

JICA Country Analysis Paper
for
The People's Republic of Bangladesh

Japan International Cooperation Agency
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JICA Country Analysis Paper (JCAP) is a paper in which countries are analyzed by JICA, as a development assistance agency, from the viewpoint of development and is to be utilized in considering and providing effective cooperation to ODA recipient countries. JCAP provides information from the viewpoint of development for the government of Japan in formulating aid policies such as “country assistance policy”. It is also noted that actual cooperation and projects to be implemented shall be considered and determined in accordance with policies of the government of Japan, and budget of each fiscal year, etc.

List of Abbreviations

Abbreviation	Definitionh
ADR	Alternative Dispute Resolution
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BIG-B	Bay of Bengal Industrial Growth Belt
BIGM	Bangladesh Institute of Governance and Management
CAAB	Civil Aviation Authority Bangladesh
DX	Digital Transformation
FDI	Foreign Direct Investment
FOIP	Free and Open Indo-Pacific
GDP	Gross Domestic Product
GNI	Gross National Income
GED	General Economics Division, Bangladesh Planning Commission
GHG	Greenhouse Gas
ICT	Information and Communication Technology
IMF	International Monetary Fund
JCAP	JICA Country Analysis Paper
JDS	Project for Human Resource Development Scholarship
JOCV	Japan Overseas Cooperation Volunteers
LDC	Least Developed Country
NAP	National Adaptation Plan
NCDs	Non-Communicable Diseases
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NIP	National Industrial Policy
MRT	Mass Rapid Transit
PEDP4	Fourth Primary Education Development Programme
PP2041	Perspective Plan of Bangladesh 2021-2041
TOD	Transit Oriented Development
SDGs	Sustainable Development Goals
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
WB	World Bank
WHO	World Health Organization
8FYP	8th Five Year Plan July 2020- June 2025

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Chapter 1: Analysis of Development Policies, Plans, Key Development Issues and Sectors in Bangladesh

1.1 Bangladesh's development policies and plans, including their relationship to the SDGs

1.1.1 Perspective Plan 2021-2041 (PP2041)

In March 2020, the Government of Bangladesh announced its long-term vision "Perspective Plan of Bangladesh 2021-2041 (PP2041)" as a strategy with development goals through 2041, and policies/programs to achieve them. Under PP2041, Bangladesh aims to become an Upper Middle-Income Country and eliminate extreme poverty¹ by 2031, and to achieve a High-Income Country status by 2041 with poverty² approaching extinction. The main visions of PP2041 are (1) Bangladesh will be a developed country by 2041, with per capita income of over US\$12,500 and fully in tune with the digital world, and (2) Poverty will become a thing of the past in *Sonar Bangla*. The transition can be realized through a process of rapid inclusive growth leading to the elimination of poverty while increasing the productive capacity, building an innovating knowledge economy and protecting the environment, with the following 9 strategic goals.

Strategic goals

- Eradication of Extreme Poverty by 2031; reducing Poverty to less than 3 percent by 2041
- Towards Upper middle-income country by FY 2031; High-income country by 2041
- Industrialization with export-oriented manufacturing will drive structural transformation into the future
- Paradigm shifts in Agriculture will enhance productivity and ensure nutrition and food security for the future
- A service sector of the future will provide the bridge for the transformation of the rural agrarian economy to a primarily industrial and digital economy
- The urban transition will be an essential part of the strategy to move to a high-income economy

¹ The Government of Bangladesh independently calculates the expenditure level at which a person can intake the minimum amount of energy (2,122 kcal per day) necessary for human survival (the national poverty line). The term "extreme poverty" refers to a state of poverty in which people live below the national poverty line and its expenditure level.

² Poverty, as defined by Bangladesh in PP 2041 etc., refers to a state of poverty living at an expenditure level equivalent to the national poverty line.

- Efficient Energy and Infrastructure will be essential components of the enabling environment that facilitates rapid, efficient and sustainable growth
- Building a Bangladesh resilient to climate change and other environment challenges
- Establishing Bangladesh as a knowledge hub country for promoting a skill-based society

Table 1 : Growth and Poverty Reduction Goals for PP2041

indicator	FY2020 Standards	Target FY2031	Target FY2041
Real GDP growth (%)	8.2	9.0	9.9
Extreme poverty (%)	9.4	2.3	<1.0
Moderate Poverty (%)	18.8	7.0	<3.0

1.1.2 Eighth Five-Year Plan (July 2020-June 2025) (8FYP)

In December 2020, the Government of Bangladesh announced the “8th FIVE YEAR PLAN July 2020-June 2025 (“8FYP)”. Based on the lessons learnt from the previous FYP, the 8FYP launches some concrete measures to achieve the main vision, strategic goals of PP2041, and Sustainable Development Goals (SDGs), and sets 12 priority strategies under 6 priority issues.

Priority issues

- Rapid recovery for COVID-19 to restore human health, confidence, employment, income and economic activities
 - GDP growth acceleration, employment generation, productivity acceleration and rapid poverty reduction
 - A broad-based strategy of inclusiveness with a view to empowering every citizen to participate fully and benefit from the development process and helping the poor and vulnerable with social protection- based income transfers
- A sustainable development pathway that is resilient to disaster and climate change; entails sustainable use of natural resources; and successfully manages the inevitable urbanization transition
- Development and improvement of critical institutions necessary to lead the economy to Upper Middle-Income Country status
 - Attaining SDG targets and coping up the impact of LDC graduation.

Priority Strategies

- Strategy for COVID-19 Recovery

- Accelerating Inclusive Growth
- Prudent Macroeconomic Policies
- Efficient Public investment and its Financing
- Strengthening Human Development
- Poverty Reduction, Social Protection and Inclusion
- Strategy for Infrastructure Development
- Digital Bangladesh and Information Communications Technology (ICT)
- Managing the Urban Transition
- Sustainable Development
- Strengthening Public Institutions and Governance
- Development Results Framework (DGF)

1.2 Key development issues and sectors in Bangladesh

1.2.1 Strengthening of industrial structure

Bangladesh has maintained positive growth even during the COVID-19 pandemic, and its economy is expected to continue to grow at over 6%, driven by the secondary and tertiary sectors (International Monetary Fund (IMF), 2022). In particular, the garment industry continues to account for more than 80% of exports (Bangladesh Bureau of Statistics (BBS, 2021), and Europe and the United States account for 80% of exports (Bangladesh Central Bank (BB), 2022). This trade structure is vulnerable to economic trends and tariffs in Europe and the United States. In addition, the trade balance continues to be in deficit (BB, 2022), mainly due to the low value-added of export products. While industrial diversification and high value-adding are necessary to foster industries that will follow the garment industry, Foreign Direct Investment (FDI), which facilitates the transfer of technology necessary for this purpose, is only 0.7% of GDP (2016-2020 average), lower than that of Vietnam (6.2%), India (1.8%), and the Philippines (2.5%) (World Bank (WB), 2022). Furthermore, Bangladesh has already achieved the LDC graduation criteria set by the UN in March 2018 and is scheduled to officially graduate from LDCs in 2026 if it continues to achieve steady socio-economic growth. Considering the concerns about further expansion of the trade balance deficit due to the elimination of preferential treatment following LDC graduation, it is important to strengthen the industrial structure (diversification and high value-added). It is also necessary to develop infrastructure (e.g., to improve the efficiency of transportation and logistics, and to establish a stable power supply system) to support the strengthening of industrial structure.

(1) Private sector development

As mentioned above, Bangladesh has an industrial structure in which garments account for more than 80% of exports, and with the graduation of LDC in 2026, costs due to tariffs are expected to increase (+8.9% points) as a result of the non-application of the special preferential tariff (World Trade Organization ("WTO") and Enhanced Integrated Framework, 2020). Furthermore, the competitiveness of Bangladesh is expected to decline due to rising labor costs associated with economic growth, the promotion of industries other than the garment industry is an important issue. In addition, the amount of Bangladesh's imports in FY2021/22 were approximately 1.5 times of its exports, and the trade promotion through the development of high value-added industries is strongly required in terms of improving the balance of international trade. Therefore, it is also necessary to work on industrial diversification and the creation of high value-added export industries.

