Bangladesh Coast Guard

The People's Republic of
Bangladesh

PREPARATORY SURVEY REPORT
ON
THE PROJECT FOR IMPROVEMENT
OF
RESCUE CAPACITIES
AT THE COASTAL AND INLAND WATERS
IN
THE PEOPLE'S REPUBLIC OF BANGLADESH

February 2018

JAPAN INTERNATIONAL COOPERATION AGENCY

SHIPBUILDING RESEARCH CENTRE OF JAPAN

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PREFACE

Japan International Cooperation Agency (JICA) decided to conduct the preparatory survey and entrust the survey to Shipbuilding Research Centre of Japan.

The survey team held a series of discussions with the officials concerned of the Government of Bangladesh, and conducted a field investigations. As a result of further studies in Japan, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Bangladesh for their close cooperation extended to the survey team.

February, 2018

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Director General

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SUMMARY

(1) Present Situation in Bangladesh

The People's Republic of Bangladesh (hereinafter referred to as "Bangladesh") located in the deepest part of the Indian Ocean / Bengal Bay has country area of 148 thousand square kilometers (about 40% of Japan). Bangladesh is a county of South Asia, where about 160 million people live, and the three sides of the country borders with India, bordering Myanmar with a part of the southeastern part. Bangladesh is located downstream or at the mouth of a large river such as the River Padma (the River Ganges in the upper Indian territory), the River Jamuna (the River Brahmaputra in Bengali) and the River Meghna, and about 50% of the land area is less than 6 to 7 meters in altitude and about 68% of the land is in danger of floods and soil erosion. The country's climate is tropical, gentle in winter from December to February, hot and humid in the summer months from March to May, and from June to September it is a hot and humid monsoon season. Cyclones often occur from October to November at the transition from hot and humid season to winter, and coupled with the above national land conditions, disasters such as collapse of houses and floods occur. Then, the whole village must be evacuated frequently through the waterway.

Bangladesh is a moderate democratic Muslim country, mainly consisting of Bengali people, located at the nodal point of South Asia and Southeast Asia which was born after the two independence in 1947 and 1971, and it plays an important role in stability and economic development of the South Asian region.

According to World Bank statistics, the real GDP in 2016 was $167.8 billion and the nominal GDP per capita in 2016 according to IMF statistics was $1,411, which is only about a tenth of the world average. It is somewhat higher than the neighboring Myanmar ($1,269) but is also less than the neighboring country India ($1,723). It is positioned as a least developed country that shows especially late countries among developing countries according to one of the social and economic classifications of the world defined by the United Nations.

The finance of Bangladesh is a chronic deficit (the fiscal deficit in fiscal year 2017 (July 2016 - June 2007) to GDP is 5.0%), which is compensated by foreign assistance and borrowing from the domestic bank, etc. This is mainly due to the tax collection capacity of the government and the vulnerability of the revenue base, as well as the financial deficit compensation for inefficient state-owned enterprises.

However, the Awami League government, which was born in 2009, has a "Vision 2021" policy aiming to become a middle-income country by 2021, the 50th anniversary of independence. According to the government announcement, in fiscal year 2017, Bangladesh achieved an economic growth rate of 7.24% with three pillars of export, overseas worker remittance and agriculture sector. Toward sustainable development in the future, diversification of industries is an issue, and it is urgent to develop basic infrastructure such as electric power and roads to promote investment from overseas. To that end, 29.3% of the total budget is devoted to social development and 31.7% to infrastructure construction projects in the fiscal year 2018 budget proposal, and in the infrastructure construction projects, the budget is preferentially allocated to agriculture and rural development (13.0%), transportation (11.9%) and electricity and energy (5.2%).

(2) Background of the Project

The marine resources in the coastal area occupy an important position for the national economy of Bangladesh. In addition, marine resources and Sea Lines of Communications (SLOCs) are increasingly becoming important to the national economy in situations where land resources are rapidly depleting. Furthermore, inland waters transportation has been developed using large and small rivers flowing through Bangladesh, and fisheries on sea area and inland waters area are also active. Overseas maritime traffic routes have been established with international Chittagong Port and Mongla Port. The large-scale natural disasters and ship accidents occurred in such domestic inland waters area and coastal area in Bangladesh, and many people were injured.

In Bangladesh, from the Planning Commission under the jurisdiction of the Ministry of Planning in December 2015, the seventh 5-year plan was announced from the fiscal year 2016 to the year 2020 (July 2015 to June 2020). In this five-year plan with the subtitle "Accelerating Growth, Empowering Citizens", it is one of the main tasks to make a path of sustainable development strong against natural disasters and climate change.

On the other hand, Bangladesh has a coastline of 580 km (CIA: The World Fact Book), and set up the territorial seas of 12 nautical miles, the connected waters of 18 nautical miles, the exclusive economic zone of 200 nautical miles and the continental shelf according to the Territorial Waters and Maritime Zones Act, 1974. In such water area in Bangladesh, since the independence in 1971, the Bangladesh Navy has been responsible for the main mission of sea defense as well as the search and rescue in the sea area and the execution of laws and regulations, but it has become difficult to carry out such activities at the same time as the maritime security services increased.

Based on this recognition, it was necessary to establish maritime law enforcement agency to ensure maritime traffic safety, conserve marine resources, and maintain law and order in the waters under the jurisdiction of the state. For this reason, "Coast Guard Act, 1994" was enacted in September 1994, and on 14th February, 1995, Bangladesh Coast Guard (BCG) has officially started its activity under the Ministry of Home Affairs, using two patrol boats transferred from the Bangladesh Navy.

After that, with the expansion of the mandate of BCG such as piracy measures, smuggling crackdown, oil and gas, mangrove resource and environmental protection, maintenance of maritime security, law enforcement, disaster relief and maritime rescue activities, the budget has been increased and the number of personnel has been increased, and also the management organization has been expanded. The current number of vessels has also increased to 111, but it is an urgent matter to update the rescue boats as their aging has also become obvious.

Under this background, the grant aid cooperation has been requested to procure four (4) coastal rescue boats having overall length of approximately 20 m and twenty (20) small rescue boats having that of approximately 10 m to strengthen maritime rescue and disaster relief activities in coastal and inland waters areas of Bangladesh and to contribute to mitigation of damage caused by ship accidents and natural disasters in coastal and inland waters, which are operated by BCG responsible for a part of disaster relief and rescue activities.

(3) Contents of the Project

In response to the request mentioned above, the Government of Japan decided to conduct a preparatory survey relating to the Plan, and the International Cooperation Agency (JICA) sent the preparatory study team to Bangladesh from 3rd June, 2017 to 21st June, 2017. After the return of the team to Japan, further studies were carried out and the draft report of preparatory survey was prepared. The draft report explanation team was sent to Bangladesh from 25th November, 2017 to 1st December, 2017, and held the discussions and confirmation on the contents of the outline design, the items undertaken by the recipient country and both sides mutually agreed.

In order to provide four (4) coastal rescue boats and twenty (20) small rescue boats, following principal policies shall be applied to the project with reflecting from the request of Bangladesh government and the result of site survey and mutual agreement.

1) The principal dimension of the boats shall be made as much as reasonable in consideration of various operating conditions such as onboard equipment, quantity of complement (crew and rescued persons), boat's velocity, and the seaworthiness.
2) The propulsion and steering system shall be of type easy for operation and maintenance considering the operation in coastal area and inland waters area in Bangladesh.
3) The cruising range (endurance) shall be selected within the range of practical consideration of operation in the coastal and inland waters areas.
4) The maximum speed shall be suitable for maritime rescue and disaster relief activities.
5) The complement of boat shall be of six (6) persons for the coastal rescue boat and three (3) persons for the small rescue boat, but accommodation space shall be suitable for receiving more persons including rescued persons.
6) The coastal rescue boat shall have an accommodation space and equipped with accommodation facilities for crew so that activities can be carried out over several days.

The following are the specifications mutually agreed.

Item	Specifications		
20 m type Coastal Rescue Boat	Type and No. of boat	: 20 m type Coastal Rescue Boat x 4 Boats	
	Rule and Regulation	: Ship Safety Act of Japan	
	Navigation Area	: Coastal Area	
	Type of Boat	: Type IV ship (Category IV)	
	Principal Particulars :		
	Dimensions	Length (Overall)	abt. 20 m
		Breadth (Mould)	5.8 m or more
		Depth (Mould)	abt. 2.4 m
		Draft (Mould)	abt. 1.5 m
	Displacement		abt. 40 tons
	Maximum Trial Speed		not less than abt. 25.0 knots

	(50% fuel/fresh water tank, 110% output) Endurance approx. 300 sea miles (at a speed of 15kt) Complement Crew: 6 persons (1-Captain, 1-Navigation Operator, 1-Mechanic, 1-Electrician, 2-Sailors) Rescued Persons : 30 persons Material of Boat and Equipment: Hull material Bottom / Side shell : High-tensile steel Upper Deck : High-tensile steel, or Aluminum alloy Superstructure : Aluminum alloy Main Engine : Marine Diesel Engine abt. 720BkW x 2sets Propulsion and Steering System : FPP type Propulsion x 2sets Generator : abt. 28 kW x 2sets Lighting, Communication System, Radio System, Nautical Equipment : 1set Accommodation: With air conditioning system. Wheel House, Crew's Room & Meeting / Mess Room Marine Pollution Control Equipment : Oil Spreading Prevention Devices, Oil Recovery, Oil Absorbent, etc.
10 m type Small Rescue Boat	Type and No. of boat : 10 m type Small Rescue Boat x 20 Boats Rule and Regulation : Ship Safety Act of Japan Navigation Area : Coastal Area within 5 sea miles from the shore and smooth waters Principal Particulars : Dimensions Length (Overall) abt. 10 m Breadth (Mould) abt. 3 m Depth (Mould) abt. 1 m Maximum Trial Speed not less than abt. 15.0 knots (100% fuel/fresh water tank, 23 persons on board) Endurance approx. 100 sea miles (at a speed of 12kt) Complement Crew: 3 persons (Rescued Persons : 20 persons) Material of Boat and Equipment: Hull material : FRP Main Engine : Marine Diesel Engine x 1set Propulsion and Steering System : FPP type Propulsion x 1set Emergency Engine & Propulsion System : Gasoline Outboard Engine x 1set Lighting, Communication System, Radio System, Nautical Equipment :1set

(4) Implementation Schedule and Project Cost of the Project

The detailed design works of the 20m type Coastal Rescue Boat (hereinafter referred to as "20m type rescue boat") will be completed in about 3.5 months after the conclusion of the consulting

agreement. The shipbuilding contract will be concluded after about 2 months from completion of the detailed design. About 18 months will be required for the construction, and further about 2 months will be necessary for transportation from Japan to Bangladesh and the delivery.

Also, 18 months will be required for manufacturing the 10 m type Small Rescue Boat (hereinafter referred to as "10m type rescue boat") after conclusion of the manufacture contract.

Namely, the entire period up to the delivery in Bangladesh after the conclusion of the consulting agreement will be about 25.5 month, and further 12 months will be taken for defect liability period.

The project cost to be borne by Bangladesh side is roughly estimated as follows:

1) Commission for banking services based upon the Banking Arrangement (B/A) etc.
2) Costs/expenses for domestic transportation

1) + 2) = about 2.93 million Taka

(5) Relevance of the Project

Implementation of this project with Japan grant aid is considered relevant from the view points of the content, degree of the effects, capability for the operation and maintenance of the new rescue boats as follows.

a) Implementation of the project is aimed at strengthening the BCG's capabilities on SAR operation to cope with maritime/river accidents and natural disasters in the coastal area and inland waters of Bangladesh by providing the rescue boats with BCG, thereby contribute to the prompt and efficient rescue and relief activities when maritime/river accidents or natural disasters occur in such areas mainly in the western part and the southern part of Bangladesh.

b) BCG, which is the executing agency of this project, already owns and operates rescue boats and patrol boats, and can operate and maintain the new rescue boats without problems.

c) There is no problem in terms of environmental destruction and social and environmental considerations due to the rescue and relief activities on maritime/river accidents and natural disasters by the new rescue boats, and the evaluation in the JICA Guidelines for Environmental and Social Considerations is Category C.

d) The project can be carried out without any difficulty, the planned new rescue boats at are built and manufactured in Japanese shipyard and manufacturer through Japan's grant aid cooperation system.

Since approving the independence of the Bangladesh in 1972, prior to Western countries, Japan consistently maintains friendly relations and actively participates in efforts toward economic and social development of Bangladesh as a major donor. In ODA (Official Development Assistance) "Country Assistance Policy to the People's Republic of Bangladesh" (June 2012), the basic policy of aid is to support efforts to overcome vulnerability to natural disasters such as cyclones and floods, and it is a priority area to support disaster prevention and climate change countermeasures and overcome social vulnerability. This project conforms to this policy.

Furthermore, it contributes to cooperation for promoting sustainable development based on the ocean, and support in climate change and disaster prevention field, expressed in the "comprehensive partnership" established at the Japan - Bangladesh Summit Meeting held in May 2014. In addition, it contributes to realization of "Investing in disaster risk reduction for resilience" that has been stated as one of priorities for action in "Sendai Framework for Disaster Risk Reduction 2015-2030" adopted at the 3rd UN World Conference on Disaster Risk Reduction, held in Sendai in March 2015.

(6) Effectiveness

1) Quantitative Effectiveness

Index	Base Line (2017)	Target (2020) (3 years after completion of the Project)
Total Accommodatable Number of Rescued Persons	230	520
Required Time to arrive at Site (*1)	1 hour	40 minutes (10 m type Boat) 24 minutes (20 m type Boat)
Seaworthiness (Operable Conditions) (*2)	Less than Beaufort Scale 2	Less than Beaufort Scale 3 (10 m type Boat) Less than Beaufort Scale 4 (20 m type Boat)
Oily Water Removal Capability	0	about 9 m^3/hour/unit

(*1) Assumed distance to Site : 10 Nautical Miles

(*2) Beaufort Scale 2 : Wave Height 0.1 m - 0.5 m
Beaufort Scale 3 : Wave Height 0.5 m - 1.25 m
Beaufort Scale 4 : Wave Height 1.25 m - 2.5 m

2) Qualitative Effectiveness

a) To contribute to the prevention of the rapid spreading of oil flowing into the sea or water area, and the protection of the natural environment and resources in the coastal and inland waters area by collecting.

b) To contribute to the improvement of safety of transportation in the coastal and inland waters area

As mentioned above, it is considered that the implementation of this project has high relevance and effectiveness to be expected.

