port Development Project (II)	70,195
		COVID-19 Crisis Response Emergency Support Loan	30,000
		Disaster Resilience Enhancement and Management Program Loan(III)	30,000
		Peusangan Hydroelectric Power Plant Construction Project (II)	13,629
		Construction of Jakarta Mass Rapid Transit Project(Phase 2)(II)	87,918
		Patimban Access Toll Road Construction Project	42,120
	Cambodia	Sihanoukville Port New Container Terminal Expansion Project (I)	41,388
	Thailand	COVID-19 Crisis Response Emergency Support Loan	50,000
	Philippines	COVID-19 Crisis Response Emergency Support Loan Phase 2	30,000
		North-South Commuter Railway Project (Malolos-Tutuban) (II)	107,017
		North-South Commuter Railway Extension Project(II)	270,000
	Vietnam	Project for Disaster and Climate Change Countermeasures Using Earth Observation Satellite (II)	18,871
Central Asia/ Caucasus	Uzbekistan	Horticulture Value Chain Promotion Project (Phase2)	27,005

Region	Country	Project Name	Commitment Amount (million yen)
South Asia	India	Project for the Construction of Mumbai-Ahmedabad High Speed Rail (III)	100,000
		Mumbai Trans-Harbour Link Project(III)	30,755
		Project for the Establishment of Mizoram State Super-Specialty Cancer and Research Centre	9,918
		Project for the Construction of Mumbai-Ahmedabad High Speed Rail (IV)	300,000
		Rajasthan Water Sector Livelihood Improvement Project (II)	18,894
		The Patna Metro Rail Construction Project (I)	98,612
		The Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal	9,308
	Bangladesh	Dhaka Mass Rapid Transit Development Project (Line 5 Northern Route) (II)	133,399
		Southern Chattogram Regional Development Project	32,462
		Chattogram-Cox's Bazar Highway Improvement Project (I)	55,729
		Matarbari Port Development Project (II)	105,362
		Project for the Construction of Dual Gauge Double Line Between Joydebpur-Ishurdi Section(E/S)	4,228
	Nepal	Urban Transmission and Distribution System Improvement Project	15,901
	Bhutan	The COVID-19 Crisis Response Emergency Support Loan	3,300

List of projects signed in FY2022 (new commitments) (2/3)

ODA loan (continued from the previous page)

Region	Country	Project Name	Commitment Amount (million yen)
Central America/ Caribbean	El Salvador	San Miguel Bypass Construction Project (II)	6,936
	Panama	Panama Metropolitan Area Urban Transportation Line-3 Development Project (II)	92,000
South America	Ecuador	COVID-19 Crisis Response Emergency Support Loan	23,000
	Peru	Solid Waste Management Project (Phase 2)	5,733
	Bolivia	COVID-19 Response Emergency Support Loan	15,000
Middle East	Iraq	Basrah Refinery Upgrading Project(IV)	120,000
	Egypt	Greater Cairo Metro Line No.4 Phase 1 Project (II)	41,000
		Development Policy Loan for Universal Health Coverage	44,000
	Tunisia	Project for Support to Strengthen the Social Protection	12,000
	Morocco	Development Policy Loan for the Improvement of Learning Environment of Basic Education	22,000
	Jordan	Electricity Sector Reform and Resilience Enhancement Program Loan	15,000

Region	Country	Project Name	Commitment Amount (million yen)
Africa	Côte d'Ivoire	COVID-19 Crisis Response Emergency Support Loan	15,000
		Taabo-Kossou-Bouake Power Network Reinforcement Project	22,028
		Food Security Emergency Support Loan	15,000
	Senegal	Universal Health Coverage Support Program (Phase 2)	10,000
		Development Policy Loan for the Education Sector	10,000
	Nigeria	Lagos and Ogun Power Transmission System Improvement Project	26,180
	Botswana	The COVID-19 Crisis Response Emergency Support Loan	15,000
Europe	Ukraine	Local Authorities Environmental Improvement Project	13,000
		Local Authorities Environmental Improvement Project 【Increment】	65,000

List of projects signed in FY2022 (new commitments) (3/3)

Private-Sector Investment Finance (21 projects)

Region	Country	Project Name
Southeast Asia	Vietnam	Waste to Energy and Waste Treatment Project in Binh Duong Province
		Ninh Thuan Province Onshore Wind Power Project in Vietnam
	Laos	Monsoon Wind Power Project
	Indonesia	Project for Affordable Housing Finance for Low-Middle Income Households
	Cambodia	Rural Area Agricultural Sector Supporting Project
	Thailand	Smart Ferry Project along Chao Phraya River
		Project for Promoting Financial Inclusion of Low-Income Population
South Asia	India	Agricultural Sector Support Project
	Nepal	Impact Investment Promotion Project
	Bangladesh	Bangladesh Special Economic Zone Development Project
		Green Finance Promotion Project
	Maldives	Tourism Sector Support Project

Region	Country	Project Name
Central Asia/ Caucasus	Azerbaijan	Alat Solar Power Project
	Uzbekistan	Zarafshan Wind Farm Project
Central America/ Caribbean	Costa Rica	Support for Micro, Small, and Medium Enterprises in Costa Rica
South America	Brazil	Project for Rehabilitation of Distribution Network in Northeastern Area
	Ecuador	Project for Sustainable Portfolio and MSMEs in Ecuador
Middle East	Egypt・United Arab Emirates	Kom Ombo Solar Project
	Palestine	Micro, Small and Medium Enterprises Support Project
Africa	Africa	Project for Start-ups Innovation Support in Africa
Worldwide	Africa・Asia	Fintech Start-ups Growing Support Project