Although the Government of Bangladesh aims to accelerate import substitution and promote high value-added industries by increasing FDI and forming linkages with domestic industries, FDI to Bangladesh remains low at 0.7% of GDP (2016-2020 average) (WB, 2022). The following issues have been pointed out as reasons for the lack of increase in FDI: complicated licensing/approval procedures, underdeveloped financial markets (Bangladesh's total credit/GDP ratio is 45%, while the ratio of the Association of Southeast Asian Nations (ASEAN) is 75%), and lack of special economic zones and industrial clusters that offer a high level of services. In order to increase FDI and create linkages with domestic industries, for example, the Government of Bangladesh aims to attract manufacturers of vehicles and primary parts through FDI, expand local production in stages, and foster domestic supporting industries in the Automobile Industry Development Policy (2021). The government provides incentives for new investment (e.g., preferential tax treatment) and sets a policy on used car import restrictions. However, further efforts are required to realize the policy objectives to address the remaining issues (e.g. relaxing restrictions on foreign capital and intensifying restrictions on used car imports).

In National Industrial Policy (NIP) (2022), the Government of Bangladesh has identified agriculture/food processing and manufacturing as promising industries for export diversification, Although the agricultural sector (including food processing and fisheries) has high growth potential, it is pointed out that agricultural, livestock, and fishery products are contaminated due to excessive use of pesticides and chemical fertilizers and water pollution from chemical residues. In addition, excessive use of preservatives and colorants in the food processing stage has hindered food exports, which require a high level of safety.

In the manufacturing sector, employment opportunities are expected to be secured

in the “light engineering³” and supporting industries such as the plastics industry, which are mainly carried out by small and medium-sized enterprises, and human resource development is required for industrial diversification and high value-adding. However, higher education institutions (equivalent to universities) are not fully performing their function as “knowledge and human resources hubs,” as their enrollment rate (24% in 2020) is lower than the average for low-and-middle-income countries (35% in 2020) due to the low quality of education (WB, 2022). In the field of technical education, the lack of a system to support graduates’ career paths is a factor in the low employment rate of them, and it has also been pointed out that the quality of education is not sufficiently guaranteed, resulting in a failure to produce human resources with sufficient skills and abilities required by the industrial world. In addition, capacity development of teachers seems to be another issue due to the shortage of teachers and their teaching skills in higher and technical education, etc. The ICT industry is listed as a special promotion industry in the NIP, and there is a need to develop advanced ICT human resources by strengthening practically technical skills through the collaboration between industrial expert and academia.

In PP2041, the Government of Bangladesh emphasizes the creation of high value-added industries through the creation of new business models based on innovative technologies by start-ups and non-traditional actors, but 90% of Bangladeshi start-ups are unable to overcome initial stage deficits. In order to foster an active competitive environment, there is a need to implement policies to remove barriers to entrepreneurship and increase the number of start-ups.

(2) Industrial infrastructure development

(i)Connectivity improvement

In Bangladesh, transportation demand is growing at about 8% per year due to population and economic growth (General Economics Division (GED), Bangladesh Planning Commission, 2020). On the other hand, there are issues such as underdevelopment of road and rail networks due to the large rivers dividing the country, insufficient capacity of existing roads and railroads, and a mix of different gauge (wide gauge and narrow gauge) railroads, which hinder smooth transportation within the country and to neighboring countries. In addition, the Bangladesh Railway is chronically in the red due to inefficient management, and government agencies in charge of road and rail development face challenges on maintenance and management capacity (both budgetary and technical).

The country's port cargo trade is growing at an average annual rate of about 12%

³ The “light engineering” is used as a generic term for the machinery and metalworking industries in Bangladesh.

from 2011 to 2020. Chattogram Port handles 98% of the country's containerized cargo volume, and the port's cargo volume (2.59 million TEUs) by 2020 exceeds the designed handling capacity of existing port facilities (1.75 million TEUs), resulting in chronic congestion and long waiting times at ports of entry. In response to the global trend toward larger vessels, Bangladesh has yet to develop deep-sea ports which can accommodate large container vessels, resulting lack of international competitiveness.

Dhaka International Airport, the country's gateway, has averaged 7% annual growth in airport passenger volume from 2010 to 2022 (excluding the period of COVID-19 pandemic) (Civil Aviation Authority Bangladesh, "CAAB", 2022). On the other hand, while the existing terminal has reached a maximum design capacity at 8 million passengers, the number of passengers in 2022 reached a record high of approximately 7.92 million, and facility improvements are not keeping up with demand (CAAB, 2022). Additionally, customer satisfaction is low due to the low quality of service provided by the airport.

(ii)Power and energy

Bangladesh's electricity demand has been increasing at an average annual rate of about 8%, and demand is expected to increase in line with economic growth (GED, 2020). The country has traditionally produced abundant domestic natural gas and utilized it as a major energy source, but production has been declining since peaking in 2017. Considering the above, Bangladesh has recently started importing LNG, but its receiving system is not sufficiently developed. Another issue is inefficient energy use on the demand side, partly due to the fact that domestic energy has been secured at low cost in the past.

In addition, the country needs to address expanding its energy supply and achieving low-carbon society / carbon-neutrality in a compatible manner, even though Bangladesh has few suitable locations for the installation of renewable energy facilities due to the characteristics of the land.

Moreover, the lack of power grid and transmission capacity, as well as immature power system operational capacity, leads to the problems such as the large-scale power outages happened in most of the country in October 2022.

1.2.2 Urban function enhancement and environmental improvement

Bangladesh has a population density of about 1,119 people/km², which is very high compared to other countries (WB, 2022). The total population is expected to increase from approximately 164.69 million in 2020 to approximately 192.57 million in 2050. Of this total, the urban population is expected to grow rapidly from approximately 62.88 million in 2020 to approximately 112.38 million in 2050, due to the accelerating influx

of people from rural areas to urban areas in search of employment opportunities and quality public services (United Nations, 2019). This results in a rapid expansion of the urban area, causing urgent issues such as high demand for urban infrastructure and public services and the emergence of environmental problems. In order to promote sustainable economic development, urban functions must be strengthened to accommodate the rapidly growing urban population. Environmental problems that accompany economic growth are also serious, and there is a need to realize a "clean city" that harmonizes the economy and the environment.

(1) Urban function enhancement

In Bangladesh, population growth and economic growth have increased traffic demand, especially in urban areas, while public transportation is insufficiently developed, resulting in chronic traffic congestion and air pollution. The average vehicle travel speed in Dhaka is less than half that of central Tokyo, and economic losses due to traffic congestion are estimated at several billion USD per year (WB, 2018). In order to solve the above-mentioned issues, it is necessary to promote Transit Oriented Development (TOD), which requires an integrated approach, including urban planning at the upstream stage, infrastructure development at the downstream stage such as construction of Mass Rapid Transit (MRT) and development in stations and their vicinities. In addition, it is also necessary to take measures in the road transportation network to reduce the flow of transit traffic into urban centers and to eliminate bottlenecks on arterial roads in order to control and improve chronic traffic congestion and air pollution.

Demand for electricity is also growing in urban areas. Especially, in the Dhaka metropolitan area, it is necessary to take measures against increasing electricity demand since the area accounts for about 35% of the nation's electricity demand (Ministry of Power, Energy and Mineral Resources, 2016) and the demand is expected to continue to grow. In addition to quantitative issues, there are also qualitative issues, such as the risk of wide range of power outages due to the radial development of the power distribution system, and concerns about the negative impact on supply reliability and power quality when renewable energy is introduced on a large scale in the future.