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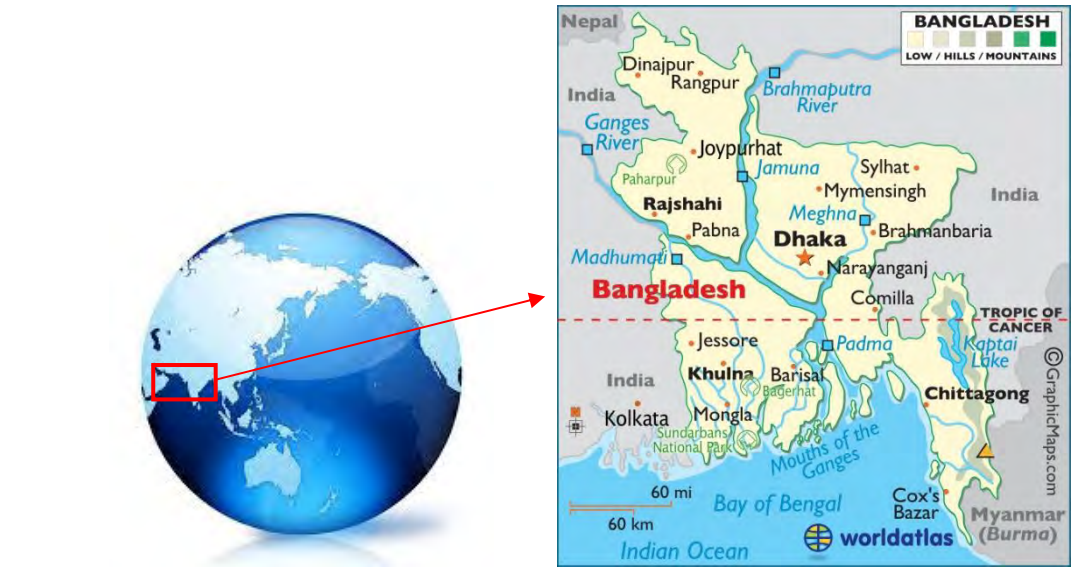

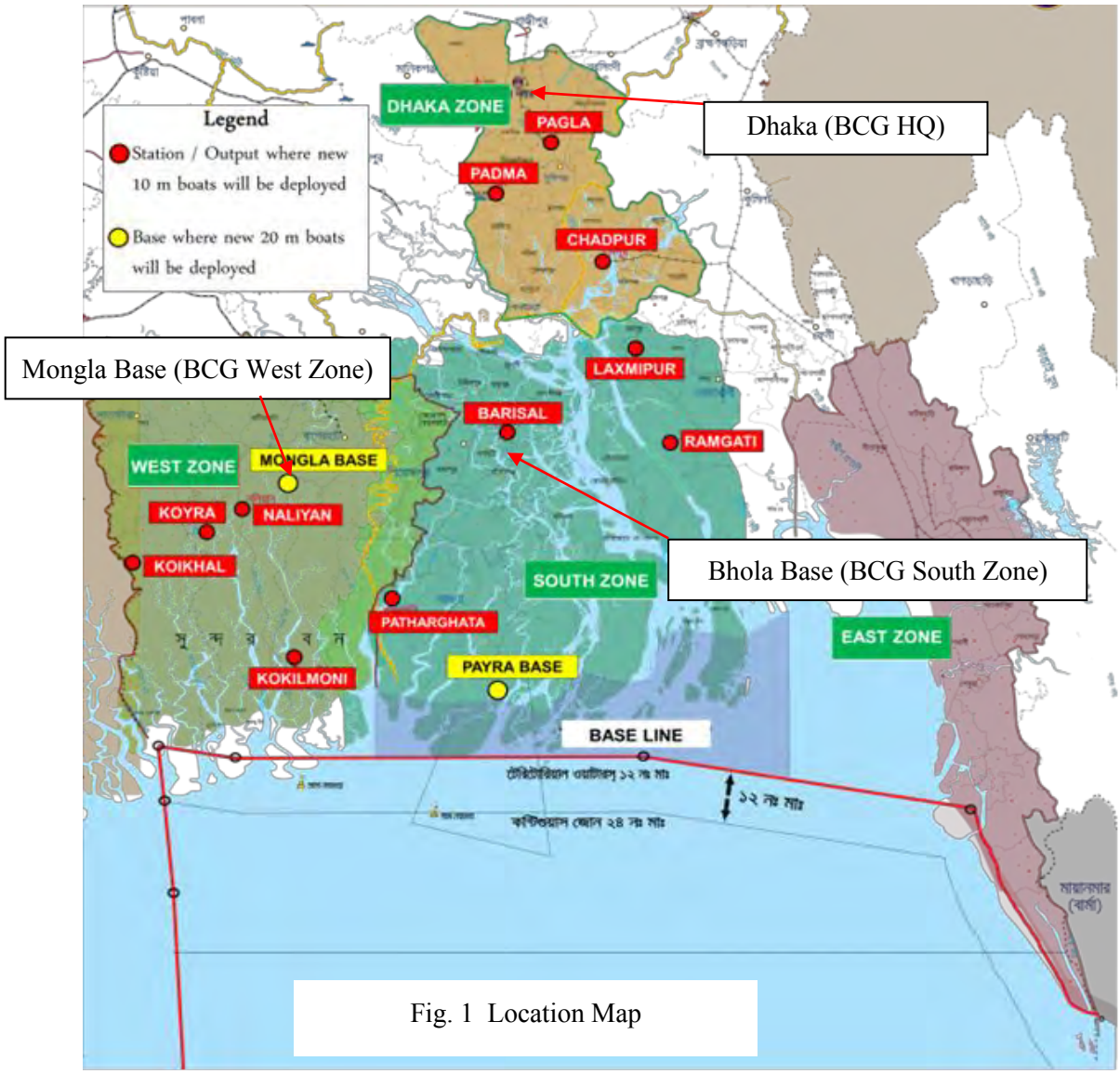

Fig. 1 Location Map

Fig.2 Perspective of 20 m Type Rescue Boat

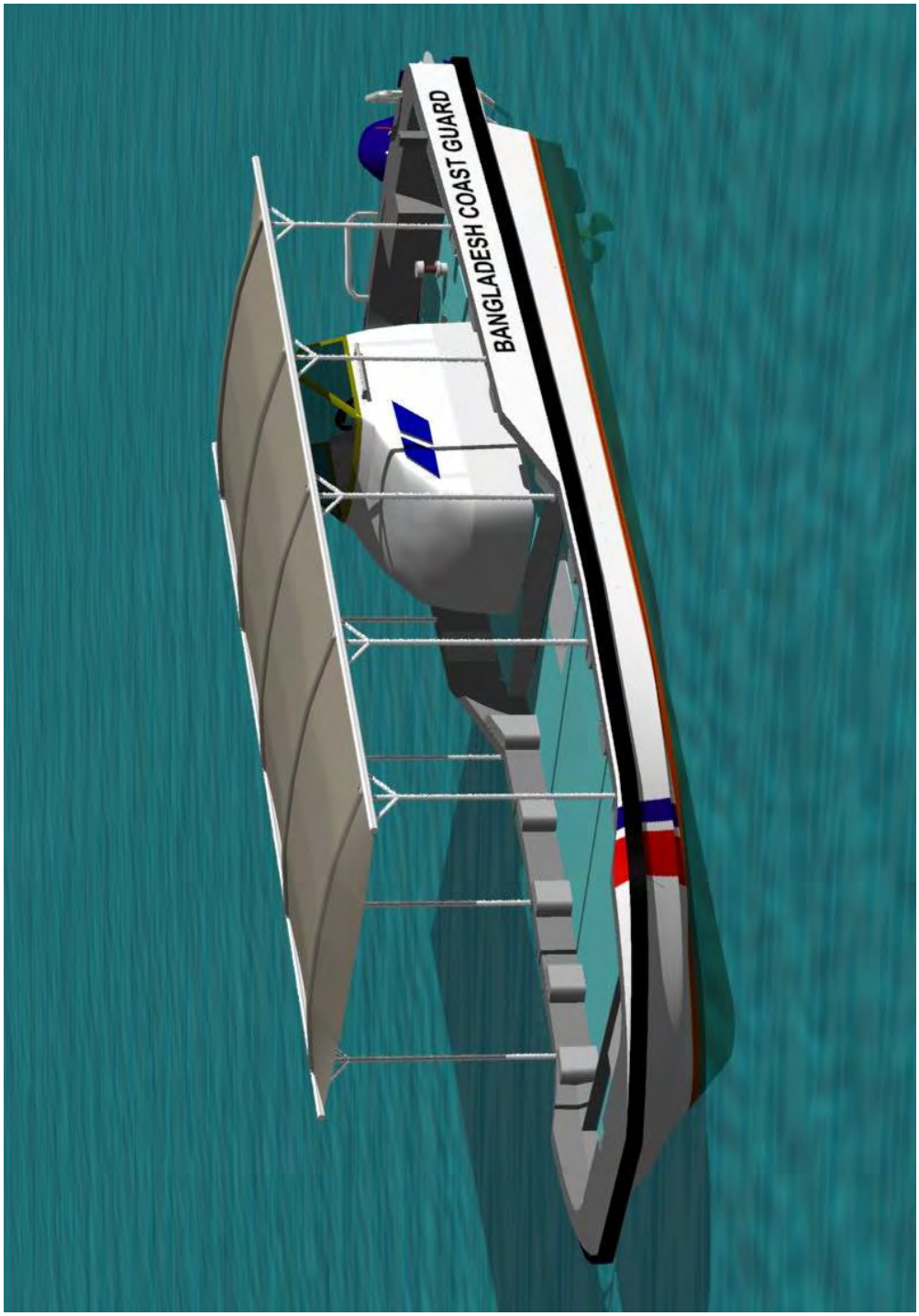

Fig.3 Perspective of 10 m Type Rescue Boat

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ABBREVIATIONS

7th FYP	Seventh Five Year Plan
AIS	Automatic Identification System
BBS	Bangladesh Bureau of Statistics, Statistics & Information Division
BCG	Bangladesh Coast Guard
BMD	Bangladesh Meteorological Department
CCMC	Coastal Crisis Management Centre
CPV	Coastal Patrol Vessel
DGPS	Differential Global Positioning System
DMB	Disaster Management Bureau, Disaster Management & Relief Division
ECDIS	Electronic Chart Display and Information System
EEZ	Exclusive Economic Zone
EPIRB	Emergency Position Indicating Radio Beacon
ERD	Economic Relationed Division, Ministry of Finance
FPP	Fixed Pitch Propeller
FPV	Fast Patrol Vessel
FRP	Fiber Reinforced Plastic
FYP	Five Year Plan
GDP	Gross Domestic Product
GED	General Economic Division, Planning Commission
GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System
HF	High Frequency
IMO	International Maritime Organization
IPV	Inshore Patrol Vessel
JCI	Japan Craft Inspection Organization
JG	Japanese Government
JIS	Japanese Industrial Standard
JSQS	Japanese Shipbuilding Quality Standard
LED	Light Emitting Diode
MF	Medium Frequency
MOHA	Ministry of Home Affairs
NAVTEX	Navigation Telex
NK	Nippon Kaiji Kyokai (Classification Society)
NPDM	National Plan for Disaster Management
OPV	Offshore Patrol Vessel
SAR	Search and Rescue
SSB	Single Side Band
UNCLOS	United Nations Convention on the Law of the Sea
VHF	Very High Frequency

Unit

S. Mile Nautical Mile (1 S. Mile=1.852Km)

KtKnots （1Knots＝1 S. Mile／hour＝1.852km/h）

Chapter 1 Background of the Project

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1-1 Background and Overview of Grant Aid

The duty of BCG (Bangladesh Coast Guard) includes a wide range of activities such as smuggling control in jurisdiction, protection of fishery industry, oil and gas, mangrove resources and environment, maintenance of maritime security, law enforcement, disaster relief and marine accident rescue activities. But due to the recent weather fluctuations, the natural disasters caused by cyclones, monsoons, etc. occur frequently, and the rescue operation of evacuees is important. The purpose of utilization of rescue boat etc. by this project is mainly rescue of evacuees due to such natural disasters, including rescue in ship accident and measures against oil spill contamination. The main target area is the coastal watershed of villages scattered along the many large and small rivers that spread like the mesh of the net.

The four (4) 20 m type coastal rescue boats (hereinafter referred to as "20 m type rescue boat") are planned to undertake the duty as a rescue mother ship which carries to the nearest safe zone including the "Coastal Crisis Management Centre" (CCMC) constructed by the US grant. On the other hand, the twenty (20) 10 m type small rescue boats (hereinafter referred to as "10 m type rescue boat") are planned to be used as substitute of 23 boats currently used among 49 rescue boats of 10 m class provided by Japan in 1988, and are planned to approach each village for evacuees to wait, rescue them, carry to the rescue mother ship (20 m type coastal rescue boat), and in some cases directly carry to the evacuation site.

For this reason, it is planned for rescue boats to have a capacity of 30 persons onboard in the 20 m type rescue boat and 20 persons onboard in the 10 m type rescue boat, in addition to the operation personnel (6 persons in the 20 m type rescue boat, 3 persons in the 10 m type rescue boat).

The 20 m type rescue boats will be deployed to the Mongla Base in the West Zone and the Rabnabad Station in the South Zone, and the 10 m rescue boats will be deployed to 12 stations and outposts in the Dhaka Zone, the West Zone and the South Zone to carry out their missions.

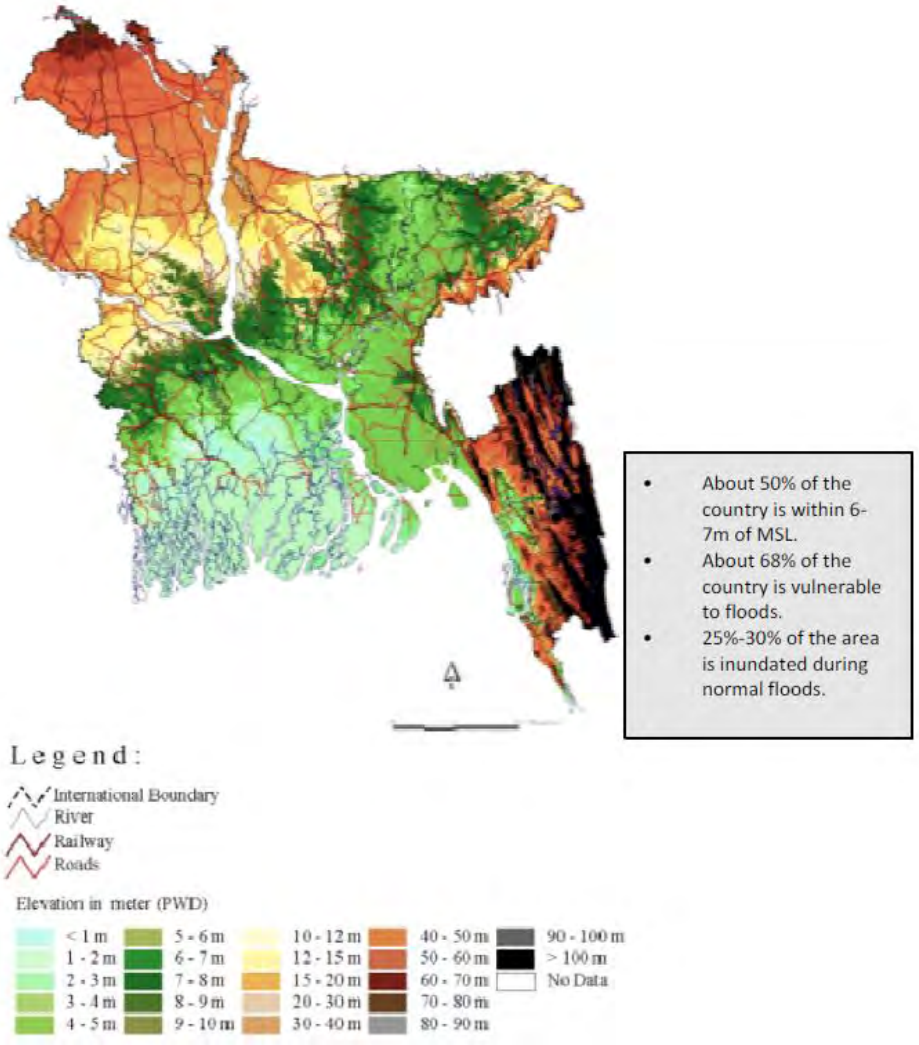
Further, among 58 inland rivers within the jurisdictions of BCG, 57 rivers are international ones, where the traffic is heavy and there is always the danger of oil spill accident. To keep the impact on the natural environment to a minimum, there is a strong intention of Bangladesh to provide the marine pollution control equipment. The diffusion of spilled oil is not only affecting the natural environment, but also the impacting on local economic by shutting off water traffic by temporarily closing rivers. In addition, it is important to maintain the lives of small-scale fishermen who have no way of living than fishery. These are the necessity of the marine pollution control equipment. For this purpose, the marine pollution control equipment such as oil fences and oil skimmers are also planned to be included in the grant aid. These are planned to be kept in the Dhaka Zone, the East Zone, the West Zone and the South Zone respectively, and to be loaded on a ship at the time of the accident and to go out to the accident occurrence area.

The proper deployment of the rescue boats is being studied while considering the following factors. The Dhaka Zone in the metropolitan area is also large in economic scale and has a large amount of water traffic. The East Zone has the largest international port, Chittagong Port, and there are many oceangoing ships. In addition, there is the Sunderbans National Park within the jurisdiction of the West Zone and the South Zone, where the necessity of nature conservation is high.

1-2 Natural Conditions

1-2-1 Geography

The People's Republic of Bangladesh (hereinafter referred to as "Bangladesh") is located in the western part of South Asia, between north latitude 20 degrees 34 minutes and 26 degrees 38 minutes, east longitude 88 degrees 01 minutes and 92 degrees 41 minutes (2016 Statistical Year Book Bangladesh (Bangladesh Bureau of Statistics)). It is also located in the deepest part of the Indian Ocean / Bengal Bay and has a coastline of 580 km in length (CIA: The World Fact Book). The three sides of the country are bordered by India, part of the southeastern part is bordered by Myanmar. The land area is 148 thousand square kilometers (about 40% of Japan) where about 161.75 million people are living. It is located in the downstream or the estuary of the great rivers such as the Padma River (Ganges River in the upper Indian territory), the Jamuna River (Brahmaputra River in Bengali), the Meghna River. There are a large number of rivers and their tributaries running nationwide. As shown on Fig. 1-1, approximately 50% of the land area is less than altitude 6 or 7 meters, and about 68% of the land is at risk of flooding and soil erosion.