Project performance in FY2022

Commitments

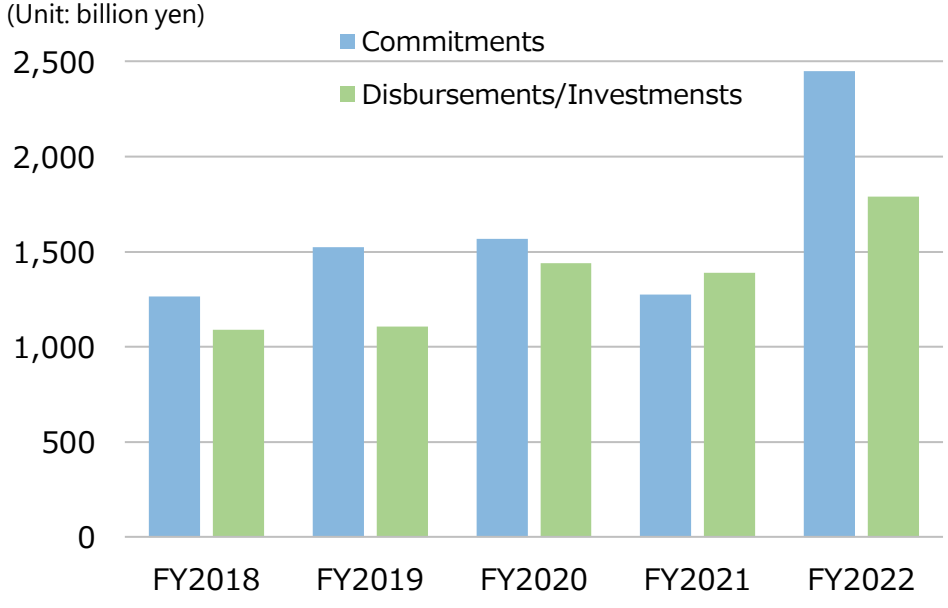
(Unit: billion yen)

FY2018	FY2019	FY2020	FY2021	FY**2022**
1,266.1	1,523.2	1,566.6	1,274.7	**2,450.6**

Disbursements/Investments

(Unit: billion yen)

FY2018	FY2019	FY2020	FY2021	FY**2022**
1,089.4	1,107.9	1,438.8	1,388.2	**1,789.9**



ODA Loan Disbursement for Top 10 Countries in FY2022

(Unit: billion yen)

	Country name	Disbursement amount
1	**India**	**459.0**
2	**Bangladesh**	**260.5**
3	**Philippines**	**182.8**
4	Iraq	88.3
5	Ukraine	78.0
6	Indonesia	69.6
7	Turkey	61.2
8	Thailand	60.0
9	International Organizations	60.0
10	Myanmar	52.5

Source: JICA

Track Record for FY2022 : Social Bonds

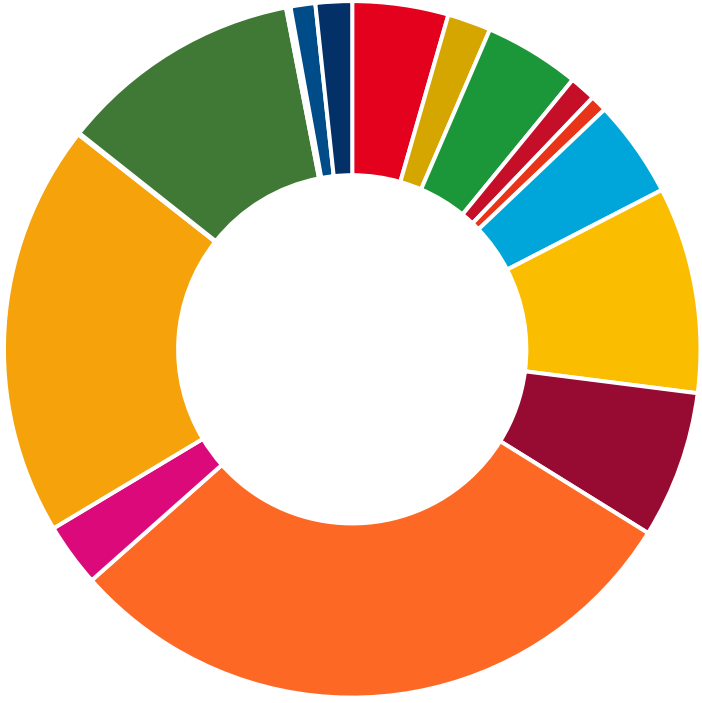
Issue No.	Issued Amount	Date of Issuance	Term (Redemption Date)
66th (Peacebuilding Bond)	11 billion yen	July 22, 2022	10 years（July 22, 2032）
67th (Peacebuilding Bond)	13 billion yen	July 22, 2022	20 years（July 22, 2042）
68th	7.5 billion yen	September 30, 2022	10 years（June 18, 2032）
69th	13 billion yen	September 30, 2022	20 years（June 20, 2042）
70th	10 billion yen	December 23, 2022	10 years（September 17, 2032）
71st (Retail)	5 billion yen	February 3, 2022	5 years（December 20, 2027）
72nd	20.5 billion yen	March 10, 2022	2 years（December 20, 2024）

Total issuance for FY2022 Social Bonds: 80 billion yen including Theme Bonds (Peacebuilding Bond) 24 billion yen

Allocation Ratio per SDGs

- For JICA bonds issued in FY2022, 56 billion yen* was fully allocated to JICA's Finance and Investment projects** that contribute to the achievement of SDGs in developing regions as shown below.