In addition, Bangladesh faces the problem of insufficient water supply in urban areas, where only approximately 53% of the population has access to safely managed drinking water supply (World Health Organization (WHO) and United Nations Children's Fund (UNICEF), 2021). Water demand in major cities⁴ in Bangladesh is

⁴ Dhaka, Khulna, Chattogram, Rajshahi and Rangpur.

expected to increase by more than 1.6 times (compared to 2020) by 2050, making expansion of water supply an urgent need (GED, 2018). In addition, since much of the water source is dependent on groundwater, there is a need for sustainable use of groundwater to prevent groundwater levels from declining, and for surface water development when water demand exceeds groundwater availability. Furthermore, water utilities established in urban areas are also affected by inefficient management, resulting in low quality water services, low customer satisfaction, and high non-revenue water rates, which in turn lead to a negative cycle of deteriorating financial conditions for the water utilities.

For the urban administration sector, there is insufficient coordination between the central government agencies and city corporations including Dhaka and Chattogram, causing challenges in efficient administrative procedures and public administrative services.

(2) Urban environment improvement

In Bangladesh, rapid urbanization is worsening environmental problems in urban areas. Due to budget constraints of government agencies and insufficient capacity of public officials, a comprehensive approach which balances economic development and environmental conservation has not been taken, and the promotion of environmental administration has become an urgent issue.

In the waste sector, while the collection rate of general waste has been increasing, institutional design and facility development for waste treatment and disposal remain insufficient, resulting in pollution. In addition, the rapid increase in waste generation, especially in urban areas, has led to a shortage of disposal sites, and it is also necessary to deal with hazardous waste.

Furthermore, despite the rapid increase in sewage discharges in urban areas, sewage systems are not yet in place, with exceptions in parts of Dhaka. Urban sewerage coverage remains at about 23% of the population (WHO and UNICEF, 2021). Also, insufficient sewage management has led to problems of pollution in rivers and other bodies of water and deterioration of sanitary conditions.

In addition, the country is experiencing serious air pollution due to expanding economic activities, and the PM_{2.5} concentration (annual average) in 2021 was 76.9 µg/m³, far exceeding the WHO environmental standard (5 µg/m³), making it the most polluted country in the world (IQ Air, 2021). This is damaging to the health of its citizens, as the annual number of deaths attributed to air pollution is said to be about 123,000 (2017) (Health Effects Institute, 2019).

1.2.3 Overcoming social vulnerabilities

Despite robust economic growth, more than 10% of the population is still below the international poverty line⁵ (WB, 2022). The Gini coefficient, which had been worsening between 1985 and 2000, has improved slightly in recent years, but income inequality is still evident at 32.4% as of 2016 (WB, 2022). In addition, the fiscal balance is in deficit by about 5% of GDP, and the tax revenue ratio is at 9% of GDP (IMF, 2022), significantly lower than in other countries. This means that public expenditure on health, education, social security, etc. is inadequate, and social services are not fully secured for socially vulnerable. There is an urgent need to establish a stable social security system for the future during the demographic dividend period, which will continue for about 40 years starting around 2015. In addition, the country must overcome its social vulnerabilities, such as the influx of more than 950,000 displaced persons in Bangladesh from Rakhine State, Myanmar (as of January 2023, United Nations High Commissioner for Refugees, 2022) and the increased burden on host communities that host the displaced persons, as well as the impacts of climate change.

(1) Governance and rural development

(i) Governance

According to Worldwide Governance Indicator by World Bank, Bangladesh's governance remains among one of the lowest countries in the world (WB, 2022), making it a challenge to raise governance capacity to sustain economic growth and promote social development. In particular, there is a need to strengthen the functions of administrative agencies by developing capacities of public officials and digitizing public administration in order to enhance the policy-making and execution capabilities of administrative agencies including local governments. In addition, the government needs to strengthen revenues by improving tax revenues, which remain at 9% of GDP (IMF, 2022), in order to expand public services. Furthermore, with the number of pending cases in courts reaching 3.6 million as of 2019 (GED, 2020), and citizens' equal access to justice impeded, there is a need to improve judicial practices and expand Alternative Dispute Resolution (ADR). To address these issues, it is necessary to improve access to justice by promoting speedy judicial procedures, promoting the use of mediation as a type of ADR, and training mediators.

In addition, there is a lack of social security systems and other safety nets for vulnerable groups such as the disabled and the poor people, and public support for

⁵ The international poverty line is set as a poverty state living on less than \$1.9 per day (2021 purchasing power parity (in US dollars)). In contrast, 24.3% of the population (in 2016) lives in poverty with an expenditure level equivalent to the domestic poverty line set independently by the Bangladesh government.

them needs to be strengthened.

(ii)Rural development

The poverty rate in rural areas remains high at 26.4% compared to 18.9% in urban areas (BBS, 2017). In addition, public health challenges are evident with low rates of access to safely managed drinking water supply services (about 62%) and sanitation facilities (about 42%) in rural areas (WHO and UNICEF, 2021). In the crop and livestock sector, low productivity is a challenge due to inadequate rural infrastructure facilities and limited access to finance by farmers, which has prevented the adoption of modern agricultural technologies. In the fisheries sector, depletion of resources is an issue due to overfishing and other factors. In addition, inadequate and insufficient flood control and irrigation facilities during floods and droughts are an issue.

The influx of the displaced persons in Bangladesh from Rakhine State, Myanmar and the prolonged problems have also had a serious impact on host communities. In areas where the influx of the displaced persons has been confirmed, social problems have become more serious (e.g., decreased employment opportunities and lower wages, deterioration in the security situation, and environmental degradation) in addition to overloading existing infrastructure (e.g., traffic congestion, drinking water shortages, and increased waste). There seems to be little prospect for the return of the displaced persons to Myanmar, and there are concerns that the humanitarian crisis will become more prolonged and serious, and cooperation that meets local needs must be considered and implemented. Regarding support for the displaced persons, the Government of Bangladesh has initiated government-led assistance on Bhasan Char Island, where the displacement of people continues, but there are some challenges for providing social services such as health and education and opportunities for livelihood improvement, and the assistance for the displaced persons is required from various donors.

(2) Human development

(i)Health system strengthening

In the health sector, in addition to the lack of health care facilities, especially in rural areas, procurement of equipment and maintenance of existing facilities is a challenge. Inadequate food safety inspection systems and inspection capabilities have led to some health hazards due to food-borne diseases, and prevention of diseases caused by unsafe food has also become an issue. Furthermore, due to concerns about the quality of public healthcare, many private healthcare facilities are widely used at their own expense, and the ratio of out-of-pocket expenses for healthcare is as high as 74% (WHO, 2020) due to the lack of a social security and public healthcare insurance

system, which creates challenges in accessing to healthcare services. In addition, information systems in health sector are disorganized, and patient information is not managed properly. Thus, disease prevention, treatment follow-up, and appropriate referrals among health care facilities are not fully realized. An appropriate referral system between primary, secondary, and tertiary care facilities has not been established, leading to a concentration of patients in secondary and higher facilities and a decline in the quality of health care services.

In addition to the above, there is a serious shortage of medical personnel with only 8.3 medical personnel including nurses per 10,000 people (in 2017, SDG recommendation: 44.5 per 10,000). The quality of medical and health care educational institutions also needs to be improved, and these challenges have led to a decline in the quality of health care services as well.

Although the under-five mortality rate and the maternal mortality rate have improved from 49 per 1,000 live births (2010) to 29 per 1,000 live births (2020) and 258 per 100,000 childbirths (2010) to 173 per 100,000 childbirths (2017) respectively (WHO, 2019 and 2023), the number of Non-Communicable Diseases (NCDs) is increasing due to changes in eating habits, lifestyles, etc. It accounts for 67% (2016) of national cause of death (WHO, 2018). Therefore, prevention and early detection of the diseases through strengthening capability of health care service providers and enhancing preventive awareness-raising activities have become important.