（Source：National Plan for Disaster Management 2010-2015 (Disaster Management Bureau)）

Fig. 1-1 Topographic Map of Bangladesh

Among the 58 rivers under the jurisdiction of BCG, 57 rivers are international rivers, which are the shortest route of ships going to the Indian territory adjacent to the northern part of Bangladesh, and important traffic routes for cargo ships, sand carrier, etc. Further, for residents of river basins where onshore infrastructure is not fully developed, utilization of rivers is a major means of transportation, and small and medium-sized passenger ships also come and go, and traffic volume is high.

The fishery industry in Bangladesh plays an important role in the country's economy, and many small fishing vessels operating in the inland waters area are slow speed and have insufficient equipment such as night markers. For these fishing vessels, distress accidents are caused by cyclone etc.

1-2-2 Weather Conditions

The climate in Bangladesh is a typical sub-tropical monsoon climate, and it is divided into the seasons mainly the cool and dry winter (December to February), the hot and humid summer (March to May), the monsoon season where torrential rains and cyclones occur in a short period of time (June - September) and the post-monsoon season (October - November) which is the transition period from hot and humid summer season to dry winter season. In the monsoon season, the sustained low pressure may cause strong winds, and cyclones frequently come on in variable weather during the post-monsoon season. Then, the disaster such as collapse of houses, inundation, etc. occurs due to the above national land conditions. And it is also frequent that the entire village has to evacuate via a waterway.

Bangladesh is located in a heavy rain area with annual rainfall of 2,500 to 3,000 mm, about 90% of which is concentrated in the monsoon season.

Tropical cyclones and cyclones are often generated in the Bay of Bengal, and the number of occurrences differs depending on the year, but about 12 on average per year occur. The cyclone can occur at any time during the year, but it is least in the cold season from January to March, occurring most frequently in May, October and November.

In the Bay of Bengal, the northeast and southwest monsoons are prominent. According to "Admiralty Sailing Directions Bay of Bengal Pilot" (The United Kingdom Hydrographic Office), in the northern part of Bengal Bay, the northeast monsoon season starts in late October and lasts until the end of February. The average Beaufort scale is 4 (5.5 m/s to 7.9 m/s), but the Beaufort scale is sometimes 6 (10.8 to 13.8 m/s) and occasionally 7 (13.9 to 17.1 m/s). The southwest monsoon season is from June to September, and the average Beaufort scale is 4 to 5 (8.0 to 10.7 m/s), but sometimes the wind of scale 6 blows and occasionally scale 7.

1-2-3 Flood

Bangladesh is a region susceptible to natural disasters such as floods, river erosion, cyclones, droughts, tornadoes, earthquakes and so on. Among them, the damage caused by the floods and the cyclones deeply related to this project are mentioned.

In Bangladesh, flooding is a phenomenon throughout the year, but the biggest one occurs in July and August. Approximately 50% of the altitude of land area is below 6 or 7 meters above sea level, and about

68% of the land is vulnerable to floods. And about 20% of the land was affected in normal floods, and in extreme cases, 68% of areas could be damaged. Among them, particularly in 1988, 1998 and 2000, the damage was enormous.

In the flood in 1988, about two-thirds of the country's land was affected, 1,100 people died and 30 million people lost their homes. The flood in 1998 lasted 65 days from 12th July to 14th September and 67% of the country was damaged. In the flood in 2000, it also occurred in the southwestern part of Bangladesh, where flood is normally not found, and has caused serious damage to human life and property. Fig. 1-2 shows the extent of the territory damaged by major flood.

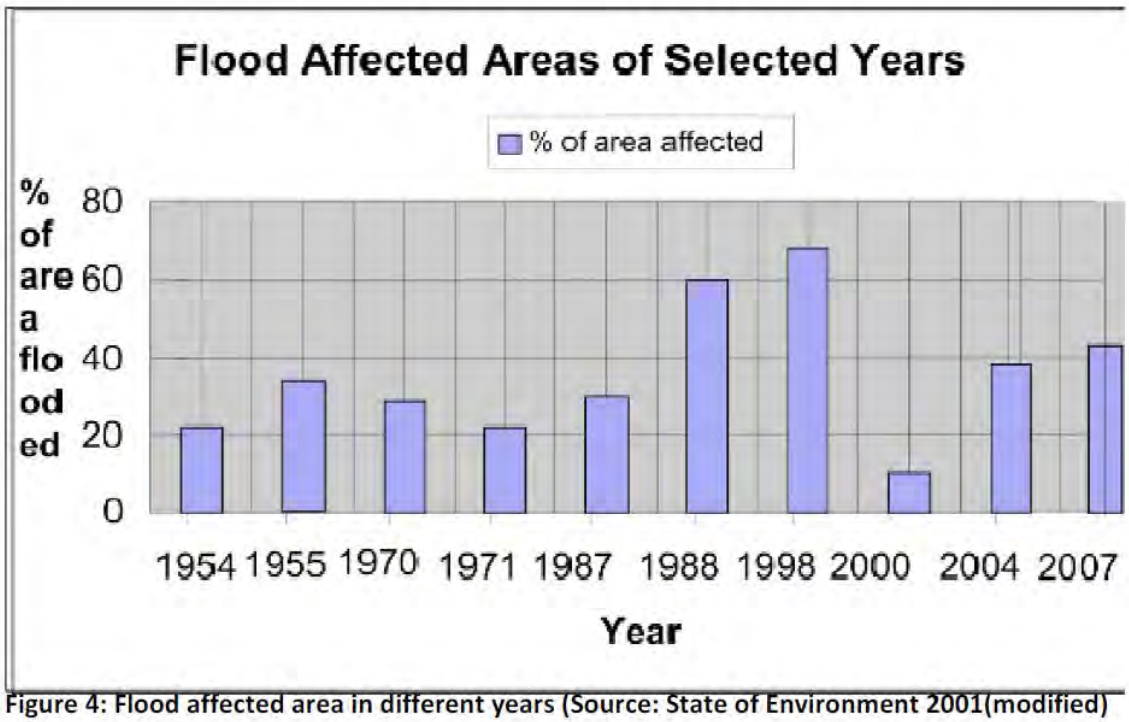


Figure 4: Flood affected area in different years (Source: State of Environment 2001(modified)

（Source：National Plan for Disaster Management 2010-2015 (Disaster Management Bureau)）

Fig. 1-2 Extent of Territory Damaged by Major Flood

1-2-4 Cyclone and Storm Surge

Cyclone with storm surge is one of the major disasters occurring in the Bay of Bengal. Table 1-1 shows the major cyclones that hit Bangladesh. A cyclone that attacked in 1970 had a maximum wind speed of 224 km/hour (62 m/s), a storm surge of 6 m to 10 m occurred, and about 300 thousand people died.

According to “National Plan for Disaster Management 2010-2015”, disaster countermeasures in the coastal area are required more than ever as the population has increased, and the Bangladesh government is progressing countermeasures such as the construction of evacuation shelters.

Table 1-1 Major Cyclone hit Bangladesh

Date		Maximum Wind speed (km/hr)	Storm Surge height (metres)	Death Toll
11 May	1965	161	3.7-7.6	19,279
15 December	1965	217	2.4-3.6	873
01 October	1966	139	6.0-6.7	850
12 November	1970	224	6.0-10.0	300,000
25 May	1985	154	3.0-4.6	11,069
29 April	1991	225	6.0-7.6	138,882
19 May	1997	232	3.1-4.6	155
15 November (SIDR)	2007	223	--	3363
25 May (AILA)	2009	92	--	190

（Source：National Plan for Disaster Management 2010-2015 (Disaster Management Bureau)）

1-3 Environmental and Social Consideration

Evaluation of environmental and social impact is assessed as Category C in accordance with the following;

Table 1-2 Environmental Impact Assessment

Item	Assessing	Basis for decision
Health and hygiene	C	There are discharges from the boat, but it is discharged in accordance with MARPOL(International Convention for the Prevention of Pollution from Ships)
Waste	C	There is no waste from the boat. Waste oils generated by operations are treated properly in the facilities of the land.
Possibility of Disaster	C	Stranding, collision, capsizing occur possibly but limited
Air pollution	C	There are diesel engines for propulsion and generator as a source of air pollution as NOx, SOx, etc., but these are produced as marine engine in compliance with the Convention of Prevention of Marine Pollution, which causes no problem.
Sediment and marine pollution	C	TBT (Tributyltin) of bottom paint of boat has been prohibited to be adopted by international convention has not already been produced. At present, “tin free” self-polishing copolymer antifouling paint is commonly used globally.

Chapter 2 Contents of the Project

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2-1 Basic Concept of the Project

2-1-1 Overall Goal and Project Purpose

Bangladesh located in the deepest part of the Indian Ocean / Bengal Bay has country area of 148 thousand square kilometers (about 40% of Japan). Bangladesh is a county of South Asia, where about 160 million people live, and the three sides of the country borders with India, bordering Myanmar with a part of the southeastern part. Bangladesh is located downstream or at the mouth of a large river such as the River Padma (the River Ganges in the upper Indian territory), the River Jamuna (the River Brahmaputra in Bengali) and the River Meghna, and about 50% of the land area is less than 6 to 7 meters in altitude and about 68% of the land is in danger of floods and soil erosion. The country's climate is tropical, gentle in winter from December to February, hot and humid in the summer months from March to May, and from June to September it is a hot and humid monsoon season. Cyclones often occur from October to November at the transition from hot and humid season to winter, and coupled with the above national land conditions, disasters such as collapse of houses and floods occur. Then, the whole village must be evacuated frequently through the waterway.

In Bangladesh, from the General Economics Division (GED) which is the secretariat of the Planning Commission chaired by the Prime Minister, the 7th Five Year Plan was announced in December 2015 over the period from FY2016 to FY2020 fiscal year (from July 2015 to June 2020). In this FYP with the subtitle "Accelerating Growth, Empowering Citizens", the following three themes are centered.

- GDP growth acceleration, employment generation and rapid poverty reduction;
- A broad-based strategy of inclusiveness with a view to empowering every citizen to participate full and benefit from the development process.
- 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.

Under these main themes, development strategies have been developed in 13 sectors. "Environment and Climate Change" is cited as one of these sectors. In this sector, it is pointed out that Bangladesh is extremely vulnerable to the effect of climate change, and particularly, 88% of the country consists of floodplains. It is therefore suspected to be vulnerable to natural disasters such as floods and cyclones and an additional 14% of the land will be exposed to the risk of flooding by 2030 as the water level rises due to climate change. To counter this, the government plans to double financial investment in this field in the final year of the FYP in order to ensure sustainable social and economic development and ensure peace of nation’s mind.

On the other hand, "Social Protection" is mentioned as another sector, in which it is pointed out that the main challenge for the 7th FYP in area of social protection is the successful implementation of the "National Social Security Strategy". In order to enhance the resilience of the poor, to have resilience

while preserving the safety of citizens, residences and resources, and make it possible for sustainable development, related to topography, irrigation and weather, it is said that an overall goal of disaster management is to alleviate damage and vulnerability from disasters, environmental shocks, human-induced disasters, climate-related emergencies, etc. As a burden of these public expenses, it is claimed that the Government will make efforts to increase from 2.02% of GDP in FY2015 to 2.3% in FY2020.

In April 2010, by the Disaster Management & Relief Division/Disaster Management Bureau, a division of the Ministry of Disaster Management and Relief, the “National Plan for Disaster Management (NPDM) 2008-2015 " has been formulated. This is the result of domestic and international commitments of the Bangladesh Government and the Ministry of Food and Disaster Management to cope with disaster risk. This plan is intended to guide the vulnerability of the poor by natural phenomena, environmental influences, and human-induced disasters to a manageable and acceptable humanitarian level, the spirit of which is taken over by the 7th FYP. Furthermore, as one of the main goals aiming at toughening the national land of this FYP, the establishment of the "National Disaster Management Plan 2016-2020" harmonized with the "Sendai Framework for Disaster Risk Reduction 2015-2030" adopted in March 2015 is also mentioned.

Based on this background, the project aims to improve the maritime rescue and disaster relief capacities at the coastal and inland waters, with BCG, which is part of disaster countermeasures and relief activities, by procuring four (4) 20 m type rescue boats and twenty (20) 10 m type rescue boats, thereby contributing to the reduction of damage due to maritime accidents and natural disasters in coastal and inland waters area.

2-1-2 Basic Concept of the Project

This project is to provide BCG with grant aid necessary for procurement of four (4) 20 m type rescue boats, twenty (20) 10 m type rescue boats including construction and manufacture of the boats, sea transportation from Japan to Bangladesh, and familiarization training for crew of 20 m type rescue boats.

The 20 m type rescue boats are made of high tensile steel in hull and aluminum alloy in superstructure and each is equipped with two (2) sets of propeller type propulsion system driven by marine diesel engines. The 10 m type rescue boats are made of FRP in hull and each is equipped with one (1) set of propeller type propulsion system driven by marine diesel engine and one (1) set of outboard propeller type propulsion system driven by gasoline engine for emergency use.

After completion in Japan, all boats are transported from Japan to probably Chittagong port in Bangladesh onboard cargo ship under the responsibilities and expenses of the shipbuilder / manufacturer. After arrival at Chittagong port, these new rescue boats will be unloaded onto the sea, restored to the operating conditions under the responsibilities and expenses of the shipbuilder / manufacturer and delivered to BCG after confirming the operation by BCG in attendance of the shipbuilder's / manufacturer's supervisor(s).

2-2 Outline Design of the Japanese Assistance

2-2-1 Design Policy

2-2-1-1 Basic Design Policy

The area under the jurisdiction of BCG in Bangladesh has complex terrain and extensive area covering coastal and inland waters as shown in Fig. 2-1. In these areas, BCG has its primary duties for deterring piracy and trafficking, protecting fisheries, oil and gas, forest resources and environmental pollution, securing overall safety, legislation and order through maritime port safety measures support, and emergency rescue and relief activities at the natural disasters.

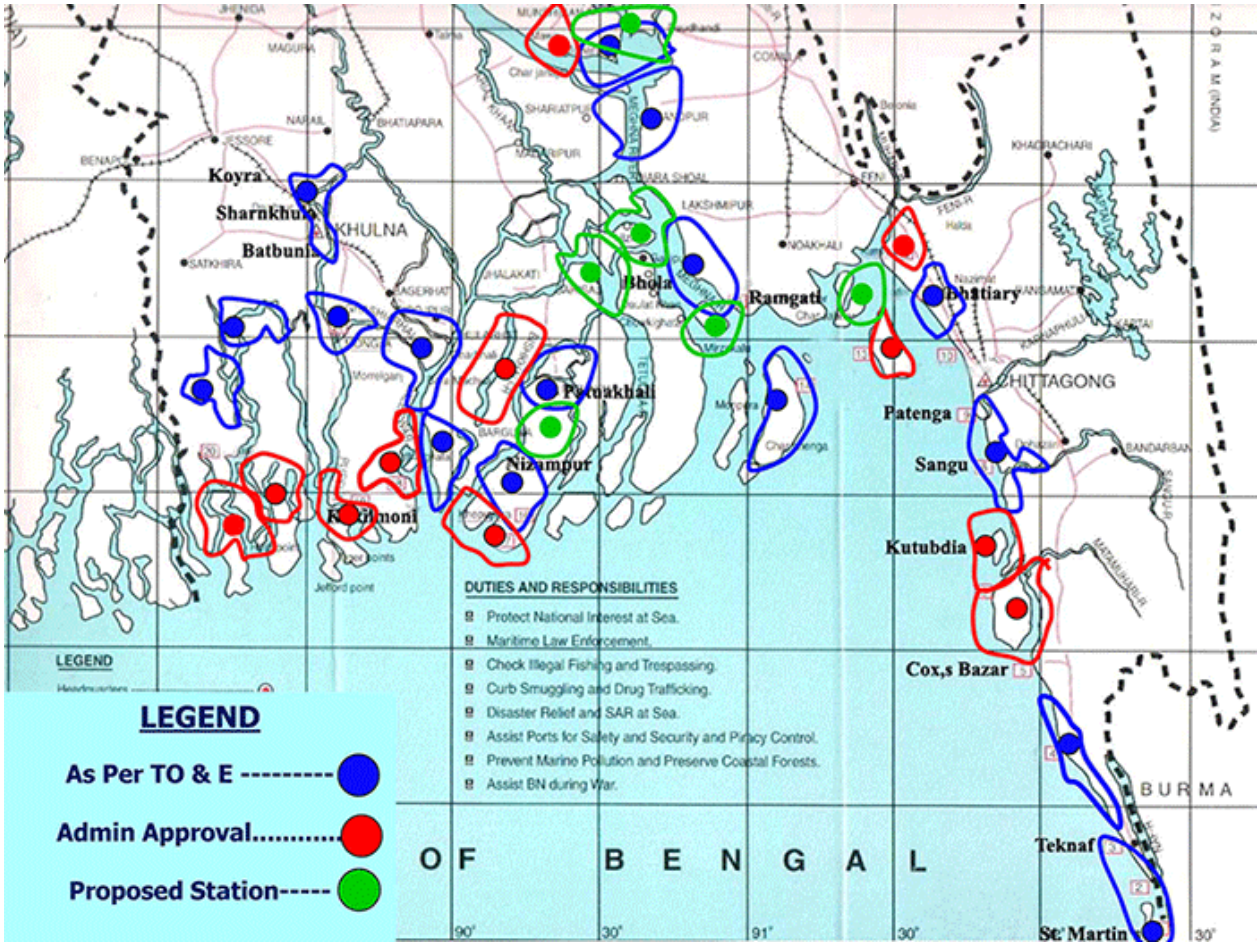


Fig. 2-1 Jurisdiction of BCG

Among the 111 vessels that are currently owned by BCG, two (2) large 87 m class offshore patrol vessels (OPV), two (2) 30 – 40 m class patrol vessels (inshore patrol vessel : IPV, fast patrol vessel: FPV, coastal patrol vessel : CPV), eleven (11) patrol boats of 15 to 25 m class, twenty-six (26) 10 m class rescue boats, and sixty (60) 10 m class high speed boat with maximum speed of 35 to 45 knots.