* The remaining 24 billion yen issued under Peacebuilding Bonds is scheduled to be fully allocated by March 2025 (FY2024).
**Excludes investments in coal-fired power generation projects.



Total allocation: 56 billion yen

(Allocation period: Until March end 2023)

Allocations per Sustainable Development Goals (%)

1 NO POVERTY: 4.5%	2 ZERO HUNGER: 2.0%	3 GOOD HEALTH AND WELL-BEING: 4.4%	4 QUALITY EDUCATION: 1.2%	5 GENDER EQUALITY: 0.8%
6 CLEAN WATER AND SANITATION: 4.5%	7 AFFORDABLE AND CLEAN ENERGY: 9.6%	8 DECENT WORK AND ECONOMIC GROWTH: 6.8%	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE: 29.6%	10 REDUCED INEQUALITIES: 3.0%
11 SUSTAINABLE CITIES AND COMMUNITIES: 19.2%	12 RESPONSIBLE CONSUMPTION AND PRODUCTION: 0.1%	13 CLIMATE ACTION: 11.3%	14 LIFE BELOW WATER: 0.1%	15 LIFE ON LAND: 0.1%
16 PEACE, JUSTICE AND STRONG INSTITUTIONS: 1.1%	17 PARTNERSHIPS FOR THE GOALS: 1.7%			

(Note) Allocation is made for the disbursed/invested projects during the allocation period, and is divided according to the expected SDGs contribution of the projects based on ex-ante evaluation reports. For projects that are expected to contribute to multiple goals, the allocation is divided equally among the pertaining goals.

Examples of impacts per SDGs from allocated projects

Expected Impacts (1)

Better financial access for farmers

Project Name	Rural Area Agricultural Sector Supporting Project (Private-Sector Investment Finance)
Country / Region	Cambodia (Southeast Asia)
Loan amount	USD 85 million
Agreement Date	May 13, 2022

Agriculture is highly important to the Cambodian economy, accounting for about 20 % of GDP and 30 % of employment. However, financial access in the agricultural sector is limited to 9% of the total loan amount in the country, meaning more than half of the farmers do not have access to finance. 90 % of the poor in Cambodia live in rural areas, and 80 % of rural residents are engaged in agriculture. There is economic disparity with incomes in rural areas remaining at around 50-60% of urban areas.

This project will improve financial access for farmers in rural areas through ACLEDA Bank, a financial institution with the largest lending volume in Cambodia's agricultural sector. This project is co-financed with Sumitomo Mitsui Banking Corporation (SMBC). In addition, more than 30% of the loan amount in the project will be extended to female farmers and small and medium-sized businesses run by women, which enhances women's economic empowerment.

Expected Main Project Effects

Qualitative Effects

-Improvement in financial access in the agricultural sector

Quantitative Effects

Indicators	Baseline (actual value in 2021)	Target (2025)
Loan balance for the agricultural sector (million US dollars)	1,094	1,611
Number of borrowers who receive loans financed by JICA	0	12,000

Source: Ex-ante Evaluation https://www2.jica.go.jp/en/evaluation/pdf/2022_B1881_1_s.pdf

Photo by JICA

Farmers purchased rice milling machine and storage warehouse by accessing loans from ACLELA Bank.

Expected Impacts (2)

Improving rice productivity and food security	
Project Name	Komering Irrigation Project (Phase 3) (ODA Loan)
Country / Region	Indonesia (Southeast Asia)
Loan amount	15,896 million yen
Agreement Date	March 30, 2017

In Indonesia, there is a constant need to import rice because of the decrease in farmland area due to urbanization and industrialization and increase in population, improving the country's food self-sufficiency rate is an urgent issue. The Komering Irrigation District was developed to increase the production of rice and other crops. Japan has continuously supported the district since 1979.

This project will strengthen water supply and maintenance capacity for farmland, and renovate the facilities developed by the Phase 1 and 2 projects. This project will improve agricultural productivity, incomes for farmers and food security in the country. Furthermore, in the project area, changes in rainfall patterns due to climate change is predicted to occur in the future, and there are concerns about the impact on agricultural production. This project will contribute to "adaptation to climate change" by stabilizing agricultural production.

Expected Main Project Effects

Qualitative Effects

- Improvement of the living environment by stable farm income
- Stable supply of food

Quantitative Effects

Indicators	Baseline (actual value in 2014)	Target (2 years after completion)
Irrigated Area (ha)	-	8,500
Paddy production (tons/year)	25,500	89,250
Yield of Paddy (tons/ha/year)	3.0	5.0 (rainy season) 5.5 (dry season)
Annual average total farm income per hectare (million Indonesian Rupiah)	16	38

Source: Ex-ante Evaluation https://www2.jica.go.jp/en/evaluation/pdf/2016_IP-574_1_f.pdf

Tertiary canal
(Constructed in the
Komering Phase 2 Project)

Rain-fed fields will be irrigated in the
Project area
(Lumpin Expansion Area)

Photo by Nippon Koei

Expected Impacts (3)

Fostering practical and innovative engineers with Japan's "KOSEN" education model

Project Name	Industrial Human Resources Development Project (ODA loan)
Country / Region	Thailand (Southeast Asia)
Loan amount	9,434 million yen
Agreement Date	March 30, 2020

In 2016, the Thai government set out "Thailand 4.0" as a long-term development vision, aiming to transform industries from traditional labor-intensive to knowledge-intensive, and to promote digitalization, automation, and such. This vision aims to avoid the "Middle-income Trap" by improving productivity and promoting innovation. To achieve this, it is essential to foster practical engineers with specialized expertise.