(ii)Education improvement

After primary education became compulsory in 1990, improvements can be seen in the enrollment rate, from 94.8% (2010) to 97.8% (2018) (Ministry of Primary and Mass Education, 2018). On the other hand, there are challenges in learning achievement, with only 31% of school children in math and 64% in reading comprehension (UNICEF, 2021) having the academic skills they should have acquired in their final year of primary school (grade 5). There are also concerns about learning loss due to the impact of the 18-month-long school closure imposed by the outbreak of COVID-19.

Furthermore, the enrollment rate in secondary education (equivalent to junior high school and high school in Japan) has also improved from 48% (2010) to 67% (2018) (WB, 2020). However, the rate remains low compared to primary education. Access to education among the poor is a challenge with low enrollment, since secondary education is not free, and also because ICT systems for distance learning have not been sufficiently established. In addition, the dropout rate remains high at 38.3%, with child marriage being one of the contributing factors (GED, 2020). Other challenges include the low number of students majoring in science and technology in higher education (WB, 2019) and the lack of sufficient basic education in science and

mathematics that lead to the development of industrial human resources.

(3) Disaster management and climate change countermeasures

Bangladesh is one of the most vulnerable countries in the world to natural disasters and is said to be the 7th worst vulnerable country to climate change (Germanwatch, 2021). While measures for disaster reduction and climate change are required, lack of planning and coordination capacity by government agencies and inadequate disaster risk assessment have resulted in poor disaster preparedness measures at the national level. In particular, since emergency response has been the main focus in the past, the central government and other disaster management-related ministries and agencies have not sufficiently formulated preventive response plans, and there is insufficient coordination between the central government and other disaster management-related ministries and agencies that are in charge of infrastructure projects. Lack of disaster prevention planning in rural areas is also a challenge.

Bangladesh is particularly vulnerable to floods, storm surges, cyclones, and other wind and water disasters, as most of the country's land area is low-lying, less than 5 meters above sea level. Climate change is also predicted to cause more severe flooding damage in the future (GED, 2018). According to 8FYP, although the country's efforts have resulted in some improvement in disaster response capacity, the ongoing damage caused by wind and flood disasters has increased the need for policy change toward disaster management by strengthening proactive disaster prevention and promoting the Bangladesh Delta Plan 2100, etc.

In Nationally Determined Contribution (NDC), increased greenhouse gas (GHG) emissions have been pointed out, and cooperation on both climate change mitigation and adaptation measures are required (Ministry of the Environment, Forestry and Climate Change, 2021). Furthermore, as the country belongs to the Himalayan region⁶ where earthquakes occur frequently, it is necessary to address seismic risk. While building safety measures need to be promoted, the challenge is that buildings are rapidly becoming taller and denser without sufficient land use regulations and building design review and construction inspection. If an earthquake of magnitude 7.5 or so occurs, it is expected to cause large-scale building collapses and fatalities in Dhaka City, so immediate action is required.

⁶ The Himalayan region has experienced seven earthquakes of M7.0 or more in the past 150 years.

Chapter 2: Derivation of Key Development Issues and Sectors to be Addressed by JICA

2.1 Significance of Japan's cooperation to Bangladesh

2.1.1 Friendly bilateral long-term relationship

Bilateral relations between Japan and Bangladesh have been very good since Bangladeshi foundation, Especially at the government level, Bangladesh highly values to Japan's experiences, technology, etc. and it is remarkable among the countries that the Japanese government cooperates. Therefore, Bangladesh can serve as a model case for "win-win" cooperation, as stated in the Development Cooperation Charter (2015) as a basic policy, in which cooperation "based on Japan's experience and knowledge" and more direct benefits to Japan can be expected through cooperation to the partner country.

2.1.2 Geopolitical importance as a nexus of South Asia and Southeast Asia in terms of Free and Open Indo-Pacific (FOIP), and its role for regional stability and development

At the Japan-Bangladesh Summit held on May 26, 2014, it was agreed to promote economic cooperation under the initiative of the Bay of Bengal Industrial Growth Belt (BIG-B), which aims to form an industrial cluster from Dhaka to Cox's Bazar via Chattogram and to make the region an international value chain hub, as part of the Comprehensive Partnership. Under this initiative, it was decided to promote economic cooperation based on the three Pillars: economic infrastructure development, investment environment development, and regional connectivity support. Since 2014, JICA has been providing cooperation mainly through ODA loans that contribute to the realization of the BIG-B initiative, and there are high expectations for continued cooperation aimed at the realization of the BIG-B initiative. The area covered by the BIG-B initiative (the southeastern region centering on Dhaka-Chattogram-Cox's Bazar) is of particular geopolitical importance in terms of its connectivity with northeastern India and its role as a nodal point with Southeast Asia. Therefore, JICA's cooperation is expected to contribute not only to the promotion of economic growth, but also to the strengthening of connectivity between South and Southeast Asia, regional stability, and the promotion of Free and Open Indo-Pacific (FOIP), while keeping in mind the Bangladesh government's policy of "Friendship to all, malice to none".

2.1.3 Abundant human resources, a promising market with high growth potential and a lot of interests by Japanese companies

With the 8th largest population in the world, a large segment of young people, abundant labor force, and strong economic growth in recent years, Bangladesh is attracting increasing attention for its economic potential as a market and production center, as well as a source of human resources. Interest of Japanese companies in Bangladesh is also increasing, with the number of Japanese companies operating in the country increasing steadily from 269 (2018) to 324 (2021) (Japan External Trade Organization (JETRO), 2021). Since Japanese companies are expected to accelerate their expansion in the future, boosting sustainable economic growth toward LDC graduation through cooperation and avoiding middle-income trap can be expected to lead to benefits for Japanese companies and economy.

2.1.4 High credibility due to certain achievement of poverty reduction and achieving the SDGs

The SDGs state that "no one will be left behind," and call for the elimination of poverty and inequality in all its forms, and for nations to address climate change and other pressing global issues. It also states that the international community should support developing countries in achieving their goals through development assistance. Bangladesh is facing a variety of challenges to achieve the SDGs, including the fact that more than 10% of the population still falls below the absolute poverty line, the need to cope with climate change and natural disasters, which have a significant impact due to the country's geographical features, concerns about energy shortages and growing inequality due to rapid economic growth, and pressure to create jobs due to the country's abundance of young population. By providing cooperation to Bangladesh and contribution to poverty reduction and the achievement of SDGs in the country, both Japan and Bangladesh can expect to secure the trust of the international community.

2.2 Necessity of JCAP revision

The Government of Japan has released the "Country Development Cooperation Policy for the People's Republic of Bangladesh" (February 2018)", which follows the "Country Assistance Policy for the People's Republic of Bangladesh" formulated in June 2012. Under its basic policy (overall goal) "Accelerating sustainable and equitable economic growth and removing poverty in order to become a middle-income country", two priority areas (subsidiary goals) are established: "Accelerating economic growth for the benefit of all citizens toward a middle-income country" and "Overcoming social

vulnerabilities." JICA also formulated "JICA Country Analysis Paper (JCAP) for the People's Republic of Bangladesh" in March 2019, establishing similar policies and priority areas, and has implemented cooperation programs in various fields. On the other hand, JCAP needs to be reviewed considering the following changes surrounding Bangladesh.

2.2.1 Changes in the surrounding environment

The surrounding environment is changing and affecting Bangladesh, including global compound risks such as the COVID-19 pandemic that occurred after the last JCAP revision, price hikes associated with the Ukraine crisis, etc., as well as the unstable economic conditions in neighboring countries.

2.2.2 Impacts likely to occur due to LDC graduation⁷

Bangladesh has already achieved the LDC graduation criteria in 2018 and is scheduled to officially graduate from LDC in 2026. In PP2041, the Government of Bangladesh has also set a national goal of becoming an Upper-Middle Income Country by 2031 and a High-Income Country by 2041. On the other hand, with the graduation of LDCs, the following preferential treatment for LDCs will no longer be available, while the country will be highly trusted by the international community by graduation. In order for Bangladesh to achieve sustainable and equitable economic growth and eliminate poverty in the future, a tailored approach to address the challenges that obstruct growth is required.