About half of the propulsion systems are propeller type driven by inboard diesel engine, except for seventeen (17) high speed boats with water jet (WJ) system and forty (40) boats with outboard propulsion system among the rescue boats and high-speed boats.

Among these, existing twenty-three (23) 10 m class rescue boats out of forty-nine (49) boats were provided from Japan about 30 years ago. But as aging is progressing, twenty (20) 10 m type rescue boats were requested to replace with them. And four (4) 20 m type rescue boats which play role as mother ship of 10 m type rescue boats were also requested.

The size of the project shall be adequate to the necessity to rescue maritime accidents in coastal and inland waters in Bangladesh, and relief evacuees due to natural disasters such as cyclone and monsoon, and to conduct activities including oil spill countermeasures and shall be minimal.

Regarding the small rescue boat, there were requests from Bangladesh side of ten (10) boats of 9 to 10 m in length with inboard engine and ten (10) boats of 8 to 9 m in length with outboard engine. But, considering the efficiency of procurement and the convenience of operation, twenty (20) 10 m type boats with the same design are provided with an inboard engine and an emergency outboard engine. Since these boats are planned as replacement with 23 rescue boats that have been provided from Japan in 1988 and are still in use, the hull material shall be FRP as well. The 10 m type rescue boats are planned to be deployed to twelve (12) stations / outposts which are supposed to have higher rescue activity frequency among twenty-four (24) stations and twelve (12) outposts nationwide. It is optimal to deploy two (2) boats to each station / outpost at a time, because one (1) boat can always be operable even if one (1) is out of service. But those shall be integrated with the boats and ships currently in operation, considering that, twenty (20) boats will be provided as requested by BCG.

Since the 20 m type rescue boat will be used as a mother ship of the 10 m type rescue boat, it is appropriate that its length is 20 m to accommodate the evacuees rescued by the 10m type rescue boats. In order to promptly arrive at the rescue site from the deployed base at the speed of 25 knots, it is necessary to reduce the hull weight. And it is necessary to ensure the robustness of the hull as the rescue boats need to navigate even when it is not quiet. For these reasons, the main hull of the boat is made of high tensile strength steel and the superstructure is made of aluminum alloy to have a hybrid structure, which has many achievements as 20 m class patrol boat in Japan. It is planned to deploy two (2) boats to the BCG South Zone and the West Zone, respectively, which are supposed to have many activity cases, so that one boat can be surely operated even during the maintenance of another boat. In total, four (4) boats are planned.

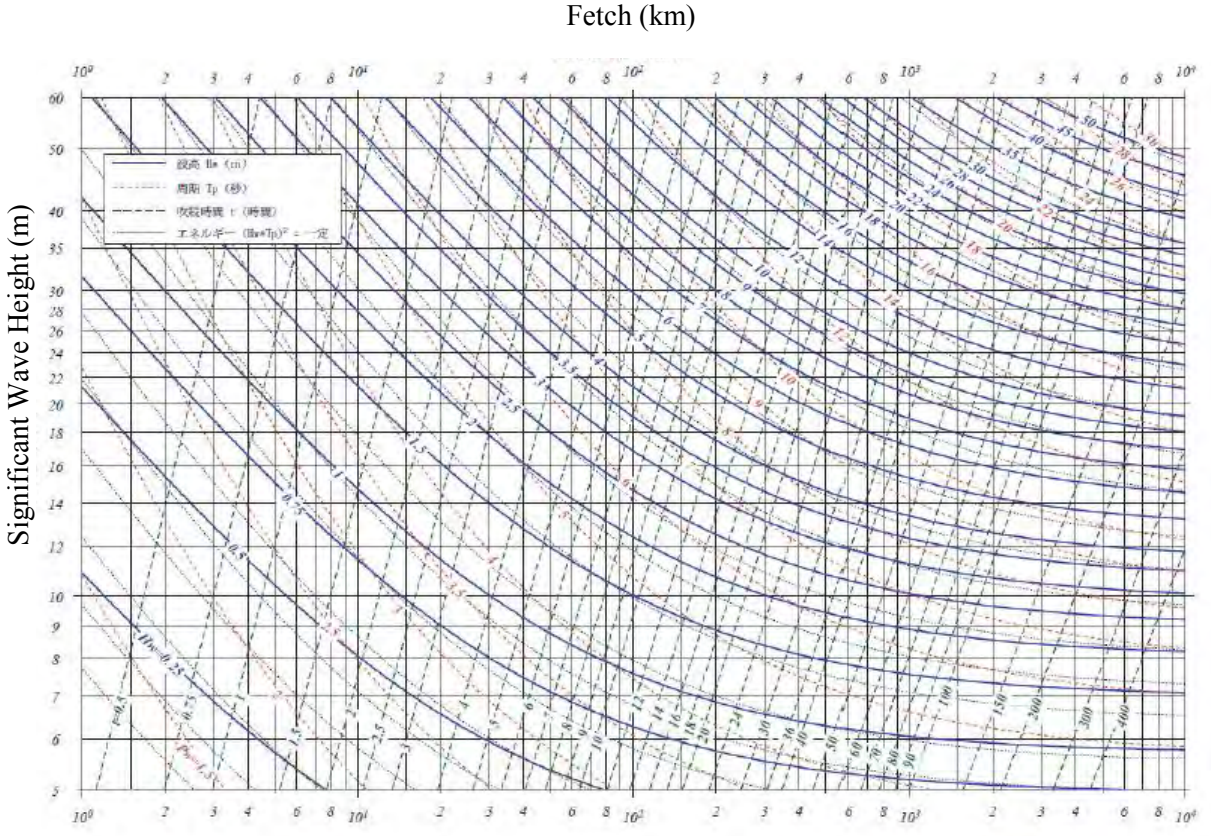
2-2-1-2 Policy for Natural Conditions

According to the data obtained from the Bangladesh Meteorological Department (BMD), there is a mild climate in the winter (December to February), in the summer (Pre-Monsoon: March to May) gusts occur due to the generation of low pressure and the climate is likely to cause thunderstorms, in the monsoon season from June to September, the sustained low pressure may cause strong winds, and in the Post-Monsoon season (October to November) cyclone is occasionally occurring with variable weather,

which is the transition time from hot and rainy summer season to dry winter season. However, in Khepupara in the South Zone close to the coastal area, the cumulative occurrence frequency of the wind speed of 1 knot (about 0.5 m/s) or less is 89.8% even in the monsoon season, and in Khulna in the West Zone located in the inland waters area, an equivalent value is 95.7%, so it is judged that it will not interfere with the plan of the rescue boats and their operation.

Regarding the waves that have the greatest influence on the operation of vessels, relational expressions indicating the relation of the fetch, the duration of the wind, the wind speed, the generated wave height, and the wave period are proposed. One of the results of summarizing the formula called Wilson IV Formula is shown in Fig 2-2.

Generally, in the inland waters area, the fetch is too short to develop the wind blow. By applying this figure, even if the fetch is assumed to be 10 km which is supposed to be maximum and the wind speed to be 15 m/s in the strong wind range, the significant wave height remains at 1.0 m. Therefore, the significant wave height of 1.0m is considered as the basic design condition for the main dimension.



Source : The Collection of Hydraulic Formulae (Japan Society of Civil Engineers 1999)

Fig. 2-2 Diagram of Estimation of Wave by Wind based on Wilson IV Formula

The climate of Bangladesh close to the Tropic of Cancer is tropical and the temperature is high. For the Mongla and Khulna in the West Zone, Barisal and Khepupara in the South Zone, the daily maximum

air temperature ratio based on the daily maximum temperature data over the thirty years from 1981 to 1990 published by BMD are shown on Table 2-1.

Table 2-1 Percentage of Occurrence of Maximum Daily Air Temperature

(Unit : %)

Max. Temperature (°C)	Mongla	Khulna	Barisal	Khepupara
More than 40	0.05	0.06	0.00	0.00
38 - 40	0.70	0.56	0.05	0.00
36 - 38	5.71	6.33	1.50	0.65
30 - 36	61.08	60.89	63.58	61.51
25 - 30	27.38	26.62	30.22	34.01
20 - 25	4.80	5.25	4.42	3.80
Less than 20	0.28	0.28	0.24	0.03

According to this table, 25 to 36 °C accounts for about 90% and it may be 38 to 40 °C at a ratio of 1% or less, but even if it exceeds 40 °C, it is rare of one day in five years in the most. Considering these conditions, the design conditions of the air conditioning system for 20m type boat are settled as follows:

Outside air temperature : 38 °C
Humidity : 95%
Ambient temperature of machinery and equipment : 45 °C
Seawater temperature : 33 °C

Both 10 m type rescue boat and 20 m type rescue boat are equipped with sunshade so that evacuees rescued on the boats can avoid the tropical strong sunshine.

2-2-1-3 Policy for Operation and Maintenance

In BCG, daily maintenance and regular maintenance of the owned vessels are carried out by specialized officers belonging to each station or engineering staffs of the Zone Headquarters. Although docking maintenance can be carried out on the slipway facility owned by the Zone Headquarters for small boats, the periodic maintenance of relatively large boats is entrusted to a shipyard belonging to the Navy. Since the periodic maintenance of 20 m type rescue boats will be carried out at these shipyards, it is necessary to design with sufficient consideration of the facility / technological capacity and capability, but according to the previous survey it can be judged that they have sufficient capacity for the size and specifications of the 20m rescue boats.

Also, spare parts necessary for daily maintenance and regular maintenance are procured by each Zone Headquarters through local agents coordinating with BCG Headquarters, where procurement of spare parts is properly done as judged from the current state of maintenance. To ensure smooth procurement of spare parts at the new rescue boats, with regard to selecting the major machinery such as the main engines,

the after-sales service in Bangladesh, parts availability, maintenance expenses etc. are considered. In addition, the manufacturer list is prepared by the shipbuilder as a finished plan in consideration of contacting with a new supplier.

2-2-1-4 Policy for Grade of the New Rescue Boats

Normally, the active area of the 20 m type rescue boats is mainly inland waters area, and the area from the inland waters area to the distance of 24 nautical miles (12 nautical miles of the territorial waters + 12 nautical miles of the connected waters) even if it is far from the coastal area. Therefore, Japan's ship safety law for the coastal area shall be applied mutatis mutandis to life-saving equipment, lighting equipment and wind speed conditions. Furthermore, the boats shall be constructed in accordance with the regulations prescribed by the Government of Japan (JG), subject to a specified inspection by the JG inspector and obtain a confirmation letter by the Nippon Kaiji Kyokai (NK).

Standards and construction practices shall be in accordance with the Japanese Industrial Standard (JIS) and Japanese Shipbuilding Quality Standard (JSQS).

On the other hand, because the operation area of the 10 m type rescue boat is an inland river, the Japanese regulations for the safety for craft (operation area within 5 nautical miles from the shore and the calm area) shall be applied. The boat shall be inspected by the Japan Craft Inspection Organization.

Standards and manufacturing practices shall be in accordance with the Japanese Industrial Standard (JIS) and the provisional standard for FRP Boat.

Main machinery and maneuvering equipment shall be robust, easy to maintain and manage, avoiding complications such as automation.

2-2-1-5 Policy for Construction/Procurement Method and Schedule

The new rescue boats are small but relatively high-speed vessel having purpose different from that of general ship, and special skills are required not only for design but also for construction. In addition to high speed and operability for purpose of relief in maritime accident and natural disaster, safety and hull stability for unspecified number of rescuers, reliability to operate even in case of emergency and redundancy when some trouble has occurred are especially required.

Both the 20 m type rescue boat and the 10 m type rescue boat are required to have high production technology, rich construction experience, strict process control on hull form, hull structure, main engine capacity, etc. by the shipbuilder and manufacturer of the boats. Especially, since the 20 m type rescue boats will be adopted with similar basic design with high confidentiality of Japan Coast Guard, the pre-qualification shall be carried out for the Japanese shipbuilders which have sufficient experiences of building and repairing such kind of boats, sufficient engineering capabilities, facilities and equipment and good number of engineers to construct the new rescue boats.

From the viewpoint of cost reduction, quality control, process control, etc., it is desirable to construct and manufacture four (4) 20 m type rescue boats and twenty (20) 10 m type boats at the same shipbuilder

and manufacturer, respectively. But because of the large number of boats, countermeasures will be considered to shorten the construction period by joint venture, etc. so that the delivery time of all boats will be appropriate.

2-2-2 Basic Plan

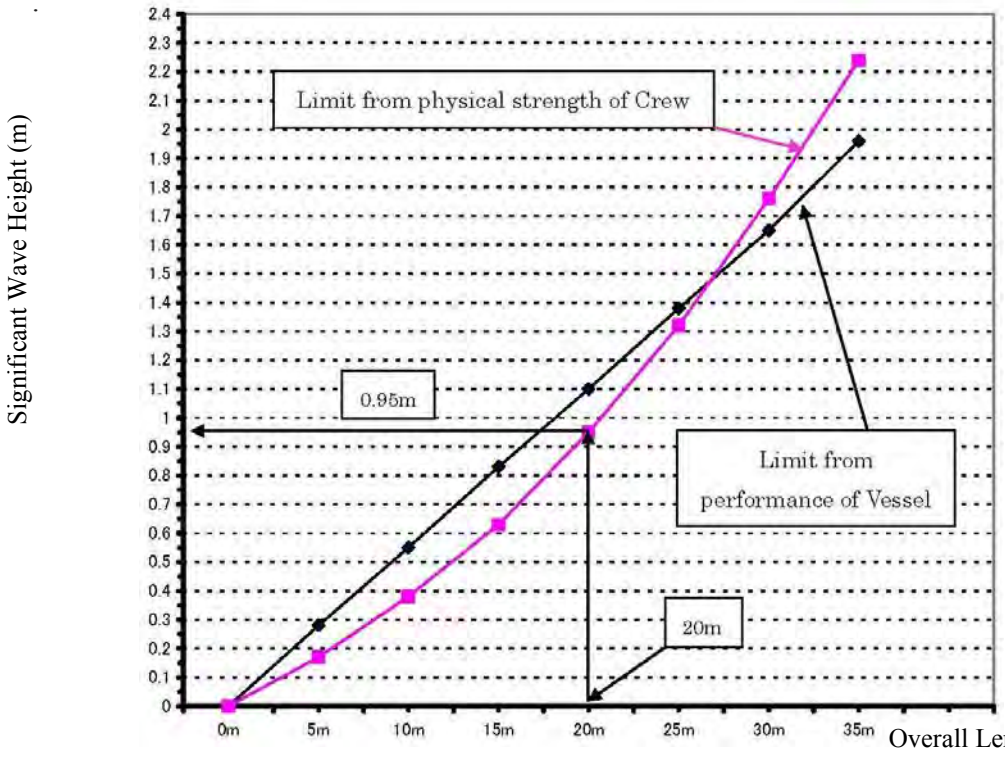
Operation of the rescue boats and maintenance works including regular inspection and maintenance will be carried out by BCG themselves. Therefore, the machinery and equipment shall be properly selected, avoiding those equipped with sophisticated system and mechanism as much as possible. Regarding small boats, periodic inspections and repair work will be carried out using slipway facilities owned by BCG.