The Thai government has decided to introduce Japan's "KOSEN" education model which focuses on fostering practical and innovative engineers. And in 2019, the first KOSEN "the College of Technology Affiliated to King Mongkut's Institute of Technology Ladkrabang (KOSEN-KMITL)" was opened. This project will establish and operate two KOSENs in Bangkok, the capital of Thailand, to provide education at the same level as Japanese KOSEN. It will also provide opportunities to study abroad at KOSENs in Japan. The project will contribute to foster practical and innovative engineers, and thus contribute to sustainable economic development.

Expected Main Project Effects

Qualitative effects

- Improving the quality of engineering education
- Development of human resources meeting demand of the target industries
- Promoting research and innovation

Quantitative indicators

Indicators	Baseline	Target (2 years after completion)
Employment rate of students who graduated from Thai or Japanese KOSEN in target industries* of "Thailand 4.0" (%)	-	100
Number of students who graduated from Thai or Japanese KOSEN (people)	-	1,152
Number of teachers of Thai KOSEN who are trained by the project (people)	-	100

*Thailand 4.0's 10 target industries (1) next-generation automobiles, 2) smart electronics, 3) medical and health tourism, 4) agriculture and biotechnology, 5) future foods, 6) robot industry, 7) aviation and logistics, 8) biofuels and bioscience, 9) digital industry and 10) medical hub

Ex-ante Evaluation (Japanese version only)
https://www2.jica.go.jp/ja/evaluation/pdf/2019_TXXXV-1_1_s.pdf

King Mongkut's Institute of Technology Ladkrabang College of Technology (KOSEN-KMITL)

Photo by KOSEN-KMITL

Expected Impacts (4)

6 CLEAN WATER AND SANITATION

Water supply development for access to safe water

Project Name	Siem Reap Water Supply Expansion Project (ODA Loan)
Country / Region	Cambodia (Southeast Asia)
Loan amount	13,497 million yen
Agreement Date	March 29, 2012 (Phase1), October 21, 2021 (Phase 2)

In Cambodia, the civil war that continued until the early 1990s destroyed water supply facilities, severely deteriorating access to safe water. After the end of the civil war, improvements have been made to water supply services mainly in Phnom Penh City, the capital of Cambodia. But access to safe water is limited in provincial areas such as Siem Reap City, where there is rapid increase in demand for water due to a combination of natural population growth and tourists drawn to the nearby Angkor Wat heritages.

This project will support the construction of water supply facilities such as water diversion facilities, water treatment plants, and distribution pipes in Siem Reap City. This project will contribute to safe and stable water supply services, improving living environment, and promotion of the tourism industry.

Expected Main Project Effects

Qualitative Effects

- Improving living environment
- Better sanitation
- Conservation of the Angkor heritage
- Industry and economic development in the region

Quantitative Effects

Indicators	Baseline (Actual value in 2011)	Target (2 years after completion)
Number of households connected to water supply (households)	4,867	30,516
Total served population (people)	24,876	183,096
Turbidity (NTU)	-	Less than 5

Source: Ex-ante Evaluation
https://www2.jica.go.jp/en/evaluation/pdf/2021_CP-P26_1_s.pdf
https://www2.jica.go.jp/en/evaluation/pdf/2011_CP-P12_1_f.pdf

Water treatment plant under construction

Manual digging for water pipe laying route

Photo by JICA

Box1: From Japan to Cambodia toward better water supply management

6 CLEAN WATER AND SANITATION

“Miracle of Phnom Penh” – Synergizing with Technical Cooperation

Bond proceeds are not allocated to Technical cooperation projects.

25 % → 90 %

Water supply coverage rate in Phnom Penh city
(1993 → 2006)

70 % → 8 %

Non-revenue water rate in Phnom Penh city
(1993 → 2006)

Photo by JICA

- In Cambodia, access to safe water was an urgent need in post-war reconstruction after decades of the civil war.
- JICA, in cooperation with Kitakyushu City and others, has supported Cambodia for developing water supply administration and human resource development in the capital Phnom Penh through technical cooperation since 1993.
- As a result, in the late 2000s, it succeeded in providing affordable and stable supply of safe water to more than 1 million citizens. This is praised as the "Miracle of Phnom Penh" from around the world.
- Furthermore, in Cambodia at the time, “non-revenue water” (water that is pumped and then lost or unaccounted for) was a major problem. If fees cannot be collected, water supply maintenance and management problems cannot be sustainable. In JICA projects, experts dispatched from Kitakyushu city carefully shared knowledge on water supply management with Cambodian counterparts, resulting in a significant reduction on non-revenue water rate from 70% to 8% . This was a great achievement even compared to non-revenue water rates in UK and France at the time, which were around 20%.
- JICA continues to support improvement of water supply facilities and human resource development in Siem Reap and other cities in Cambodia.