(1) Application of preferential tariffs

Under the Generalized System of Preferences (GSP) agreed at the UN Conference on Trade and Development, preferential tariffs are applied to Bangladesh, but as mentioned above, the non-application of preferential tariffs due to the LDC graduation is expected to result in 8.9% points increase in tariffs and strong downward pressure on exports (WTO and Enhanced Integrated Framework, 2020). In addition, the Everything But Arms (EBA) system in the EU market, which accounts for more than half of Bangladesh's exports, allows all items except arms to be exported tariff-free and without quantity restrictions. Trade with Japan, Canada, and Australia also benefit from LDC preferences.

⁷ Since many development assistance agencies do not set support conditions based on LDC graduation, it is not expected that LDC graduation will have any direct and significant impact on the consideration for assistance conditions at this stage. On the other hand, JICA, which is the largest donor in Bangladesh, will have to change the terms of its yen ODA loans, and Bangladesh will no longer be able to receive "support for LDCs" set up by some UN agencies, which may hinder future development plans such as infrastructure improvement.

Although the Government of Bangladesh has requested Japan and OECD countries to consider extending the period to apply the preferential treatment until 2029 for a smooth transition, the LDC graduation may affect the export side of Bangladesh's business. Furthermore, Bangladesh will be excluded from preferential treatment under the Asia-Pacific Trade Agreement, the South Asia Free Trade Area Framework Agreement, and other bilateral agreements for LDC members, which may hinder trade with Turkey, India, China, and other countries. The Government of Bangladesh is preparing to conclude bilateral agreements with neighboring important countries, and has agreed to launch a joint study with the Japanese government in December 2022 to consider concluding an Economic Partnership Agreement (EPA).

(2) Special relaxation measures for intellectual property rights

The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) grants LDC countries exemptions from certain patent obligations related to pharmaceuticals, and this allows for the low-cost production of generic medicines in Bangladesh. Pharmaceuticals, especially generics, produced in Bangladesh meet 97% of domestic demand of Bangladesh and are exported to other LDC countries, but there are concerns that the removal of measures related to pharmaceutical patents will increase the cost of manufacturing pharmaceuticals and impact medical services, etc (JETRO, 2014).

2.2.3 Importance of private finance utilization

Bangladesh is estimated to generate more than US\$600 billion in development demand from 2016 to 2040 (Global Infrastructure Hub, 2023). In order to meet this enormous development demand, it is essential to utilize not only ODA but also private-sector funds. Japanese companies are increasingly interested in Bangladesh, and the number of Japanese companies entering the Bangladeshi market is steadily increasing. For further economic growth in Bangladesh, it is necessary to provide cooperation including the use of Private Sector Investment Finance and other private sector partnership projects, as well as the development of a business environment to promote investment.

2.3 Directions for future cooperation

JICA will further focus on strengthening the industrial infrastructure in anticipation of LDC graduation in Bangladesh, while continuing to cooperate in addressing urbanization issues and overcoming social vulnerabilities. To update the direction of cooperation, JICA proposes to change the current three-tier cooperation framework of 2

priority areas, 7 development issues, and 9 cooperation programs⁸ to 3 priority areas, 7 development issues, and 10 cooperation programs, as shown in Tables 2 and 3 below.

⁸ All exclude "Others".

Table 2: JICA's Cooperation Programs in previous JCAP(March 2019)

Overall goal: Accelerating sustainable, equitable economic growth and removing poverty in order to become a middle-income country		
Priority Areas	Development issues	Development Programs
Accelerating economic growth for the benefit of all citizens toward a middle-income country	Economic infrastructure development	① Stable power supply ② National transportation network improvement
	Private sector development	① Private sector development
	Urban development	① Urban development
Overcoming social vulnerabilities	Human development	① Maternal and child health / health system strengthening ② Basic education Improvement
	Rural development	① Rural development
	Disaster management / Climate change	① Disaster management / Climate change
	Administrative capacity improvement	① Administrative capacity improvement
Others	Others	Others

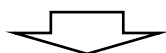


Table 2: JICA's Cooperation Programs in new JCAP(March 2023)

Overall goal: Sustainable economic growth and building a resilient society toward LDC graduation		
Priority Areas	Development issues	Development Programs
Strengthening industrial structure	Private sector development	① Private sector development
	Industrial infrastructure development	① Connectivity improvement ② Stable power supply
Addressing urbanization issues	Urban function enhancement	① Urban function enhancement
	Urban environment improvement	① Clean city
Overcoming social vulnerabilities	Governance and Rural development	① Governance enhancement ② Rural development
	Human development	① Health system strengthening ② Education Improvement

Climate change, DX, Gender mainstreaming

	Disaster management and Climate change	① Disaster management and Climate change countermeasures	
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2.3.1 Addressing cross-sectoral issues

JICA will promote climate change countermeasures, digital transformation (DX), and gender mainstreaming to contribute the achievement of SDGs, key policies of the Bangladesh government and JICA's organizational agenda. In all cooperation, JICA will promote these cross-sectoral efforts as much as possible. In addition, JICA will actively seek to identify projects that contribute to cross-sectoral issues, as well as to utilize its past cooperation assets.

(1) Climate change countermeasures

Bangladesh is considered the 7th worst vulnerable country in the world against climate change (Germanwatch, 2021), and even under a moderate climate change impact scenario, which assumes a temperature increase of 1.4-1.9°C, Bangladesh's economic activities could be hampered by reduced crop production due to extreme weather conditions and increased pest damage, and land loss due to sea level rise (flooding) etc., which could cause annual losses of about 1.1% of GDP between 2017 and 2041 (GED, 2018). The Government of Bangladesh has identified climate change as a key issue in PP2041 and 8FYP, and is aiming for sustainable growth through commitment to the Rio Convention, Paris Agreement, Sendai Framework for Disaster Reduction, and the SDGs, as well as the achievement of "Green Growth". In particular, Bangladesh will promote "Green Growth" through the Bangladesh Delta Plan 2100, a comprehensive medium-to-long-term plan for flood control and water utilization, the promotion of the National Adaptation Plan (NAP), a climate change adaptation plan, and the Environmental Fiscal Reform including the introduction of an environmental tax. In addition, Bangladesh aims to reduce GHG emissions by 89.47 million tons of carbon dioxide equivalent (per year) by 2030 under its NDC, with financial and technical cooperation from the international community. JICA will support Bangladesh's transition to a carbon neutral, low-carbon and climate resilient society and will consider incorporating a climate change component in each project.

Examples of Promotion Ideas

- Mitigation measures: For realization of a carbon-neutral society, development of low-carbon transportation system (such as MRT), introduction of renewable and energy-saving technologies, formulation of an integrated energy and electricity master plan, a circular economy realization through promotion of 3Rs, green

finance involving the private sector, forests and natural resources management, climate change mitigation measures by strengthening capacity to promote implementation of the Paris Agreement.

- Adaptation measures: flood control and storm surge countermeasures (e.g., mitigation of tsunami and cyclone damage through structures and coastal forest development), river management capacity improvement in rural areas, flood control measures through the development of urban drainage facilities etc., fishing village development and fisheries resources management, irrigation facilities development, food security through diversification of agricultural products, adaptive agriculture, sustainable water resources, utilization of the natural environment such as green areas and ecosystems to support climate change adaptation measures (Ecosystem Based DRR, Nature Based Solution etc.)

(2) Digital Transformation (DX)

In PP41, the Government of Bangladesh aims to utilize digital technology throughout the society and raise the level of digital knowledge of the population in order to diversify and upgrade the industries with a view to LDC graduation, and in the 8FYP, the development of the ICT industry is also a priority area. JICA is supporting the Government of Bangladesh in creating a concrete roadmap to realize its "Smart Bangladesh Vision 2041" through the support for developing the draft ICT masterplan "Smart Bangladesh ICT 2041 Masterplan". Following the four strategies set forth in the Masterplan (1.Smart Citizen, 2.Smart Government, 3.Smart Society, and 4.Smart Economy), JICA will continue to support for Bangladesh's use of digital technology and the promotion of data utilization (DX) and innovation.