2-2-2-1 Review on the Principal Particulars

(1) Main Dimensions

Regarding the main dimensions of the rescue boats, it is necessary to consider the seaworthiness and durability of the boat as well as comfortability to reduce the physical burden constrained for the crew, in compliance with the oceanographic conditions of the rescue activity area. Also, it shall be decided to satisfy the requirements based on the purpose.

According to the data of Shipbuilding Research Centre of Japan (SRC) "Vessel's Cruising Performance in the Wave" (Fig. 2-3), such vessel as the 20 m type rescue boat can be operated in the wave conditions of significant wave height up to 0.95 m (and more depending on wave length) within the limitation caused by the physical strength of crew. This wave height is about the same as the maximum significant wave height estimated from the fetch in the inland waters area as described above, and it is judged to have excellent seaworthiness.



Source : SRC

Fig. 2-3 The Vessel's Cruising Performance in Waves

The 20 m type rescue boat for 6 crew members was requested by BCG to be as wide as possible in order to accommodate 30 persons to be rescued. But, as it becomes difficult to obtain the boat speed of 25 knots if widening the width, the boat width shall be not less than 4.5 m.

Regarding the 10 m type rescue boat, the initial request of BCG was ten (10) outboard engine types with lengths of 8 to 9 m and ten (10) inboard engine types with lengths of 9 to 10 m, but all twenty (20) boats shall be designed in common considering manufacturing efficiency and compatibility during operation.

Also, since the breadth of some existing 10 m class boats are small, the 10 m type rescue boat shall have a breadth of 3.0 m to accommodate 20 persons to be rescued.

(2) Propulsion and Steering System

Regarding the propulsion / steering system, the boat owned by BCG has propeller type (inboard engine type and outboard engine type) or water jet (WJ) type.

Although the WJ type has advantages such as excellent propulsion performance and steering performance at high speed, and also has advantages such as being suitable for shallow water depth. On the other hand, it has the disadvantage of installation and operation to be expensive. There are places where large amount of water plants grows on the surface of the rivers, where the BCG's existing WJ type boats inhale the water plants frequently and have to stop to reverse injection. Even the 20 m type rescue boat, which is required to cruise at higher speed, is not required to cruise at such high speed as 45 knots like the existing WJ type boat, and because there is no requirement for WJ system from BCG. The propeller type is applied, which is easy to be maintained.

The water depth of some area for the rescue boats to cruise is less than 10 feet (about 3 m), but the depth of submergence of the 20 m type rescue boat is about 1.5 m even to the lower end of the propellers. It is judged that there is no problem to operate the boats in such area.

Some existing 10 m class rescue boats are equipped with gasoline type outboard engine, but the operation cost of the gasoline engine is high. As the new 10 m type rescue boats were requested by BCG to be equipped with inboard diesel engine having high fuel consumption efficiency, it is considered to provide a diesel engine driven with low operating cost. Furthermore, in order to make the operation more efficient, not a twin-engine twin-shaft system but a single-engine single-shaft system is applied. However, if a malfunction occurs in this one engine during the rescue operation it may cause a secondary disaster such as drifting along with the rescuers, so additional one outboard engine is provided as an emergency propulsion system.

(3) Hull Material

In the 20 m type rescue boat, from the viewpoint of robustness, the side shell plate is made of stronger steel, and among them, high tensile strength steel is used to reduce weight. The superstructure is made of aluminum alloy to reduce weight. Although this method requires advanced technology such as bonding of dissimilar metals using clad steel (high tensile strength steel + titanium + aluminum alloy), there are

many construction experiences in patrol boats, fishery control vessels etc. So, as long as it is constructed by Japanese shipbuilder, there are no problems in construction works.

As BCG owns steel vessels and aluminum alloy vessels, so no particular problem arises for maintenance. Since the hull is made of high tensile strength steel and is corroded by painting similarly to ordinary ships, the damaged part can be repaired by touch-up painting like as ordinary ships.

The superstructure is made of aluminum alloy and there is no problem on the corroded surface, but touch-up painting is applied for decorative coating as necessary.

Also, in the event that damage such as deformation, cracks or the like occurs in the hull or superstructure, as damaged part of high tensile strength steel or aluminum alloy is solely repaired, respectively, it is possible to be carried out by using BCG's existing technology.

The 10 m rescue boats are replacement with the existing rescue boats, and it is made of the same FRP as the existing boats. BCG currently is operating FRP rescue boats provided by Japan about 30 years ago without any problems, and there are no problems with maintenance.

(4) Speed

As the 20 m type rescue boat deployed to the two main bases of Mongla Base and Payra Port needs to arrive at a rescue area promptly by cruising a longer distance and therefore the boat speed shall be 25 knots, considering the request of BCG. This speed is comparable to the boat speed of 22 to 29 knots of the 31 to 39 m type patrol boat owned by BCG.

In order to produce high speed power, depending on the size and shape of the hull, it is necessary to have very large engine capacity equal to or higher than the boat speed ratio and to have larger engine space due to increased power and lager hull, then fuel oil consumption increase and economic efficiency such as construction cost, operation and maintenance expenses decrease. According to the planned operating conditions, the boats speed of 25 knots seem sufficient.

On the other hand, the 10 m type rescue boats deployed to the stations and outposts in each Zone have speed of 15 knots because the distance to the rescue site is short.

(5) Cruising Distance

Assumed a case that the 20 m type rescue boat cruises down the river from Mongla located in the inland waters area, one of the places where the 20 m type rescue boat is deployed, heads up the other river via the estuary and goes to the furthest region in the jurisdictional area, the possible cruising distance is about 100 nautical miles. Also, assuming that the boat is engaged in rescue activities in this area and fuel oil is not supplied until the boat returns to base again, total cruising distance of 300 nautical miles that is the result of consultation with BCG seems reasonable.

The 10 m type rescue boat is planned to cruise to the rescue site from the deployed station or outpost in the vicinity. The cruising distance to the rescue site is assumed to be about 10 nautical miles, considering the distance between the stations. Even if taking into consideration the cruising distance to carry out rescuing activities at the site, total cruising distance of 100 nautical miles is reasonable.

(6) Complement

In the 20 m type rescue boat, the number of crew is six (6), one (1) captain, one (1) operator in charge of steering, one (1) engineer, one (1) electric person and two (2) deck persons. In addition, it is assumed that thirty (30) rescuers are accommodated onboard.

For the 10 m type rescue boat, it is assumed that the number of maneuvering person, etc. is three (3) and the number of rescuers is twenty (20).

(7) Accommodation System (Air-Conditioner, Protection)

The 20 m type rescue boats with long operating time are provided with air conditioning system based on the conditions of air temperature of 24 ^{o}C in the room at the outside air temperature of 38 ^{o}C, considering the natural conditions of Bangladesh located in the tropical region.

Accommodation facilities for crew are provided to correspond to the operation longer than one day. Also, a conference room is arranged inside the hull and a folding type treatment bed is equipped for use as a rescue room during rescue operations.

As the accommodated rescuers will wait on the deck during transfer, a removable awning covering the upper deck at the center of the hull is provided to block rain and solar radiation.

In the 10 m type rescue boats based on short-term operation, accommodation area having air-conditioning system is not arranged. But a removable awning for protecting the rescuers is provided, which is not equipped with the existing 10 m class rescue boat. Also, since it is assumed that the tremors will become large during transfer on the small 10 m type rescue boats, a rope for the rescuers to grasp by hand is provided, so that the rescuers can maintain their body positions.

(8) Enforcement Equipment

As a rescue boat, the 20 m type rescue boat and the 10 m type rescue boat are equipped with radio for communicating with the headquarters, automatic vessel identification system, GPS display device, magnetic compass, search light etc.

Also, for preventing diffusion of spilled oil, portable marine pollution control equipment such as oil boom, oil skimmer, oil adsorbent, etc. and 10 feet containers for storing them are included in equipment of the 20 m type rescue boat.

(9) Main Engine and Generator

The 20 m type rescue boat is provided with lightweight high-speed marine diesel engines that has large capacity and is easy to operate and maintain. Two (2) main engines are equipped to drive two (2) propulsion shafts. Also, two (2) generators driven by diesel engines are equipped. One generator has sufficient capacity to supply the whole electric power required for the boat.

The 10 m type rescue boat is equipped with a small high-speed marine diesel engine. Also, for emergency use, it is equipped with an outboard gasoline engine which is easy to handle. A generator is not provided, and the necessary electric power is supplied from the battery. A charger to charge the battery with the generator attached to the engine is provided.

(10) Mooring System

The mooring system has one method of winding nylon rope connected to anchor with capstan and the other method of winding up chain connected to anchor with windlass. In the chain / windlass system, since the breaking force of the chain is large, there is an advantage that the mooring force is stronger and the reliability is higher. On the other hand, the windlass is large-sized equipment and chain locker for storing the chain is also required, so it is suitable for a large vessel.

Meanwhile, the nylon rope / capstan system is suitable for small vessel because the equipment is small, the weight of the whole system is light, and wide storage space is not required. Since the environmental conditions during the mooring of the small vessel are relatively not harsh, sufficient mooring is applicable if the size of the nylon rope is appropriately selected.

Regarding the 20 m type rescue boat, there was a desire by BCG to adopt the chain / windlass system to operate in the area where the current velocity is high. But, this system increases the total weight of the rescue boat and decreases the speed of the boat, and it is difficult to arrange chain locker in the small vessel. Therefore, nylon rope / capstan system is applied to the 20m type rescue boat with boat speed as a priority. Two (2) pairs of anchors and nylon ropes are equipped to ensure adequate anchoring force even at high current velocity of 5 knots. Chain of 1 m long is provided between the anchor and the nylon rope to lay down the anchor on the sea bed in the proper state. In addition, the capstan is electric type instead of hydraulic type in order to reduce the weight of the whole system.

(11) The Principles on Transfer of Defense Equipment and Technology

The specifications of the new rescue boats shall be required to have the review by the Government of Japan on the basis of the Three Principles on Transfer of Defense Equipment and Technology formulated on 1st April 2014. Also, in compliance with the vessels and boats projects that have been granted in the ODA scheme, the new rescue boats shall be designed and built, referring to such various procedures as mentioned in the Export Trade Control Order which stipulates the specific procedures for export based on the Foreign Exchange and Foreign Trade Control Law. It should be reminded to the new rescue boats so as not to have excessive specifications.

The survey team explained the BCG regarding the corresponding policy of the Three Principles on Transfer of Defense Equipment and Technology, and confirmed that the new rescue boats are not equipped with equipment that can be diverted easily for military purposes.

2-2-2-2 Basic Specifications

(1) 20 m type Rescue Boat

1) General

a) Type and Number of the Boat : 20m type rescue boat x 4

b) Rule and Regulations

The Boat shall be registered to Bangladesh.

The Boat shall be built in compliance with the following regulations and shall be inspected by Japanese Government (JG).

- Ship Safety Act of Japan (Navigation area : corresponding to Category-4 vessel for coastal areas of non-international service, non-passenger)
- Maritime Regulations of Bangladesh
- Act for Preventing Collision at Sea
- Other related regulations

c) Standards

The Boat shall be built in accordance with the following standards as much as practicable.

- Technical Standard of Ship Safety Act
- Japanese Industrial Standard (JIS)
- Standard of Japan Electrical Manufacturer's Association (JEM)
- Builder's Technical Standards

d) Principal Dimensions

Length (overall)	:	Approx. 20 m (less than 20 m)
Length (water line) (designed)	:	Approx. 18.5 m
Breadth (mld)	:	Not less than 4.5 m
Depth (mld)	:	Approx. 2.4 m
Draft (mld) (at designed full load)	:	Approx. 1.5 m
Displacement	:	Approx. 40 tons

e) Complement

Crew	:	6 persons
Others (such as rescued persons other than complement)	:	30 persons

f) Speed & Endurance

Maximum Speed (at sea trial)	:	Not less than 25 knots

(with 50% fuel and 50% fresh water, at 110% output, for 30 minutes)

Endurance : Approx. 300 N.M. (at 15 knots)

g) Spare Parts & Tools

Consumables and replacement parts for three (3) years operation according to maker's recommendation shall be provided.

One (1) set of tools stowed in a proper type container shall be provided.

2) Hull Part

a) Hull Construction

The Boat shall be built in accordance with ship structure rules and structure standard for high speed vessel related to the regulations prescribed in item 1) above.

The Boat shall be of V-shape, single bottom welded construction.

Bottom and side shell shall be made of high-tensile steel plate.

Superstructure shall be made of aluminum alloy.

Upper deck shall be made of high-tensile steel plate of aluminum alloy, but high-tensile steel is preferable.

b) Tank

Fuel Oil Tanks	:	Approx. 4 m^3 (approx. 2 m^3 x 2)
Fresh Water Tanks	:	Approx. 1.2 m^3 (approx. 0.6 m^3 x 2)

c) Accommodation Space

On Upper Deck	:	Wheelhouse, Toilet
Under Upper Deck	:	Crew's Room, Meeting /Mess Room,
Air Conditioning System	:	Central cooling for Wheelhouse, Crew's Room & Meeting /Mess Room
Outside Air	:	Temp. 38 ^oC, 70% RH
Inside Air	:	Temp. 24 ^oC, 50% RH
Sea Water	:	Temp. 33 ^oC
Furniture		
Wheelhouse	:	3 - Pilot chairs
		2 - Benches with table
		1 - Chart table
		Each 1 - Window wiper for front window
Meeting/Mess Room	:	2 – Two tiers Pullman beds
		1 - Treatment bed (Pullman bed)
		2 - Sofas
		2 - Tables

Crew's Space	:	2 - Single beds
Galley	:	1 - Refrigerator (300L)
		1 - Electric heater range
		1 - Sink with a water faucet
Lavatory	:	1 - Toilet
		1 - Wash basin
		1 – Hand held shower

d) Painting and Cathodic Protection

Bottom (outside)	:	Epoxy rust protection paint x 2
		Antifouling paint (hydrolysis) x 1
Topside (outside)	:	Epoxy rust protection paint x 2
		Chlorinated rubber type paint x 1
Upper Deck (exposed)	:	Epoxy rust protection paint x 1
		Non-slip deck paint x 1
Superstructure (Al. alloy) (outside)	:	Chlorinated rubber type under coat x 2
		Chlorinated rubber type top coat x 1
Bottom (inside)	:	Non-tar epoxy paint x 1
Engine Room (inside)	:	Oil-based paint x 1
		Phthalic top paint x 1
Steel Outfits for Mooring	:	Galvanized (except for stainless steel portions)
Cathodic Protection on hull	:	Sacrificial type zinc anodes

e) Anchors, Mooring and Towing Equipment

Anchor	:	2 - Danforth type, 30 kg, with chain (16 mm dia. x 1 m, NK grade 2)
Anchor Rope	:	2 - Nylon rope, 22 mm dia. x 80 m
Towing Rope	:	1 - Nylon rope, 22 mm dia. x 110 m
Mooring Rope	:	1 - Nylon rope, 22 mm dia. x 80 m
		3 - Nylon rope, 22 mm dia. x 40 m
Capstan	:	1 - Electric motor driven, 0.5 ton x 15 m/min

f) Life-Saving Appliances

Inflatable Life Raft	:	1 - For 10 persons
Life Jacket	:	36
Life Buoy	:	2 - With life line of min. 30 m.
Self-Igniting Signal Light	:	2