Click here or scan the QR code more about “Miracle of Phnom Penh”
(YouTube video clip created by Ministry of Foreign Affairs)

Expected Impacts (5)

Increasing power supply and addressing climate change through clean energy development (Solar Power Generation)

Project Name	Kampong Chhnang Solar Power Project (Private-Sector Investment Finance)
Country / Region	Cambodia (Southeast Asia)
Loan amount	4.1 million USD
Agreement Date	August 25, 2021

Electricity demand in Cambodia has been annually increasing by an average of 18% from 2003 to 2018 due to economic growth. Expansion of power supply is an urgent need. The Cambodian government has encouraged "Independent Power Producers (IPPs)" to develop power sources in order to strengthen the power supply system by promoting not only hydroelectric and thermal power generation, but also renewable energy including solar power generation. While promoting the diversification of power sources, the government aims to meet the rapid growing electricity demand.

This project will contribute to expanding electricity supply and reducing GHG (greenhouse-gas) emissions. Additionally, the project will supply electricity with expected unit generation cost at 3.877 cents/kwh, so it is expected to have an effect of lowering electricity costs in Cambodia. Furthermore, this project is a large-scale solar IPP project with less precedent in Cambodia, and development financial institutions including JICA will provide financing as a model project, which will have the effect of stimulating investment in subsequent similar projects by private businesses.

Expected Main Project Effects

Qualitative Effects

-Mitigation of climate change impacts

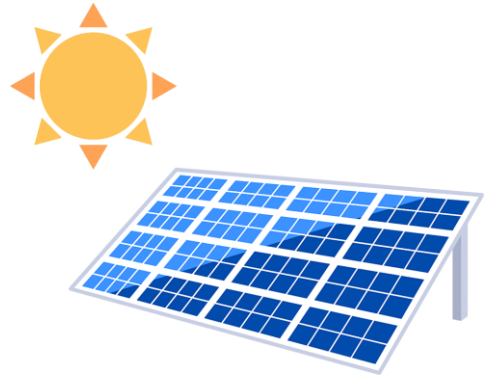
-Promoting solar power generation in Cambodia

-Sustainable economic development

Quantitative Effects

Indicators	Baseline	Target (2 years after completion)
Maximum output (MW)	-	60

Source: Ex-ante Evaluation
https://www2.jica.go.jp/en/evaluation/pdf/2023_B1864_1_s.pdf



Expected Impacts (6)

Supporting Indian Start-up companies working on DX

Project Name	DX Startups Investment Project (Private-Sector Investment Finance)
Country / Region	India (South Asia)
Loan amount	4 million USD
Agreement Date	October 29, 2021

Start-up companies are rapidly emerging in India. It is said that 470,000 new jobs were created in the five years from 2014 to 2019, making startups an important player in supporting employment and technological innovation in the country. Among these, efforts to transform society by utilizing digital technology are called digital transformation (DX) , and through DX efforts by startup companies, new approaches solving social issues such as telemedicine and smart agriculture are being introduced.

Rebright Partners IV Investment Partnership (RP No.4 Fund) in which this project invests, focuses on matching business alliances between companies in emerging countries in which it invests and Japanese companies, and has contributed to open innovation by Japanese companies. RP No.4 Fund is a VC fund that invests in startup companies working on DX in emerging countries centered on India, and by focusing on education, healthcare, agriculture, climate change, financial inclusion, and others. This project will contribute to solving social issues.

Expected Main Project Effects

Qualitative Effects

-Improving financial access for startup companies

-Enhancing industrial competitiveness

Quantitative Effects

Indicators	Baseline (Actual value in 2020)	Target (2 years after completion)
Number of DX start-ups targeted for investment	0	15
Number of jobs created	Set at the time of Investment decision	Same as left

Source: Ex-ante Evaluation https://www2.jica.go.jp/en/evaluation/pdf/2021_7166_1_s.pdf

Expected Impacts (7)

Comissioned in December 2022

GHG emission reduction: 180,000 tons / year *

*CO2 equivalent, estimated value at 2027

Bangladesh's 1st urban railway "Dhaka Metro" ~Safe, Secure, and Clean transportation for everyone~

Project Name	Dhaka Mass Rapid Transit Development Project (I-V) (ODA Loan)
Country / Region	Bangladesh (South Asia)
Loan amount	255,798 million yen
Agreement Date	(I) February 20, 2013; (II) June 29 , 2016; (III) June 14, 2018; (IV) August 12, 2020; (V) March 29 , 2022

The population of Dhaka, the capital of Bangladesh, increased from 6.62 million to 19.8 million from 1990 to 2018 (United Nations, 2018), and the rapid increase in transportation demand due to population growth has led to chronic traffic congestion and air pollution. This project aims to develop MRT Line 6, which is 20 km long and connects the northern part of the city with the center. It is the highest priority route in the urban transport development master plan, "Dhaka Urban Transport Strategic Plan", revised with support from Japan. This project will help meet the transportation demand in the Dhaka metropolitan area. It will also promote a modal shift to public transportation and contribute to reducing air pollution in the Dhaka metropolitan area.