Examples of Promotion Ideas

- Utilization of digital technology and data in transportation infrastructure (e.g., MRT passenger data utilization, introduction of facial recognition systems at airports)
- Implementation of advanced digitized systems in the power and energy sector (e.g., DMS to stabilize and optimize the power distribution system, SCADA systems for monitoring and controlling, etc.)
- Establishment of a mechanism for local governments to centrally manage data generated from various initiatives associated with cities.
- Support to ensure cyber security and the use of digital devices and education-related data in the education sector, and to contribute to disease prevention and treatment follow-up through data management (acquisition, storage, and use) in the health sector (e.g., use of data in the management of non-communicable diseases and diagnostic imaging)

- Efficient infrastructure development, urban planning, and disaster prevention planning through the utilization of geospatial information and the development of satellite positioning environments such as electronic reference points. Furthermore, consideration of support for the promotion of automated operation of construction and agricultural machinery, etc.
- Improvement of administrative services for urban municipalities through the use of digital technology and data, etc.

(3) Gender mainstreaming

Bangladesh ranks 129th out of 191 countries on the United Nations Development Programme (UNDP)'s Human Development Index, with women falling behind men in education and income indicators. The country also ranks 131st out of 191 countries with a gender inequality index of 0.530. In particular, there is a large gap between men and women, as the labor participation rate for men aged 15 and older is 78.8%, while the rate for women is only 34.9% (UNDP, 2022). In the 8FYP, the Government of Bangladesh notes that harmful and discriminatory issues such as child marriage, child abandonment, and gender-based violence remain due to practices rooted in traditional social norms. The government has identified gender inequality as one of the impediments to economic growth and has made gender equality and women's empowerment one of its key policies. Therefore, efforts to promote gender mainstreaming should be considered in all cooperation.

Examples of Promotion Ideas

- Gender-oriented project design, specifications, and initiatives (e.g., setting up women-only cars and monitoring cameras in stations in transportation and traffic projects, installing gender-segregated restrooms, rest areas, and prayer rooms, securing breast-feeding spaces, and improving lighting)
- Ensuring women's participation in decision-making process
- Realization of equal employment opportunities and equal pay for men and women in project implementation
- Conducting gender analysis on Bhasan Char Island where displaced persons from Myanmar reside, etc.

Table 3 Human Development Index

Indicator	National average	Female	Male
Human development index	0.661	0.617	0.688
Average life expectancy (years)	72.4	74.3	70.6

Expected average years of schooling for school-age children (years)	12.4	13.0	11.9
Average years of schooling received by 25 years and older	7.4	6.8	8.0
GNI per capita (purchasing power parity in 2017 in US\$)	5,472	2,811	8,176

2.3.2 Strengthening industrial structure

(1) Private sector development

(i) Private sector development program

Based on the BIG-B initiative agreed upon at the Japan-Bangladesh summit meeting in 2014, JICA will support for economic infrastructure development, investment environment development, and connectivity improvement. Specifically, JICA aims to establish an industrial cluster in the Moheshkhali-Matarbari region (southern Chattogram region). JICA will continue to support the formulation of development plans, the strengthening of development implementation systems, and the development of industrial and support infrastructure in the region. In addition to infrastructure development related to SEZs, including the Bangladesh Special Economic Zone (BSEZ), which is the first SEZ in Bangladesh with international-level infrastructure, JICA will also continue to provide support that contributes to the improvement of the investment environment in aspects other than infrastructure, such as support for the promotion of foreign companies entering the SEZ (including support for the establishment and operation of one-stop service centers) and support for investment promotion activities.

In addition, JICA will continue to provide cooperation related to industrial competitiveness enhancement for industrial diversification and the creation of high value-added export industries, while paying attention to the formation of linkages with domestic industries when providing support for attracting FDI.

Furthermore, in order to increase FDI, JICA will continue to support the improvement of customs control capacity for trade facilitation and will consider supporting for the development of financial infrastructure and legal systems (development of credit risk database, easing and improvement of financial regulations) to improve financial markets and access to finance.

Additionally to the above, JICA will continue to provide support for improving access to capital and food processing technology in order to strengthen the agricultural sector (including food processing, fisheries, etc.), which has high growth potential for industrial diversification. For industrial human resource development, JICA will also support the training of highly skilled human resources, particularly in the ICT industry. Also, for Polytechnic Institute, JICA will continue to provide support for improving teaching materials and enhancing the capacity of teachers, etc. to improve the quality

of technical education through strengthening cooperation with companies, etc. In addition, JICA will continue to examine ways to provide support that contributes to the development of engineers and the expansion of the industrial base with a view to future changes in the industrial structure. Furthermore, JICA will consider supporting for the formation of an environment for the development of start-up companies, and will actively consider expanding the use of private sector partnership programs (Private Sector Investment Finance and SME support) in all areas, and will examine as necessary how to develop industrial human resources that will contribute to the social and economic development and advancement of the country.

(2) Industrial infrastructure development

(i)Connectivity improvement program

In order to meet the increasing demand for transportation, JICA will contribute to improving the transportation capacity of the country by providing support for the development of main roads and railways. Specifically, JICA will continue to support for the development of arterial roads (including outer roads), the construction and replacement of bridges, and the construction of railway bridges and double-tracking of railways. In addition, continue to support capacity building of competent government agencies to ensure that developed road and rail facilities are properly maintained and managed. JICA will also consider supporting the widening and construction of new arterial roads, as well as the construction of bridges and tunnels in sections divided by large rivers.

Regarding ports and maritime/ water transport, JICA will continue to support the development and promotion of smooth maritime (water) transport, including the construction of Matarbari Port, the country's first deep-sea port capable of receiving large vessels, and capacity building of the implementing agencies for the operation and maintenance of the port.

Regarding airports, JICA will continue to support the expansion of Dhaka International Airport to improve its capacity to handle the increasing number of passengers and cargo, and continue to support capacity building to improve operational capacity and services to enhance convenience, efficiency, and safety of the airport. Support for the renovation of existing terminals at international airports and expansion of other domestic airports will also be considered as needed. In addition, JICA will consider assistance policies to improve logistics with neighboring countries.

(ii)Stable power supply program

JICA will steadily proceed with the ongoing "Integrated energy and electricity master plan formulation project" and continue to provide support that contributes to the

stabilization of electricity supply, optimization of energy supply and demand, and promotion of low-carbon and carbon neutrality, while utilizing the results of the project.

In the electric power sector, JICA will continue to support for the development of power generation facilities, and also consider to further support for the introduction of renewable energy. In doing so, JICA will actively consider supporting the expansion of the use of Private Sector Investment Finance, etc. for the projects that are expected to have high development effects and a certain level of commercial profitability, such as renewable energy power generation. In addition, JICA will implement/consider support for human resource development that contributes to the formulation of a master plan for power distribution and improvement of power system operation capacity, in order to address issues such as insufficient transmission network and substation capacity and immature power system operation. Also, JICA will continue to study international power interchange for the diversification of power sources.

In the energy sector, JICA will continue to support for the introduction of energy-saving equipment, support for the development of gas pipelines to improve natural gas efficiency, and support for the construction of gas network systems to optimize supply and demand with the aim of both optimizing supply and demand and promoting low-carbon and carbon neutrality.

2.3.3 Addressing urbanization issues

(1) Urban function enhancement

(i) Urban function enhancement program

JICA will support urban planning and development of individual infrastructure (urban railway and road) in order to build a sustainable city in view of the increasing transportation demand in urban areas due to population growth and economic growth. Specifically, JICA will continue to support the formulation of plans to promote TOD and MRT development in Dhaka and will also consider supporting MRT development in cities other than Dhaka and the construction of circular roads in Dhaka and Chattogram. In addition, JICA will continue to support the construction, operation, and improvement of the capacity of urban transport operators to provide safe and high-standard public transportation services.