Self-Activating Smoke Signal : 2
Parachute Signal : 4
Rocket Flare : 2
Emergency Medical Equipment : 1

g) Fire Fighting Apparatus

5 kg Portable Powder Extinguisher : 2 - In Engine Room and Meeting/Mess Room
5 kg Portable CO_2 Extinguisher : 3 - In Wheelhouse, Engine Room and Meeting/Mess Room (Galley)
Auto-Diffusion type Extinguisher : 2 - In Engine Room

h) Marine Pollution Control Equipment

Oil Spreading Prevention Devices

Oil Fence : 5 sets - MLIT approved B type, approx. 20 m/set
Anchor : 5 - Stockless type of approx. 30 kg
Anchor Chain : 5 - 11 mm dia. x 6 m
Buoy : 10 - Orange buoy, 30 cm dia.
Light Buoy : 5
Shackle : 5
Rope : 5 rolls - 6 mm dia. sail rope, 200 m/roll

Oil Recovery (9 m^3/h and over)

Skimmer Head : 1
Suction Hose : 1
External Pump Unit : 1
Discharge Hose : 1
Collecting Oil Tank : 1

Oil Absorbent

Mat type : 5 boxes - 100 sheets/box
Roll type : 5 boxes - 1 roll/box
Bunting type : 5 boxes - 6 pieces/box
Streamer type : 5 boxes - 2 pieces/box

Container (10 feet) : 1 - For stowing above provisions

3) Machinery Part

a) Main Engine

Number : 2
Type : V-type 4-cycle, high-speed diesel engine with turbo charger

Maximum Output (at the end of the engine shaft)	:	Approx. 720 kW at 2,250 RPM
Control	:	From Wheelhouse and Engine Room, Electric start (DC24V)

b) Diesel Generator Engine

Number	:	2
Type	:	4-cycle, high-speed diesel engine
Maximum Power Output	:	Approx. 28 kW

c) Propulsion & Steering Equipment

Propeller	:	2 - Fixed pitch, Aluminum bronze cast
Steering Gear	:	1 - Electro hydraulic type
Rudder	:	2
Steering Control	:	From Wheelhouse and Steering Gear Room

d) Auxiliary Machineries

Vent Fan for Engine Room	:	2 - Electric, reversible type
Vent Fan for Steering Gear Room	:	1 - Electric
Lubrication Oil Transfer Pump	:	1 - Portable electric type
Fuel Oil Transfer Pump	:	2 - Manually operated wing pump
Fire and Bilge Pump	:	1 - Electric
General Service and Sanitary Pump	:	1 - Electric
Bilge Pump	:	1 - Main engine driven self-priming type
Fresh Water Pump	:	1 - Electric
Bilge Wing Pump	:	1 - Manually operated
Cooling Water Pump for Air Conditioning System		
	:	1 - For ordinary use, electric
	:	1 - For back-up, electric
Condensing Unit for Air Conditioning System	:	2 - Electric

e) Tanks

Fuel Oil Collecting Tank	:	1
Fuel Oil Drain Tank	:	1
Lubricating Oil Tank	:	1

4) Electrical Part

a) Distribution System

Power System	:	AC 220V 50Hz 3ph
Lighting	:	AC 220V 50Hz 1ph

Communication System	:	AC 220V 50Hz 1ph/ DC24V
Navigation & Radio Equipment	:	AC 220V 50Hz 1ph/ DC24V

b) Power System Equipment

Generator	:	2 - AC 225V 50Hz 3ph Approx. 20 kW (25 kVA, PF=0.8)
Main Switchboard	:	1 - Dead front type
Storage Battery	:	1 - DC 24V
Shore Connection Box	:	1 - AC 420V 50Hz 3ph
Transformer (shore use)	:	1 - 420V/220V

c) Lighting System

Accommodation	:	Fluorescent type LED
Engine Room	:	Fluorescent type LED
Upper Deck	:	2 - Flood light type LED, 35W
Search Light	:	1 - Xenon lamp type, 300W
Daylight Signal Lamp	:	1 - Portable type LED, with 220V cable
Boat light(24V)	:	1 - Portable type LED, 220V rechargeable
Patrol Light	:	1 – Red/Blue flashlight

d) Onboard Communication Equipment

Onboard Telephone (4-stations)	:	1
Calling Bell	:	1
20W Loud Hailer System	:	1
Electric Horn	:	1
Electric Motor Siren	:	1
Bilge Alarm System	:	1

e) Navigation Instrument

Multi-Function Display	:	1 - 19” x 2
Radar	:	1 - 4kW, 36NM
GPS Compass	:	1
GPS Receiver	:	1
Echo Sounder	:	1
Automatic Identification System (AIS)	:	1
GPS Plotter	:	1
Wind Direction and Anemometer	:	1
Magnetic Compass	:	1
Barometer	:	1

Navigation Light : 1set - Mast head light, Side light, Stern light, Towing light, Anchor light, NUC light

f) Radio Equipment（GMDSS）

SSB (MF/HF) Radio	:	1
International VHF Radio	:	2
Aircraft Rescue Radio	:	1
Satellite EPIRB	:	1
International NAVTEX Receiver	:	1
SART	:	1
Two-Way Wireless Telephone	:	2
Onboard Comm. Wireless Telephone	:	4

5) General Arrangement

The outlines of the arrangement are as follows;

- The Boat shall have V-shape and single bottom.
- In Engine Room, two powerful marine diesel engines shall be installed.
- Two fixed pitch propellers shall be fitted at stern for propulsion equipment.
- On upper deck center, aluminum alloy make superstructure shall be installed for Wheelhouse.
- Under upper deck, Crew's Room, Meeting /Mess Room, Engine Room, Steering Gear Room, and Bow Store shall be arranged.

(2) 10 m type Rescue Boat

1) General

a) Type and Number of Boat : 10 m type rescue boat x 20

b) Rules and Regulations

The Boat shall be registered to Bangladesh.

The Boat shall be built in compliance with the following regulations and shall be inspected by Japanese Authority (Japan Craft Inspection Organization).

- Ship Safety Act of Japan (Navigation zone : Coasting area within 5 nautical miles from the shore and smooth water)
- Regulations for the safety for Craft of Japan
- Maritime Regulations of Bangladesh
- Act for Preventing Collision at Sea
- Other related regulations

c) Standards

The Boat shall be built in accordance with the following standards as much as practicable.

- Technical Standard of Ship Safety Act
- Japanese Industrial Standard (JIS)
- Provisional Standard for FRP boat
- Builder's Technical Standard

d) Dimensions

Length	:	Approx. 10.0 m
Breadth	:	Approx. 3.0 m
Depth	:	Approx. 1.0 m

e) Complement

Crew	:	3 persons
Others	:	10 persons
(Total complement	:	13 persons)
Others (such as rescued persons other than complement)	:	10 persons

f) Speed & Endurance

Maximum Speed	:	Not less than 15 knots
(fully equipped and loaded with 100% fuel and 23 persons on board)		
Endurance	:	Approx. 100 N.M. (at 12 knots)

g) Spare Parts & Tools

Consumables and replacement parts for three (3) years operation according to maker's recommendation shall be provided.

One (1) set of tools stowed in a proper type container shall be provided.

2) Hull part

a) Hull body

Material	:	FRP
Construction		
Outer Shell, Bulwark	:	Single plate construction
Deck	:	Single plate construction reinforced by sandwich construction
Deck Surface	:	Non-slip finish

b) Tank

Diesel Fuel Tank	:	Approx. 300 L (SUS), built in hull
Gasoline Fuel Tank	:	Approx. 60 L (SUS)

c) Steering Console

Location	:	Aft of upper deck
Equipment	:	Steering Handle, Engine Remote Control Box, Magnetic Compass, Switches for Navigation Light & Search Light, GPS Plotter, VHF Radio, AIS

d) Mooring & Towing Apparatus

Mooring Rope	:	2 - 9 mm dia. x 12 m
Anchor	:	1
Anchor Rope	:	1 - 9 mm dia. x 40 m
Mooring Bit	:	3 - Bow x 1, stern x 2

e) Life-Saving Appliances

Life Buoy	:	2 - For small craft
Life Jacket	:	23 - For small craft
Self-Igniting Signaling Light	:	1 - For small craft
Self-Activating Smoke Signal	:	1 - For small craft
Rocket Flare	:	4 - for small craft
Hand Flare	:	2
Buoyant Smoke Signal	:	2

f) Fire Fighting Apparatus

Bucket	:	1
Portable Fire Extinguisher	:	1

g) Other Provisions

Gangplank	:	1 - 30 cm x 300 cm, aluminum make
Deck Awning	:	1 - Detachable, for sun and rain shade, from bow to stern
Holding Rope	:	1 - Along inside of gunwale, for rescued person
Binocular	:	1
Signal Whistle	:	1
Other Facilities	:	1 set - Manufacturer's standard

3) Machinery Part

a) Diesel Inboard Engine

Number	:	1
Type	:	4 cycle turbocharged diesel engine with reduction/reverse gear
Accessories	:	Battery charging alternator
Starter	:	Electric motor (DC24V)
Fuel	:	Marine diesel oil
Propeller	:	1 - Fixed pitch propeller The propeller shall be retractable if the propeller protrudes from the ship's bottom.
Propeller Shaft	:	1
Engine Control	:	From Steering Console

b) Gasoline Outboard Engine

Number	:	1
Type	:	For emergency, retractable
Output	:	70 HP
Fuel	:	Gasoline
Steering Control	:	Bar handle
Engine Control	:	Clutch, reverse control

c) Steering System

Steering Gear	:	1 - Hydraulic operation
Rudder	:	1 - Manufacturer's standard The rudder shall be retractable if the rudder protrudes from the ship's bottom

d) Auxiliary Equipment

Bilge Pump	:	1
Oil filter	:	1
Puddle	:	1 pair
Repair Kit	:	1 set

4) Electric Part

a) Power Supply

Battery	:	1 - DC24V, 145AH

b) Lighting System

Search Light	:	1 - Approx. 400,000cd

c) Navigation Apparatus

AIS	:	1
GPS Plotter	:	1
Navigation Light	:	1
Magnetic Compass	:	1
Radar Reflector	:	1

d) Radio Equipment

VHF Radio	:	1

5) General Arrangement

The outlines of the arrangement are as follows;

- The Boat shall have V-shape and single bottom.
- In Engine Room one high-speed marine diesel engine shall be installed.
- One fixed pitch propeller shall be fitted at stern for propulsion equipment.
- On upper deck aft, Steering Console shall be installed.
- One outboard gasoline engine shall be provided at stern for emergency propulsion.

(3) Items to be reflected at Detailed Design Stage

The BCG requested the following items during the technical discussion with BCG at the draft report explanation. These items are described in the "Minutes of Technical Discussions" dated 29th November 2017 shown in the attached document as matters to be reflected on the technical specifications at the detailed design stage.

1) 20 m type Rescue Boat

a) A 0.5 m high bulwark to be provided at the bow part with a slit at each side for smooth anchor handling operation.

2) 10 m type Rescue Boat

a) A wheel house to be provided without the rear door and with the roof and the sliding type side windows.

b) The installation of the detachable deck awning to be cancelled. But, sockets for the detachable stanchion to be provided for future installation by BCG.

2-2-3 Outline Design Drawing

Perspective of the new rescue boats are shown on Fig. 2-4 (Fig. 2-4-1 of 20 m type rescue boat, Fig. 2-4-2 of 10m type rescue boat) and General Arrangement are shown on Fig. 2-5 (Fig. 2-5-1 of 20 m type rescue boat, Fig. 2-5-2 of 10 m type rescue boat).