Expected Main Project Effects

Qualitative Effects

- Facilitation of transportation and logistics in Dhaka metropolitan area
- Reduction of traffic congestion
- Mitigation of climate change through reduction of GHG emission and alleviation of air pollution

Quantitative Effects

Indicators	Baseline (Actual value in 2009)	Target (2 years after completion)
Passenger Kilometer (1,000 people/km/day) Uttra North – Agargaon section Agargaon to Motijheel section Motijheel to Kamalpur section	-	1,874 1,524 78
Average Travel Time (minutes)	110 (by bus)	38

Source: Ex-ante Evaluation https://www2.jica.go.jp/en/evaluation/pdf/2021_BD-P119_1_s.pdf

Car body painted with red and green colour of the national flag

Photo by JICA

Click here or scan the QR code more about DhakaMetro

Box2: Dhaka Metro with Japanese railway technologies

- Dhaka Metro adopted Japanese railway technologies such as rolling stock, depots, main line construction, station buildings, and signal/ticket gate systems. The system was developed based on the Japanese technology and is modeled after Japanese commuter trains.
- JICA provides not only ODA loans but also technical cooperation utilizing the Japanese technologies and knowledge for developing legal frameworks, organizational structure for railway operating organizations, safe operation techniques, development around stations and others.

Trial run (Photo by Nippon Koei)

Station platforms with platform doors installed (Photo by DMTCL)

Interior modeled after a Japanese commuter trains (Photo by JICA)

- Dhaka Metro adopted the contactless IC card system, using Japanese technologies. JICA has supported Bangladesh to develop the integrated transport ticketing system including setting up of a clearing house through its technical cooperation.

Dhaka Metro staff showed passengers how to use IC card (Photo by DMTCL)

Smiling female passengers holding IC cards (Photo by JICA)

The IC card system received good reviews particularly from working women during a pilot project done by JICA's technical cooperation. In Bangladesh, many consider it taboo that female have contact with male outside their family due to cultural backgrounds.

With an IC card, female passengers can use public transportation with a peace of mind, without having to worry about facing contact with a male ticketer when paying their fares.

Box3: Dhaka Metro — Safe & Secure for Everyone

Passenger using a wheelchair passes through the ticket gate (Photo by JICA)

- Elevators, automatic ticket gates wide enough to accommodate wheelchairs, braille blocks, priority seating for the elderly and vulnerable people, CCTV, women-only cars, and other facilities are in place to ensure safety and security for everyone.

A person using a wheelchair commented, "***I'm really happy that there is public transportation that I can use without the help of others***."

Passengers using wheelchairs board in a dedicated space (Photo by JICA)

Various people using the country's first urban railway (Photo: DMTCL)

Voices from female passengers,

"***We are glad that public transportation is now available for women to use safely***."

Box4: Dhaka Metro with Bangladesh's first female drivers

- Ms. Akhtar and Ms. Moriom were appointed as ***Bangladesh's very first female railway drivers***.
- They applied with great passion to this job for the country's first urban railway project. They underwent 4-months of extensive training.
- On the opening day, they operated the vehicle in which the Prime Minister Sheikh Hasina took a ride.

Ms. Akhtar (left in photo)

- *Question: Why did you apply for metro drivers?*

Answer: "Metro is a new technology for Bangladesh and has become a hot topic. My study was related to this field, which is also the reason for application."

- *Question: What do you think about working as female drivers?*

Answer: "I am very happy and excited to be able to start this project, and I am very proud that we are the first women involved in the Metro."

Ms. Morion (right in photo)

- *Question: Why did you apply for metro drivers?*

Answer: "When I heard about the job offer, I thought it was a dream project for Bangladesh. It is the first metro in the country and all the technology is new to us."

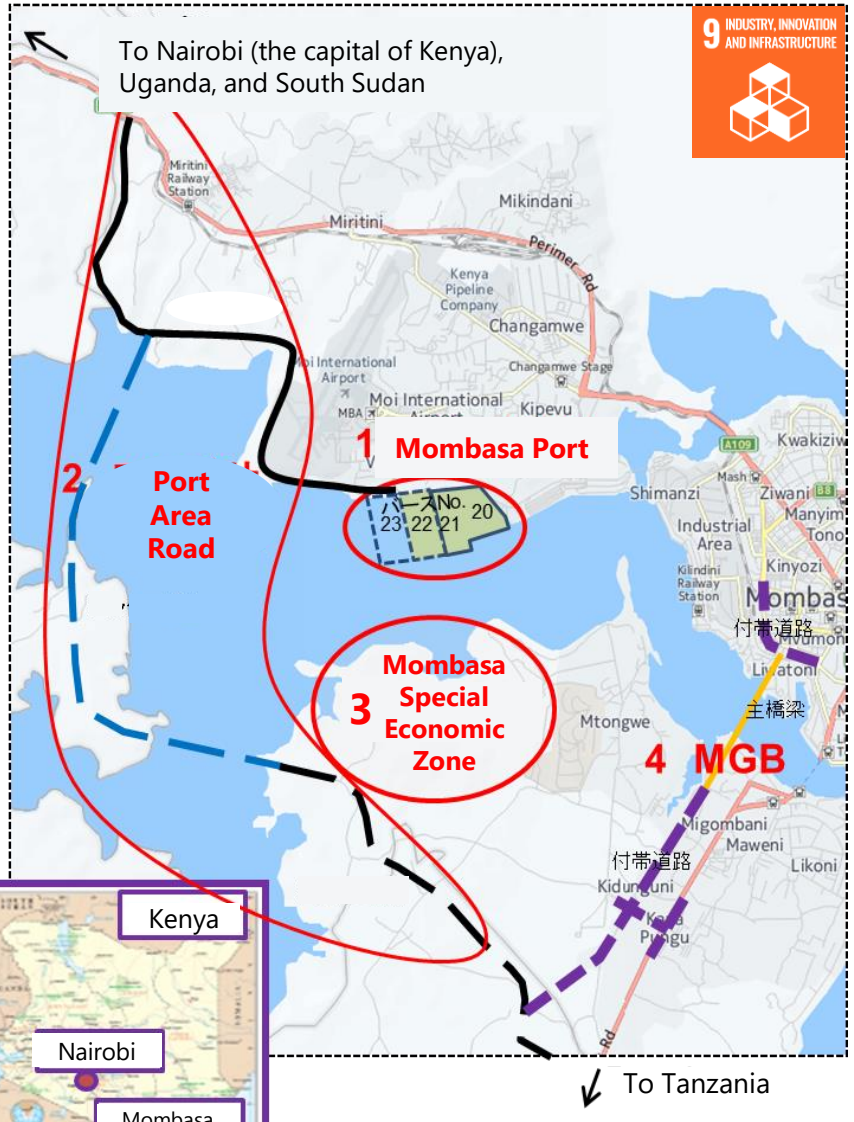
- *Question: What do you think about working as female drivers?*