For urban power infrastructure, JICA will support the development of power distribution plans in Dhaka, including the introduction of advanced digitalized systems (e.g., Distribution Management System (DMS) for grid optimization, and Supervisory and Control Analysis and Data Acquisition System (SCADA)), and will also consider supporting for improving the reliability and operational efficiency of electricity supply in urban areas in response to the expected increase in the introduction of renewable energy.

In order to realize stable water supply in urban areas, JICA will support water utilities in developing facilities and improving capacity, particularly in Chattogram. Specifically, JICA will continue to support the expansion of areas with public water supply, and will also support the operation, maintenance, management, and financial improvement of water utilities in order to improve water supply services and customer satisfaction. Furthermore, JICA will promote knowledge sharing to share such knowledge and experience to the entire country.

For urban administration, JICA will continue to support urban infrastructure development in core cities including Dhaka and Chattogram, and to strengthen the administrative and financial capacity of local governments through performance-based financing and human resource development, in order to contribute to the economic development of cities and the improvement of people's lives.

(2) Urban environment improvement

(i) Clean city program

Regarding waste management, JICA will utilize the assets of its past cooperation (e.g. waste management master plans) and will continue to support efforts to strengthen administration of waste management, by assisting reduction of waste in urban areas through efficient use of resources (3R: Reuse, Reduce, Recycle) and the introduction of intermediate treatment (waste-to-energy generation). JICA will also consider supporting for the establishment of waste management services in rural areas through sharing of knowledge and lesson learnt from large cities to Paurashavas and Upazilas.

To respond to water pollution in urban areas, JICA will consider supporting the development of public sewage systems in Chattogram in order to prevent water pollution from socio-economic activities and to improve sanitation. JICA will also continue to support the implementation structure and capacity development of sewerage utilities.

With regard to air pollution control, JICA will contribute to the suppression of traffic-derived air pollution by supporting the development of urban railroads. In addition, support will be provided for capacity development of relevant agencies, and for monitoring air pollution from mobile sources.

2.3.4 Overcoming social vulnerabilities

(1) Governance and rural development

① Governance enhancement program

In order to strengthen governance and improve the transparency and efficiency of administrative procedures, JICA will continue to support the central government in

strengthening its ability to manage public investment and the capacity of local governments, and in human resource development for public officials. In addition, JICA will consider new cooperation for improving tax collection capacity in order to strengthen public finance and expand public services. In addition, JICA will continue to support the development of pro-Japanese and experts on Japan by supporting the Bangladesh Institute of Governance and Management (BIGM), which trains senior administrative officers and by accepting scholars through the Human Resource Development Scholarship (JDS). In the area of justice, JICA will continue to support the improvement of judicial practice in civil cases, the promotion of the use of mediation, and the capacity building of judges, mediators, and other legal practitioners in order to achieve equal access to justice for all people, including the vulnerable groups in society.

JICA also plans to support to strengthen the government's capacity to promote employment and social participation of people with disabilities. JICA will consider supporting in the area of social security during the demographic dividend period in order to strengthen the safety net for the vulnerable people such as the disabled, the poor, women and children.

② Rural development program

JICA will continue to support infrastructure development and livelihood improvement in rural areas where poverty rates are higher than in urban areas. Specifically, JICA will continue to support infrastructure development by providing funds based on the results of administrative performance assessment, as well as the promotion of market-oriented agriculture that contributes to improving the livelihoods of small farmers and improving access to funds. In addition, JICA will continue to support the host communities in Cox's Bazar District that are receiving displaced persons from Rakhine State, Myanmar, through infrastructure development (roads, drainage, waste management, water and sanitation, etc.), maintenance of public facilities, strengthening of administrative functions, and improvement of aquaculture and processing techniques of fishermen and creation of alternative livelihood activities to improve the livelihood of the host communities, as well as for the development of fishing villages, etc.

With regard to support for displaced persons, JICA will continue to provide support through collaboration with the United Nations to meet the needs of displaced persons in camps. This includes sponsoring United Nations Volunteers (UNV) under the Japan Overseas Cooperation Volunteers (JOCV) framework. At the same time, JICA will support the capacity building of the relevant ministries and agencies by mobilizing experts to improve the management and living environment of the camps and Bhasan

Char Island. JICA will also consider supporting the island in the future.

(2) Human development

① Health system strengthening program

In the healthcare sector, JICA will continue to support the improvement of access to and quality of healthcare services through the development of health care facilities and equipment, as there are challenges in procurement and maintenance of existing facilities. JICA will also consider supporting for the development of food safety inspection facilities and equipment and for strengthening capacity of food safety inspection.

With regard to the development of medical human resources, the number of nurses in particular is extremely low, and issues are seen in the quality of medical higher education, including nursing programs. For this reason, JICA will continue to provide support to help improve the quality of health care services to ensure the quality of nursing human resources through technical assistance for improving the educational quality for bachelor's degree in nursing (capacity building of nursing administration, strengthening of bachelor's education system in the target nursing colleges and in-service training on clinical nursing practice at collaborative hospitals, etc.)

In addition, countermeasures against NCDs, which account for approximately 70% of all deaths, continue to be an urgent issue. JICA will therefore continue to support NCDs prevention, early detection and treatment by building an examination and diagnosis system through the construction of diagnostic imaging facilities and provision of medical equipment, improving the quality of hospitals to enhance NCDs treatment services through technical assistance, and strengthening community-based prevention and awareness-raising activities.

② Education improvement program

In the area of primary education, under the sector program (The Fourth Primary Education Development Programme: PEDP4), which was extended due to the delay in progress caused by the outbreak of COVID-19, JICA will continue to provide financial assistance through grant aid and technical assistance in science and mathematics education. JICA will review the past support for science and mathematics education as it marks the 20th anniversary of the start of the program.

In the area of secondary education, JICA will also consider future support for strengthening teacher training, improving curriculum and teaching materials, establishing a distance education system using ICT, and reviewing the assessment of academic achievement in order to improve access and quality of secondary education, with a view to developing human resources that will contribute to industrial

diversification and high value-added development of Bangladesh.

(3) Disaster management and climate change

(i) Disaster management and climate change countermeasures program

As stated in 2.3.1, JICA plans to promote climate change countermeasures as an organizational overarching agenda to be addressed across sectors in the field of disaster management and strengthening climate change countermeasures.

In the area of climate change action, based on the NDC, Bangladesh Delta Plan 2100, NAP, etc., JICA will consider all sectors such as disaster management, agriculture, energy, water supply, transportation, natural resources, etc., to reduce GHG emissions and minimize the impact of climate change. As for adaptation measures, JICA will put emphasis on investment in proactive disaster prevention to reduce disaster risk. In particular, JICA will continue to support for improving the capacity of central government agencies and local governments to formulate disaster reduction plans, and will consider supporting for subsequent implementations (e.g., development of structures that contribute to specific risk reduction based on the above mentioned cooperation, and development of new disaster information systems, etc.). JICA will also consider capacity building and provision of equipment (patrol boats, etc.) to strengthen disaster response capabilities and maritime safety. Furthermore, JICA will promote proactive disaster prevention efforts in preparation for floods, storm surges, and cyclones in order to reduce the risk of wind and water disasters, which are becoming more severe due to climate change and other factors. As flood control measures, JICA will consider supporting the improvement of river management in rural areas and the development of drainage facilities and urban drainage plans in urban areas. In addition, JICA will examine support for the construction of embankments and improvement of their maintenance and management capacity as a measure against storm surge and flooding associated with cyclones on the coast and in coastal areas. In order to ensure that the necessary mitigation and adaptation measures are taken, the project and survey formulation will also include consideration of measures that utilize the natural environment (green area, ecosystems), where such measures are expected to be effective in reducing disaster risks (Ecosystem Based DRR, Nature Based Solution). Furthermore, JICA will continue supporting capacity building for weather forecasting and warning in response to cyclones and torrential rains. To reduce seismic risk, JICA will support in strengthening the resistance of buildings to earthquakes and improving design and construction capabilities, as well as provide technical cooperation to improve safety standards and seismic reinforcement.