Fig. 2-4-1 Perspective of 20m Type Rescue Boat

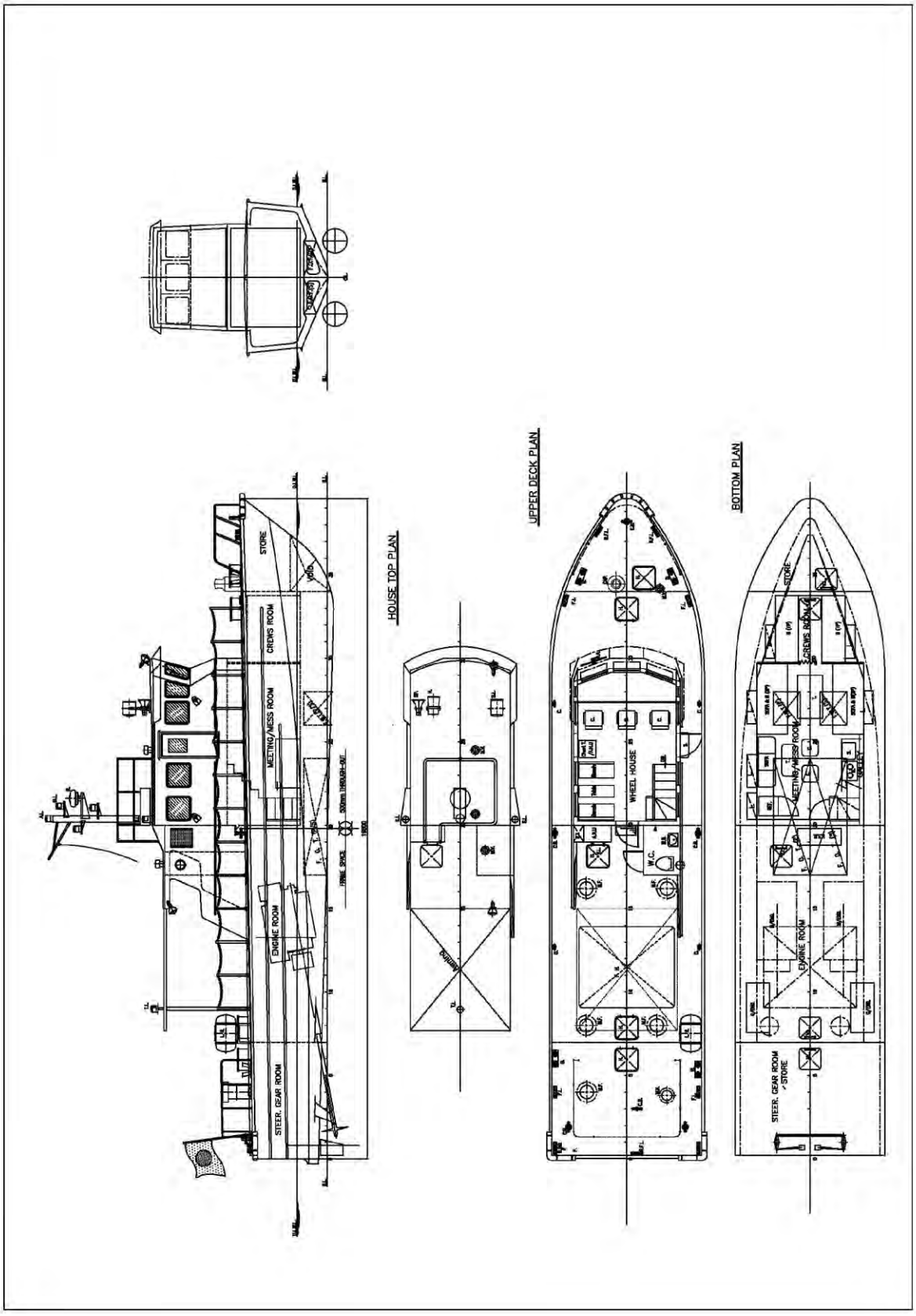


Fig. 2-5-1 General Arrangement of 20 m Type Rescue Boat

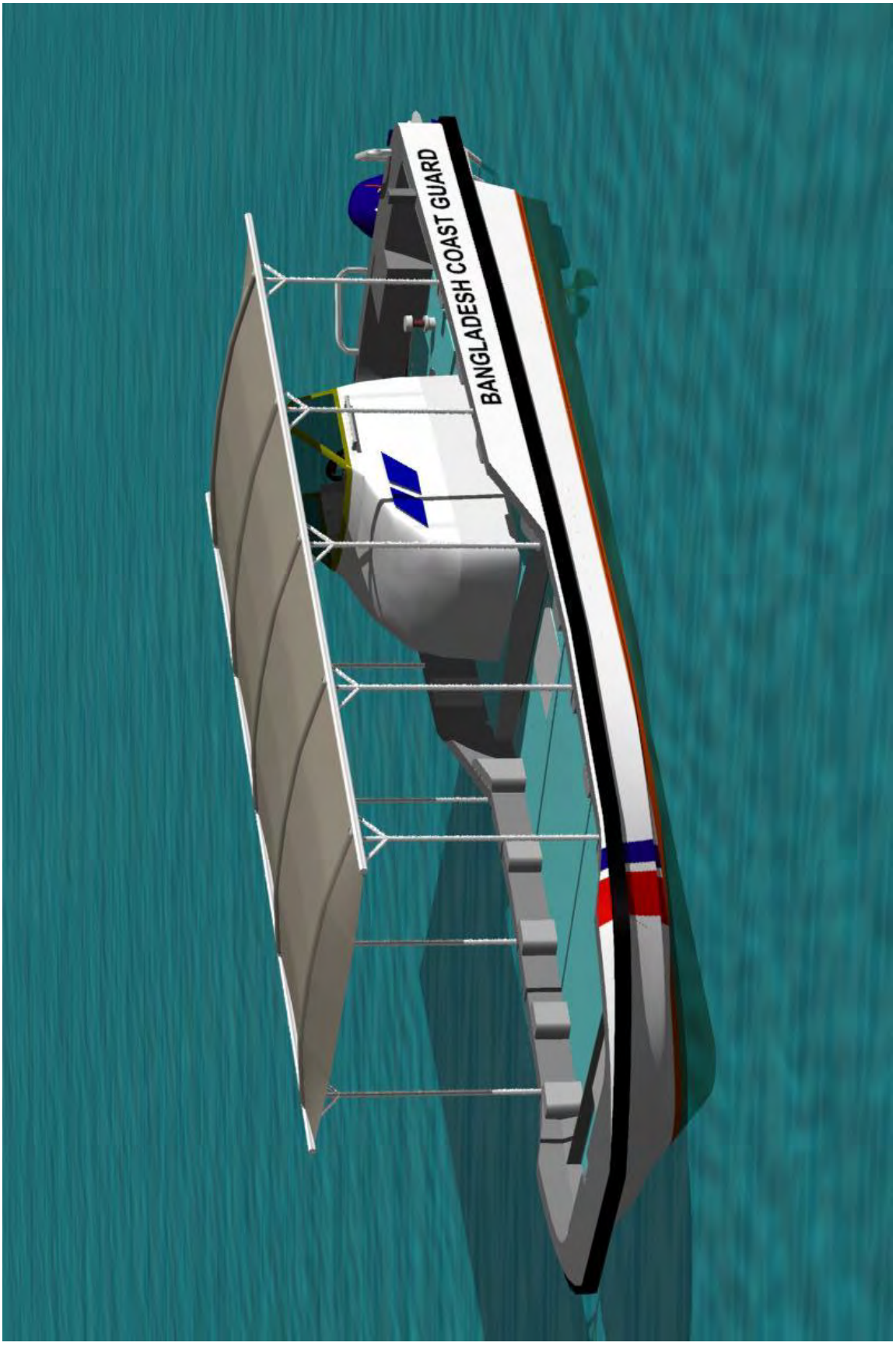


Fig. 2-4-2 Perspective of 10 m Type Rescue Boat

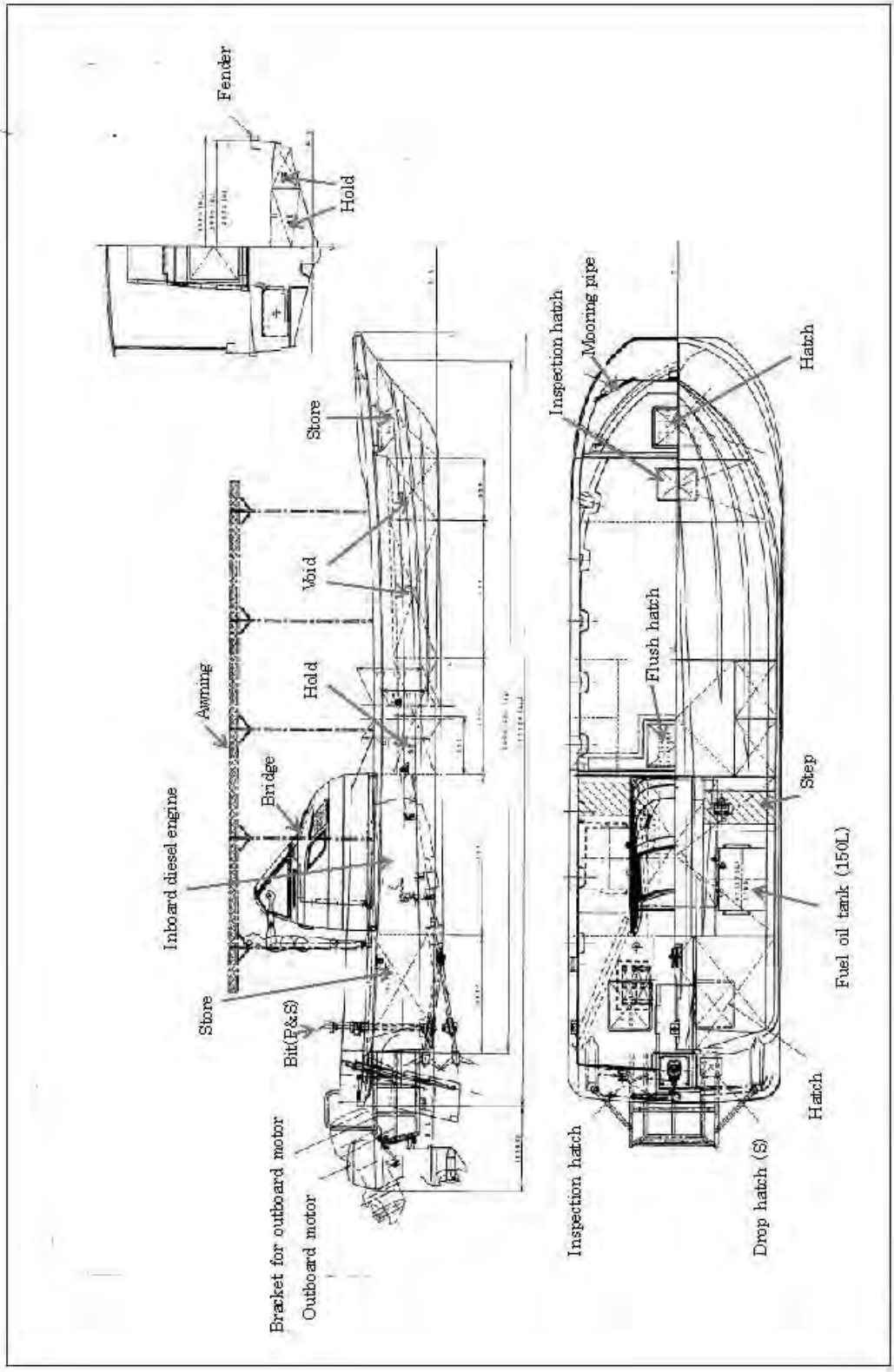


Fig. 2-5-2　General Arrangement of 10 m Type Rescue Boat

2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

After the conclusion of the Exchange of Notes of the Project, the Bangladesh government and the selected consultant shall develop the detailed design of the rescue boats based on the concept of basic design and invite qualified shipbuilders and manufactures for bidding the construction of the 20 m type rescue boats and the manufacture of the 10 m type rescue boats, respectively.

The 20 m type rescue boat shall have an overall length of approximately 20 m and a breadth of approximately 4.5 m, while the maximum speed shall be not less than 25 knots, and the cruising distance of about 300 nautical miles at the speed of 15 knots. The 20 m type rescue boats shall have cruising performance to secure the certain operation rate in the coastal and inland waters area even in the monsoon season with the severe weather conditions.

On the other hand, in the inland waters, the area spreads where the aquatic plants grow abundantly on the water surface, and the existing BCG boats equipped with the water jet type propulsion system are forced to stop by inhaling the aquatic plants. In addition, the waterjet system requires more operation costs. Therefore, a propeller type propulsion system with twin-engine and twin-shaft system shall be applied.

Since the boats are such special construction as to high-tensile steel hull and aluminum alloy superstructure in order to make the speed performance securing 25 knots and the cruising distance of 300 nautical miles compatibly, and to make the robust and lightweight hull which can withstand rescue operations even in the bad weather, the remarkable skills are required not only for designing works and but also for construction works. Therefore, the strict quality control and construction schedule control are essential for the shipbuilder to complete the boats having safety and sufficient capacity.

For this reason, the construction of the 20 m type rescue boats should be carried out by the shipbuilder, who have sufficient skills and experiences in constructing of similar type of vessels and also have sufficient engineering capability. There is, however, no such shipbuilder in Bangladesh, therefore the 20m type rescue boats will be constructed by Japanese shipbuilder.

Prior to announcement of an open tender, the consultant shall conduct pre-qualification assessment and select qualified shipbuilders among whom the tender can be made.

The shipbuilder selected by the tender shall conclude the shipbuilding contract with the Bangladesh government and carry out construction works under the inspection and supervision of a third party (Japanese Government : JG, for example) and the consultant. Also, the shipbuilder shall arrange the instruction and training program for twelve (12) officers and crew for about two (2) weeks at the shipbuilder and manufacturer of machinery during the construction works for familiarization training of the machinery and equipment installed onboard the boats.

Meanwhile, the 10 m type rescue boat shall have an overall length of approximately 10 m, a breadth of approximately 3 m, a performance with the maximum speed of not less than 15 knots and the cruising

distance of about 100 nautical miles at the speed of 12 knots. They are also required to cruise the short distance frequently in the inland waters areas of Bangladesh to engage in rescue activities.

The existing BCG' small rescue boats are provided with propulsion system driven by inboard diesel engine or propulsion system by outboard gasoline engine. Since the diesel engine driven system is lower in fuel consumption and such system is also demanded by BCG, the 10 m type rescue boats shall be equipped with the inboard diesel engine driven propulsion system. In order to improve the fuel consumption efficiency more, single-engine and single-shaft propulsion system shall be applied. If any trouble should happen on the main engine during rescue activities, it will cause trouble in rescuing the evacuees, an outboard engine system is equipped as an emergency propulsion system. These boats are the replacement with the old rescue boats provided by Japan nearly 30 years ago and BCG is familiar with operation and maintenance of such kind of boats. So, the hull is made of the same material, FRP.

Because the large facilities are required to manufacture as many as 20 boats, it is planned to be manufactured by Japanese manufacturer which have rich experiences in manufacturing the similar boats and excellent manufacturing efficiency.

Like the 20 m type rescue boats, the consultant shall conduct pre-qualification assessment prior to announcement of an open tender and select qualified manufacturers among whom the tender can be made.

The manufacturer selected by the tender shall conclude the manufacturing contract with the Bangladesh government and carry out manufacture works under the inspection and supervision of a third party (Japan Craft Inspection Organization : JCI)) and the consultant.

After completion of the construction works of the 20 m type rescue boats or the manufacture works of the 10 m type rescue boats in Japan, respectively, sea trials and final inspections shall be conducted to confirm the satisfaction with the contract and the specifications.

After completion in Japan, the shipbuilder of the 20 m type boats and the manufacturer of the 10 m type rescue boats shall transport the boats on the deck or in the holds of the cargo ship at their expense and risk from Japan to Bangladesh, taking proper measures of protection and reinforcement.

In case the shipbuilder or the manufacturer disassembles some parts prior to transportation and/or finds any defect due to the transportation after arrival, the shipbuilder or the manufacturer shall carry out restoration works immediately after arrival of the rescue boats. The new rescue boats shall be handed-over from the shipbuilder and the manufacturer to the Bangladesh government after the confirmation operation by BCG under the attendance of the shipbuilder, the manufacturer and the consultant.

2-2-4-2 Implementation Conditions

In implementation of the Project, the following attention should be paid.

(1) Quality Control

The 20 m type rescue boats shall be designed and constructed in accordance with the rules of Ship Safety Act and its relevant regulations of the Japanese government shall and shall acquire a statement of

compliance by NK to the rules of JG. The 10 m type rescue boat shall be also designed and manufactured in accordance with the rules of JG and is subject to inspection by the Japan Craft Inspection Organization.

The consultant shall have close contact with the shipbuilder and the manufacturer to make sure the construction / manufacture schedule and inspection procedures, and shall visit the shipbuilder and the manufacturer to attend and/or supervise the tests of material, machinery and equipment, as necessary.

(2) Schedule Control

As mentioned above, the new rescue boats consist of four (4) 20 m type rescue boats of twin marine diesel engines and twin shaft propulsion system with the hybrid structure made of high tensile strength steel for hull and aluminum alloy for superstructure with propeller-type propulsion system arranged at the stern and twenty (20) 10 m type rescue boats with both single propeller type propulsion system and single outboard engine type propulsion system.

The rescue boats shall be constructed or manufactured according to the schedule as shown on the Table 2 “Implementation Schedule”. As there is machinery which needs long lead time before delivery due to the situation of the market, not only the construction schedule but the procurement schedule shall be thoroughly reviewed to make sure the schedule control.

Also, in order to minimize the number of customs clearance in Bangladesh, the procurement schedule of both 20 m type boats and 10 m type boats shall be monitored and adjusted so as to reduce the number of transportation by cargo ship.

2-2-4-3 Scope of works

When the Project is executed in Japan’s Grand Aid program, the scope of works to be shared by Bangladesh and Japan shall be as follows.

(1) Scope of Works shared by Japan

1) To carry out the consulting services for the detailed design of the new rescue boats, assistance of tendering work procedure, and supervision of the construction works of the rescue boats at the shipyard and the manufacturing yard.
2) To undertake construction of the rescue boats, procurement of material, machinery, equipment and spare parts, and required tests and trials in Japan.
3) To assist training of crew for operation technique of the new rescue boats and for handling the machinery and equipment.
4) To transport the rescue boats on board cargo ship from Japan to Bangladesh port (Chittagong Port) after completion.
5) To confirm finally the operability of the new rescue boats without problem after unloading from cargo ship at Bangladesh port (Chittagong Port) before delivery.

(2) Scope of Works shared by Bangladesh

1) To get approval of Development Project Proposal (DPP) by the Executive Committee of the National Economic Council (ECNEC).
2) To perform the customs clearance, tax and port charges exemption and registration of the new rescue boats.
3) To provide appropriate berthing / mooring space for the new rescue boats.
4) To pay the demurrage fee when occurs at Chittagong Port.
5) To carry out the domestic transportation of the new rescue boats from the unloading port to the designated berthing / mooring area.
6) To perform the necessary formalities and bear the necessary expenses in case the new rescue boats being inspected in Bangladesh after delivery.
7) To ensure all the expenses and implementation enough for the operation and maintenance of the new rescue boats.
8) To bear the following commissions to the Japanese bank for banking services based upon the Banking Arrangement (B/A)

2-2-4-4 Consultant Supervision

To assist the Implementation Agency, a Japanese consultant will execute series of consulting services from the detailed design until the delivery of the new rescue boats, including provision of tendering works, conclusion of the shipbuilding contract and manufacturing contract, review and approval of key drawings, and supervision and inspection of the construction works and manufacture works.

During the construction and the manufacture of the new rescue boats, the consultant, with their experts for construction and outfitting of hull part, outfitting of machinery and equipment, will carry out supervision, including attendance to tests and trials and give instruction, advice and recommendation as necessary in consideration of the schedule of construction / manufacture works. Furthermore, the guidance and advice on the method of operation of the new rescue boats will be given at the time of delivery.

In addition, one (1) year after the delivery, the consultant will carry out the defect liability inspection for the rescue boats.

2-2-4-5 Quality Control Plan

(1) Schedule Control

The consultant will carry out periodical supervising activity without delay, in accordance with the construction schedule arranged separately. Actual progress of the works and delivery of the machinery and equipment delivered from respective manufacturers shall be controlled in comparison with planned schedule and delivery time.

Should the delayed progress be expected, close communications with the shipbuilder and/or the manufacturer will be essential in order to take the necessary measures to meet the situation, such the case that some unforeseen accidents would happen.

(2) Quality Control

Inspections, not only at the shipbuilder but at each manufacturer workshop of machinery and equipment, are important to maintain the sufficient quality level, in order to meet the rules and regulations of the regulatory bodies. Therefore, the consultant will take the necessary action of inspection, depending on the case.

2-2-4-6 Procurement Plan

In accordance with the scheme of the Japan Grant Aid, the new rescue boats shall be procured from Japan or the recipient country (Bangladesh).

During the site survey, the team investigated the marine industrial cluster in Bangladesh and found that Khulna shipyards is capable of constructing steel type or aluminum type rescue boats of similar size to the 20 m type rescue boats, but they have no experience in constructing the hybrid type rescue boats combined with high-tensile steel and aluminum alloy on the deck part as the new rescue boats. In addition, as BCG emphasizes the quality and performance of the new rescue boats, the 20 m type rescue boats are planned to be procured from Japanese shipbuilder having the experience in constructing the similar boats.