Answer: "Being a driver is considered a male's job. But because we're here now, we can guarantee that this job is suitable for everyone. It doesn't matter if you are male or female. As a women, in our country, we welcome other women to this project."

(Photo: JICA)

Expected Impacts (8)

Holistic development of Mombasa (Kenya), industrial and trade hub in East Africa



1 Mombasa Port Development (phase 2)

Completed in May 2022

Loan Amount	32,116 million yen
Agreement Date	March 9, 2015
Project outline	container terminal construction (berth 22), crane maintenance
Project effects	Volume of container cargo handled (TEU/year) 903,000 (baesline) ⇒ 2,019,000 (target*)

* Prior to this project, JICA supported construction of a container terminal (berths 20 and 21), crane maintenance and port access road through Mombasa Port Development Project (approved in November 2007, completed in February 2016) .

Port cranes constructed

2 Mombasa Port Area Road Development Project

Loan Amount	40,157 milion yen
Agreement Date	June 2 , 2012 (period I), July 4 , 2017 (period II)
Project outline	Road construction (approx. 26km)
Project effects	Annual average daily traffic volume (PCU/day), travel time, cargo volume (tons/day), etc. (*Baseline and target values are set for each road section)

Road under construction

3 Mombasa Special Economic Zone Development Project

Loan Amount	37,090 million yen
Agreement Date	February 27, 2020
Project outline	construction of ports, trunk roads and power supply facilities
Project effects	Freight volume on newly constructed roads (tons / day) 0 (baseline) ⇒ 1,100 (target)

Construction Design of Mombasa Special Economic Zone

4 Mombasa Gate Bridge Construction Project (MGB)

Loan Amount	47,800 million yen
Agreement Date	December 25, 2019
Project outline	Construction of a bridge and ancillary roads connecting Mombasa island and Likoni area in southern Mombasa
Project effects	Annual average daily traffic volume (vehicles/day) 2,500 (baseline (by ferry)) ⇒ 30,400 (taget)

Construction Design of Mombasa Gate Bridge

Source: Ex-ante Evaluation
https://www2.jica.go.jp/en/evaluation/pdf/2014_KE-P30_1_f.pdf
https://www2.jica.go.jp/en/evaluation/pdf/2017_KE-P32_1_f.pdf

Japanese only for 3 & 4
https://www2.jica.go.jp/ja/evaluation/pdf/2019_KE-P35_1_s.pdf
https://www2.jica.go.jp/ja/evaluation/pdf/2019_KE-P34_1_s.pdf

Expected Impacts (9)

Building climate change resilience with earth observation satellites

Project Name	Project for Disaster and Climate Change Countermeasures Using Earth Observation Satellite (I)(II) (ODA Loan)
Country / Region	Vietnam (Southeast Asia)
Loan amount	26,098 million yen
Agreement Date	(I) November 2, 2011; (II) May 23, 2022

Vietnam is one of the most climate disaster-prone countries in the world. More than 70% of the population live in areas affected by natural disasters such as typhoons and floods. Disaster risk reduction is an urgent issue in the country. The earth observation satellite (one optical satellite) owned by the country is not able to perform constant observation due to limited observation time and weather, and so Vietnam would acquire data from other countries to supplement their analysis. There is an urgent need to strengthen their monitoring system using earth observation satellites in order to respond quickly when disasters occur.

This project will support development of earth observation satellites and related facilities as well as human resources to utilize satellite observation data at these facilities. This will contribute to strengthening disaster reduction system in Vietnam. In addition, Japanese technology will be utilized in the development, manufacture, and launch of Earth observation satellites, as well as the construction of satellite operational systems.