Chapter 3 Considerations for Implementing Cooperation

3.1 Expanding collaboration with external partnerships, including fund mobilization

Development issues in Bangladesh are becoming more diverse and complex day by day, and in order to meet the enormous development demands, it is necessary to involve a variety of actors in addition to JICA's traditional cooperation. JICA will expand collaboration with a variety of actors, including Non-Governmental Organizations (NGOs), local governments, universities, and private sectors, and, intends to maximize development effects and improve sustainability by promoting cooperation utilizing the knowledge and experience of each organization.

Particularly in Bangladesh, NGOs play often a role in social service provision instead of the government, contributing to improving access to social services for the vulnerable people and other citizens of the society. In view of the above, the role of NGOs in the development of Bangladesh is important, and JICA will contribute to the expansion of the number of cooperation players in Bangladesh and to detailed cooperation to meet the diversifying development needs by expanding cooperation with NGOs through JICA Partnership Program and other schemes.

In addition, in Bangladesh, there are threats from global issues that show no sign of resolution without further development of science and technology, for example global warming and infections disease, are increasing rapidly. To solve these problems, JICA works with universities and research institutions through the Science and Technology Research Partnership for Sustainable Development (SATREPS) to strengthen the international science and technology capacity of Japan and Bangladesh, and to develop and apply new technologies, acquire new knowledge, and create innovations.

Additionally, the utilization of private finance is essential to meet the enormous demand for development. For the further economic growth of Bangladesh, in which Japanese companies are increasingly interested, JICA will further utilize Private Sector Investment Finance, including Public Private Partnership (PPP) projects.

Furthermore, JICA will provide ongoing cooperation to Japanese SMEs and start-ups through the "SME/SDGs Business Support Program" to accelerate the establishment and implementation of projects that contribute to solving development issues through the strategic use of private sector resources.

3.2 Promoting human resource development and exchanges

JICA's cooperation in Bangladesh started in March 1973 with the opening of a JOCV representative office, and celebrate its 50th anniversary in March 2023. Since then,

through July 2016, 1,284 JOCVs have lived with the local people and contributed to Bangladesh's economic and social development while utilizing their knowledge and expertise. The dispatch of JOCVs was subsequently suspended in consideration of the security situation in Bangladesh, but it is expected to resume in 2023 for the first time in about seven years. Through the activities of JOCV, JICA aims to contribute to the further economic and social development of Bangladesh, and to further strengthen Japan's presence in the country by deepening mutual understanding and promoting harmonious coexistence, as well as to develop human resources who can contribute the knowledge and experience acquired through their volunteer experience to solving problems in Japan and the world.

In addition, through the acceptance of trainees, students, and other human resources from Bangladesh to Japan, JICA will foster human resources who can utilize Japanese technology and experience, and will further promote the development of the pro-Japanese people and experts on Japan to strengthen the returnee network and promote its more strategic utilization.

3.3 Ensuring safety measures

Following the terrorist attack in Dhaka on July 1 2016, there have been no terrorist incidents involving foreigners, as security authorities, including those in the Dhaka District, have tightened their control of extremists and security measures. Based on this, in November 2021, the Ministry of Foreign Affairs of Japan lowered the Overseas Travel Safety Information Level for the Dhaka District from Level 2 (Avoid non-essential travel) to Level 1 (Exercise caution) as of March 2023. On the other hand, the threat of terrorism has not been completely eliminated, with suicide bombings having occurred in 2017 at security-related facilities near Dhaka International Airport and sporadic bombings targeting security authorities in other jurisdictions, so the security authorities continue to conduct cleanup operations. In addition, more than 1 million people of Buddhist minorities reside in the Chattogram Hill Tracts area (Khagrachhari, Rangamati, and Bandarban districts), and the security situation remains uncertain due to ethnic conflicts. The Overseas Travel Safety Information Level for the Chattogram Hill Tracts area remains at Level 2 as of March 2023, and security should be monitored closely and vigilantly (Ministry of Foreign Affairs of Japan, 2021).

Based on the final report published on August 30th, 2016 of the Council on Safety Measures for International Cooperation Projects, which was established in the wake of the aforementioned incident, JICA has continued its efforts to fundamentally review and strengthen its safety measures. JICA has introduced a process to obtain approval from the Chief Representative of the Bangladesh Office for the travel of survey teams and

contractors in accordance with its own security measures. Through this process, JICA authorizes the travel after carefully examining the necessity of local activities and safety measures to ensure the safety of the travelers. JICA has also established a local code of conduct and provides briefings to relevant personnel prior to travel and upon arrival to ensure the steady implementation of safety measures based on the latest information. In addition, JICA is making efforts to ensure safety measures in ODA projects by informing all parties involved in international cooperation projects, regardless of whether or not they have a contractual relationship with JICA, as well as providing training and drills on safety measures.

In this way, JICA will continue to take over the learnings from the past terrorist attacks as an organization, and will carry out its projects by constantly and deeply enhancing its efforts to ensure security.

End

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**Correspondence Table with JICA Global Agenda
(Cooperation Strategy for Global Issues) and SDGs**

Priority Area	Cooperation Programs	JICA Global Agenda	Major SDGs
Strengthening of industrial structure	Private sector development	“Private Sector Development”, “Public Finance and Financial Systems”, “Agriculture and Rural Development”, “Education”	Goal 1 (Poverty eradication), Goal 2 (Zero hunger and nutrition), Goal 8 (Economic growth and employment), Goal 12 (Sustainable production and consumption), Goal 17 (Means of implementation, partnership), etc.
	Connectivity improvement	“Transportation”	Goal 9 (Infrastructure and industry), Goal 11 (Cities), etc.
	Stable power supply	“Resources and Energy”	Goal 7 (Energy), Goal 9 (Infrastructure and industry), etc.
Addressing urbanization issues	Urban function enhancement	“Urban and Regional Development”, “Transportation”, “Resources and Energy”, “Water Resources and Water Supply”, “Governance”	Goal 6 (Water and sanitation), Goal 7 (Energy), Goal 11 (Cities), Goal 16 (Peace and governance), etc.
	Clean city	“Environmental Management”	Goal 6 (Water and sanitation), Goal 11 (Cities), Goal 12 (Sustainable production and consumption), etc.
Overcoming social vulnerabilities	Governance enhancement	“Governance”, “Public Finance and Financial Systems”, “Social Security, Disability and Development”	Goal 1 (Poverty eradication), Goal 10 (Reduced inequalities), Goal 16 (Peace and governance), etc.
	Rural development	“Agriculture and Rural Development”, “Transportation”,	Goal 1 (Poverty eradication), Goal 2 (Zero hunger and

		“Water Resources and Water Supply”, “Peacebuilding”	nutrition), Goal 6 (Water and sanitation), Goal 10 (Reduced inequality), Goal 16 (Peace and governance), etc.
	Health system strengthening	“Health”, “Improving Nutrition”	Goal 2 (Zero hunger and nutrition), Goal 3 (Health), Goal 6 (Water and sanitation), etc.
	Education improvement	“Education”	Goal 4 (Education), etc.
	Disaster management and Climate Change Countermeasures	“Disaster Risk Reduction and Recovery (Build Back Better)” “Climate Change”, “Natural Environment Conservation”	Goal 11 (Cities), Goal 13 (Climate change), Goal 14 (Oceans), Goal 15 (Forests and biodiversity), etc.
Cross-Sectoral Issues	Climate Change Countermeasures	“Climate Change”	Goal 13 (Climate change), Goal 15 (Forests and biodiversity), etc.
	DX	“Digital for Development”, “Urban and Regional Development (Geospatial information/ G-space)”	Goal 8 (Economic growth and employment), Goal 9 (Infrastructure and industry), etc.
	Gender Mainstreaming	“Gender and Development”	Goal 5 (Gender equality), etc.