Expected Main Project Effects

Qualitative effects

-Strengthening disaster countermeasures

-Strengthening climate change ountermeasures

Quantitative indicators

Indicators	Baseline (Actual value in 2011)	Target (2 years after completion)
Time required for acquiring image data from satellites at the event of disasters (hours)	120~168	6
Data processing capability improvement (scene / day)	10	60
Number of engineers equipped with SAR* data processing skill (persons)	less than 10	120

*SAR: Synthetic Aperture Radar

Source: Ex-ante Evaluation
https://www2.jica.go.jp/en/evaluation/pdf/2022_VN17-P4_1_s.pdf
https://www2.jica.go.jp/en/evaluation/pdf/2011_VN11-P2_1_f.pdf

Vietnam National Space Center construction site in Hoa Lac Hi-Tech Park
(Photo by Vietnam National Space Center)

Expected Impacts (10)

GHG emission reduction:
92,724 tons / year

Afforestation, biodiversity conservation and improving livelihoods of local residents

Project Name	Project for Community-Based Forest Management and Livelihoods Improvement in Meghalaya (ODA Loan)
Country / Region	India (South Asia)
Loan amount	10,397 million yen
Agreement Date	March 27, 2020

76% of Meghalaya state, located in the northeastern part of India, is covered by forests (2017). However, forest degradation is progressing, the percentage of forests with a standard canopy density of 10% or more but less than 40%* has increased to 42% (2017). This causes a decline in timber and forest production, soil erosion, and sedimentation into rivers, leading to a deterioration of residents' livelihoods and access to water resources.

This project aims to conserve the natural resources of villages by implementing sustainable forest management, livelihood improvement activities and strengthening organizational capacity on forest management. It will contribute to conservation of natural environment and eco-system of the Meghalaya sate as well as to improving livelihood of the residents.
(*It is viewed as low-quality forest due to illegal logging, excessive harvesting and other factors.)

Expected Main Project Effects

Qulitataive Effects

- Forest ecosystem conservation
- Women's economic empowerment

Quantitative Effects

Index name	Baseline (Actual value in 2019)	Target (2 years after completion)
Area under forest management (ha)	-	22,500
Decrease in soil runoff (%)	-	50
Increase of accessibility to water (%)	-	40
Ratio of female participation in the project activities (%)	-	Determined by baseline survey

Source: Ex-ante Evaluation https://www2.jica.go.jp/en/evaluation/pdf/2019_ID-P282_1_f.pdf

Degraded forest in Meghjalaya state, India Photo by JICA

Expected Impacts (11)

Supporting Ukraine's economy in the time of crisis

Project Name	Emergency Economic Recovery Development Policy Loan (ODA Loan)
Country / Region	Ukraine (Europe)
Loan amount	78,000 million yen
Agreement Date	May 16, 2022; June 17, 2022

This project will provide financial support through co-financing with the World Bank to Ukraine, which is facing an economic crisis due to the impact by the military invasion. This project will support the country's efforts for economic policy reforms including de-monopolization, anti-corruption, land reform, financial market improvement, strengthening social security.

This project will contribute to socioeconomic stability of the country.

(*Based on the Japanese government's Development Cooperation Charter, JICA does not implement any projects for military purposes. Funds from this project will not be used for military purposes.)

Expected Main Project Effects

-Improvement of fiscal situation
- Reducing monopoly and corruption
- Improving farmers' access to land and financial markets
- Improving social security for vulnerable groups such as elderly women, etc.

Source: Ex-ante Evaluation https://www2.jica.go.jp/en/evaluation/pdf/2022_UKR-C3_1_s.pdf

In July 2023 , JICA President Tasnaka Akihiko visited Ukraine and met with President Volodymyr Zelensky. JICA supports Ukraine's crisis response efforts through a number of supports, including this project. Photo by JICA

Box5: Holistic support for recovery and reconstruction in Ukraine

JICA's comprehensive support for Ukraine's recovery and reconstruction with various schemes.

* Projects introduced on this page other than ODA loans are implemented using financial sources other than bond proceeds.

Financial support*

- **ODA loans: total 78 billion yen** (details on page 24)

- Providing financial support and promoting economic policy reforms (*The loans are not used for military purposes.)

- **Grant aid: Total 75.5 billion yen**

- Supporting countermeasures against landmines and unexploded ordnance, debris and waste disposal of devastated buildings, recovery of infrastructures including transportation, electricity, water supply, healthcare, education, agriculture, public broadcasting and others

Supplying crop seeds for recovery of agriculture*

- Before the Russian invasion, Ukraine was one of the world's leading grain producers. After the invasion, many farmers suffered severe damage.
- JICA distributed **seeds for sunflower (31 tons) and corn (64 tons) to farmers in the northeastern Kharkiv region**.

Preparing seeds for distribution

Click here or scan the QR code for more about crop seeds supply.

(JICA website)

Support for demining*

- JICA has been supporting Ukraine for humanitarian demining of landmines through providing equipment and trainings for officials of the State Emergency Service of Ukraine (SESU).
- Training for SESU on detecting and disposing of landmines and unexploded ordnance was conducted at the facilities of the Cambodian Mine Action Centre (CMAC), which Japan has been supporting demining for over 20 years.

Demining machine operation training in Yamanashi prefecture, Japan

Video clip on demining training for Ukraine

https://www.youtube.com/watch?v=mdNLraSHP9Q

Training for detecting landmines in Cambodia

JICA Ukraine office in Kyiv reopened in November 2023

JICA opened its office in the capital Kyiv in November 2017. In light of the deteriorating situation, JICA had been operating remotely from Japan and Moldova after tentative evacuation in January 2022. In November 2023, we have re-opened the office to quickly and steadily provide support in a wide range of fields.

https://www.jica.go.jp/english/information/press/2023/1519258_25258.html

Contacts

Japan International Cooperation Agency

Treasury, Finance and Accounting Department

Address 5-25 Nibancho, Chiyoda-ku, Tokyo 102-8012

TEL +81(3)-5226-9279 FAX +81(3)-5226-6383

URLs https://www.jica.go.jp/english/about/investor/index.html