Regarding the 10 m type rescue boats, manufacturer capable of producing twenty FRP boats in a short period could not be confirmed in the site survey, so the 10 m type rescue boats are planned to be procured from Japanese manufacturer, which have the track record of providing the rescue boats nearly 30 years ago and are manufacturing the same type of boat.

BCG is quite familiar with the operation and maintenance of inboard diesel engines and outboard gasoline engines through their experiences in operation of the existing boats.

Considering the new rescue boats will be constructed in Japan, it would be quite effective to use Japanese machinery and equipment, from the viewpoint of negotiation with manufacturers, timelines of delivery, on-site presence of the consultant during shipyard inspections, and the implementation of the practical training and education program for BCG crew in Japan.

Therefore, it is expected that the machinery and equipment of the new rescue boats are of Japanese make, unless there any problems with the procurement plan.

However, the marine diesel engines of the 20 m type rescue boats, taking into consideration the requirements of performance and dimensions of the boats and convenience of maintenance, will be most provably procured from overseas makers.

2-2-4-7 Operational Guidance Plan

BCG owns 23 boats of 10 m class rescue boat, but the 20 m type rescue boat is bigger than these and operation procedure is different. Therefore, the shipyard invites 12 persons in total for 4 boats for each scheduled principal crew (one captain, one steering operator for each one boat and one person in charge of maintenance (mechanic, electrician) for each two boats). For them, the handling procedures are guided at the shipyard and equipment manufacturer for about two weeks in order to master the operation of the boat and the on-board equipment and acquire maintenance management skills. The reason why each one person in charge of maintenance for each two boats is invited is that two boats are planned to be deployed on the same base.

On the other hand, with regard to the 10 m type rescue boat, BCG is operating a similar type / scale rescue boat, and is familiar with the handling of inboard type diesel engines and outboard engines. There is no need to invite them to Japan and provide technical guidance and it is possible to become proficient in rescue boat operation by carrying out confirmation operation by the BCG crew member in the presence of the manufacturer at the time of delivery.

2-2-4-8 Soft Component

The soft component is not included in the Project, since it is not requested by the Bangladesh side and since BCG has sufficient experience in the operation and maintenance of rescue boats.

2-2-4-9 Implementation Schedule

The detailed design works of the 20 m type rescue boats will be completed in about 3.5 months after the conclusion of the consulting agreement. The shipbuilding contract will be concluded after about 2 months from completion of the detailed design. About 18 months will be required for the construction, and further about 2 months will be necessary for transportation from Japan to Bangladesh and the delivery.

Also, 18 months will be required for manufacturing the 10 m type rescue boats after conclusion of the manufacture contract.

Namely, the entire period up to the delivery in Bangladesh after the conclusion of the consulting agreement will be about 25.5 month, and further 12 months will be taken for defect liability period, as shown on Table 2-2 “Implementation Schedule”.

The actual construction / manufacturing period will depend on the situation of work load of not only the shipbuilder and the manufacturer of the rescue boats, but manufacturers of the machinery and equipment at the time of conclusion of the contract, which may be different from this schedule. In addition, each type of the rescue boats may be constructed or manufactured by plural number of shipbuilders / manufacturers depending on their work load.

Table 2-2 Implementation Schedule

		Total Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Detailed Design	1	Final Verification of Spec. in Bangaldesh	■																									
	2	Review of Detailed Design	▭	▭																								
	3	Preparing Tender Documents and Approval		▭	▭	▭	■																					
	4	Announcement of Tender				△																						
	5	Delivery of Tender Documents				△																						
	6	Tender					△																					
	7	Evaluation and Discussion						■																				
	8	Contract with Contractor						▲																				

		Total Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Construction	1	Design Develop't of Drawings [20m class]						▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭										
	2	Purchasing Machinery & Equip't [#1 Boat]							▭	▭	▭	▭																
	3	CNC Nesting								▭	▭	▭																
	4	Keel Laying										△																
	5	Fabrication of Block										▭	▭	▭	▭													
	6	Construction on Berth											▭	▭	▭	▭												
	7	Engine, Aux. Machinery & Equip't Fitting													▭	▭	▭											
	8	Launching														△												
	9	Fitting Work at Pier														▭	▭	▭										
	10	Sea Trial & Completion at Shipyard																▭	▭									
	11	Keel Laying & Construction [#2 Boat]													▭	▭	▭	▭	▭	▭								
	12	Keel Laying & Construction [#3 Boat]															▭	▭	▭	▭	▭	▭	▭					
	13	Keel Laying & Construction [#4 Boat]																	▭	▭	▭	▭	▭	▭	▭			
	14	Sea Trial & Completion at Shipyard [#2, #3, #4 Boat]																		▭	▭		▭	▭		▭	▭	
	15	Training of BCG Operat'n & Mainte. Crew																▭	▭									
	16	Design Develop't of Drawings [10m class]						▭	▭	▭																		
	17	Fabrication [#1 - #20 Boat]								▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	▭	
	18	Transportation																		▭	▭					▭	▭	
	19	Final Acceptance																										■

Note : ■ : at Site ▭ : in Japan ▭ : Transportation

2-3 Obligations of Recipient Country

The followings are the items as “the major undertakings to be taken by the recipient country” which were confirmed in writing between both countries.

1) To get approval of Development Project Proposal (DPP) by the Executive Committee of the National Economic Council (ECNEC).
2) To perform the customs clearance, tax and port charges exemption and registration of the new rescue boats.
3) To provide appropriate berthing / mooring space for the new rescue boats.
4) To pay the demurrage fee when occurs at Chittagong Port.
5) To carry out the domestic transportation of the new rescue boats from the unloading port to the designated berthing / mooring area.
6) To perform the necessary formalities and bear the necessary expenses in case the new rescue boats being inspected in Bangladesh after delivery.
7) To ensure all the expenses and implementation enough for the operation and maintenance of the new rescue boats.
8) To bear the following commissions to the Japanese bank for banking services based upon the Banking Arrangement (B/A)
    - Advising commission of Authorization to Pay (A/P)
    - Payment commission

However, in case the other expenses than the above are actually needed during the procedure of the recipient country, those shall be borne by them.

According to the site survey, the customs clearance procedures involving tax exemption are carried out in Bangladesh as follows.

① To Submit the bill of lading (B/L) from the shipbuilder to the Bangladesh national tax authority.
② Bangladesh Customs Authority to calculate price and tax.
③ To be notified to BCG from Bangladesh Customs Authority.
④ To report from BCG to MOHA.
⑤ To submit exemption application from MOHA to the National Board of Revenue (NBR).
⑥ Tax exemption to be decided by NBR. In case it is impossible, BCG to prepare tax of 33% of the total amount.

2-4 Project Operation Plan

2-4-1 Operation

(1) Daily Operation and Maintenance Work

The operations are carried out by each Zone Headquarters of BCG, and the current boat crew is 54 persons in the Dhaka District Headquarters, 177 persons in the West Zone Headquarters, and 91 persons in South Zone Headquarters, where the new rescue boats will be deployed. The 10 m type rescue boats are planned to replace with twenty-three (23) small rescue boats currently in operation. Therefore, it is considered that there is no particular obstacle to operate the new rescue boats.

Regarding maintenance, daily maintenance such as oil inspection, filter change, various inspections of power supply system, cleaning, etc. are carried out by staffs in each Zone Headquarters. 8 mechanical engineers, 6 electrical engineers and 5 procurement staffs belong to the West Zone Headquarters, to which two (2) 20 m type rescue boats and eight (8) 10 m type rescue boats are planned to be deployed. Also, 2 workers in charge are carrying out maintenance work at each cruising using workshops as necessary. Maintenance of the new rescue boats will be carried out under such existing organization.

(2) Periodical Maintenance

Regular maintenance such as engine disassembly maintenance, fuel injection valve adjustment, etc. of BCG vessels and boats are carried out according to the operation time (200, 400 hours, etc.) on the slipway and in the workshop at the base of each Zone Headquarters. About 70% maintenance works are carried out voluntarily by the BCG staffs, but the slightly complicated maintenance of inboard engines is outsourced to the outside company.

In order to make preventive maintenance, BCG is required to establish a maintenance plan in accordance with guidelines provided by the shipbuilder which indicate the regular maintenance program on whole of the boat including daily maintenance manuals of the machinery and equipment such as replacement of lubricant oil, etc.

(3) Periodical Inspection and Repair

The inspection of the bottom, cleaning, painting and tank cleaning of the 20 m type rescue boats will be carried out every two to three years in dry docking at the shipyard similarly to other BCG patrol vessels. Should the unlikely accident requiring repair occurs, depending on its degree, the dry docking work will be carried out at the shipyard, in the worst case.

On the other hand, the periodic inspection of the 10 m type rescue boats can be carried out on the slipway owned by each Zone Headquarters.

2-4-2 Maintenance and Repair Facilities

(1) Mooring Facilities

At the West Zone Mongla Base, where two (2) 20 m type rescue boats will be deployed, new mooring facilities are being newly established at the BCG budget in addition to existing mooring facilities. Jetty has already been set up and standard pontoons (length 33 m × width 7.5 m) to be built in Bangladesh are being arranged, and after completion, they are set up in front of the jetty to moor the 20 m type rescue boats. The supply system of fuel, fresh water, electricity etc. necessary for operation is in place and it is enough to just arrange piping and wiring via the jetty.

The Payra Port in the South Zone to which other two (2) boats will be deployed is located in the Rabnabad Channel close to Bengal Bay in the southern central part of Bangladesh, and is the third international port next to Chittagong, Mongla. At the Rabnabad Station in the Payra Port, one pontoon is currently installed and fuel oil etc. necessary for operation of the boats are supplied, and mooring facilities are in place. There is also a plan to add an existing pontoon as necessary, and it has been confirmed that there is no problem in securing a mooring place. The land of two acres (8,000 m^2) has been already acquired to establish new onshore facilities such as management office and to expand mooring facilities.

According to the survey of the station where the rescue boat of the same size as the 10 m type rescue boat has already been deployed, the mooring facility using the steel pontoon is properly maintained. It is judged that there is no necessity of renovation at this time because the patrol boats and the rescue boats are in operation.

These steel pontoons are built in Bangladesh according to the standard specification of BCG and will be updated with the same construction procedure when the pontoon becomes obsolete in the future. There is no request for anything to Japan, and it is judged that there is no problem with mooring place.

(2) Facilities for Maintenance of BCG

Maintenance work facilities are established in each Zone Headquarters of BCG. At the Mongla Base of the West Zone Headquarters, a workshop is set up in a corner of the first floor of the headquarters building equipped with various machine tools to carry out disassembly and maintenance of Yamaha, Cummins and other outboard engines by special staffs. Also, materials and parts are neatly stored in the storage section. Also, a water tank for checking the operation of the outboard engine is located outside the workshop. It is thought that skill level of the staffs is high because the outboard engine can be maintained only by BCG staffs up to 95%.

Regarding inboard diesel engines, the maintenance of complicated parts is outsourced, but about 70% works can be carried out by BCG staffs.

A slipway for 10 m type rescue boat is under construction at Mongla base, and after completion it is possible to put the boat on the slipway utilizing the difference of tide level to inspect and maintain the bottom of the hull. Similar facilities will be provided at other bases.

In addition, boats of about 10 m in length are mounted on transport carriages on land and transported to near workshops for maintenance, and the new 10 m type rescue boats can be serviced by such a method.

In Bangladesh, most of materials and equipment parts are imported, but mainly procured from agents based in Singapore. Others are supplied from agents in India, Indonesia, and others. Imported rubber parts, etc. which are deteriorated due to heat, are stored in a well air-conditioned warehouse determined for each product name and are well managed.

(3) Outside Facilities for Maintenance and Repair

The shipbuilders entrusting maintenance and repair of vessels and boats owned by BCG are as follows.

① Khulna Shipyard Ltd. (KSY)
② Dockyard and Engineering Works, Ltd. (DEW)
③ Chittagong Dry Dock Ltd. (CDDL)

Normally the maintenance works are entrusted to KSY or DEW.

Among them, Khulna Shipyard Ltd. is an independent profitable public corporation, but executives are employees seconded from the Navy and is managed under the Navy. KSY is building and repairing not only naval ships but also BCG vessels / boats and civilian ships. It has premises of about 3,000 m^2 and 1,400 employees, and annual steel material handling volume is 2,000 tons. There are twelve slipways around one side launching system and twelve ships with length up to 80 m can be constructed at the same time, which shows high building capacity. IPV (Inshore Patrol Vessel) for BCG is also under construction at the site survey in June 2017. It has a plan to construct a dry dock with length of 100 m and width of 40 m in the near future for about 5 years. Even now, all aluminum ships for waterway survey in Bangladesh designed by Australian company are under construction. They can also treat high tensile strength steels up to grade 36 (yield stress of steel material with 355 N/mm^2). The dry docking of the BCG vessels is also carried out here, and it seems that the maintenance works of the new hybrid boats with high tensile strength steel and aluminum alloy can be carried out, because it has sufficient capability as maintenance and repair facility of the 20 m type rescue boats.

2-5 Project Cost Estimation

2-5-1 Initial Cost Estimation

(1) Costs borne by Recipient Country

Table 2-3 shows the estimated particular costs undertaken by the recipient country.

Table 2-3 Estimated Costs/Expenses borne by the Recipient Country

Items	Content	Amount (million Taka)
Commissions for banking services	Commissions to the Japanese bank for banking services based upon the Banking Arrangement (B/A), including Advising commission of Authorization to Pay (A/P). and Payment commission	1.97
Costs/expenses for domestic transportation	Fuel and Lube Oil to be consumed for the domestic transportation of the new rescue boats from the unloading port to the designated birthing / mooring area and transportation of the portable marine pollution control equipment.	0.96
Custom Duty Value Added Tax	To handle duty (Tax) exemption procedures (payment of Custom Duty Value Added Tax : CDVAT), provide requisite legal and/or administrative documentations for customs clearance to customs broker/forwarder to be employed by the Contractor and make payment of all demurrage required at the port of disembarkation for the materials and equipment imported for the Project.	647.4 (CDVAT: 33% of the equipment & transport cost) + (Demurrage)
VAT	VAT imposed in Government of Bangladesh on the products and/or services procured by Japanese company for the implementation of the Project.	294.3 (VAT: 15% of the contract(s) with Contractor(s) and Supplier(s)
Total		

It is estimated that particular budgets relevant to the above items, totally amounting to about 2.98 million Taka, and CDVAT and VAT will be allocated by the recipient country.

However, in case the other costs/expenses than the above items are actually needed during the procedure of the recipient country, those shall be borne by them.

2-5-2 Operation and Maintenance Cost

The newly required costs arising from the operation of the new rescue boats are as follows for the 20 m type rescue boats. For the 10 m type rescue boats, new expenses will not be incurred as they will replace the existing same type boats.

(1) Operation Procedure of 20 m type Rescue Boat

The newly operated rescue boats will make patrols in the season of monsoon and cyclone, because the necessity of search and rescue activities will be high. But regular patrols will not be planned in other seasons. And, the ratio between the operational days and the non-operation days will be 70% and 30%.

If the patrol system of the 20 m type rescue boats is inferred from the Japanese same type boats, it is appropriate to depart in the morning and return in the evening. Since the operation meeting and equipment inspections will be conducted (for about 1 hour) before departure in the morning and the work reporting, fuel loading and equipment inspections will be conducted (for about one hour) after returning in the evening, the daily patrol time is assumed to be about seven hours from around 9 AM until around 4 PM.

Based on these assumptions, the operation of the 20 m type rescue boat can be assumed as follows.

1) Monsoon Period from June to November (including post monsoon season)

The average days of operation per month are assumed to be 21 days, i.e. 126 days in total (berthing at the base : 9 days per month, 54 days in total). The daily patrol time is 7 hours in each boat. During the patrol, the boat will stop at each station and outpost, visit each port, etc. Therefore, it is assumed that the rescue boat will cruise at the cruising speed of about 15 knots for around 4 hours.

On the other hand, when natural disaster such as flood occurs, each boat will depart from the base, and will engage in the operation with the maximum speed of 24 knots to rescue and evacuate the residents. It is assumed that these incidents occur about 2 days each month during the monsoon season, and each rescue boat engages in rescue and relief operations for 7 hours a day.

2) Period other than Monsoon from December to May

During this period, each boat will not engage in regular patrols, and conduct search and rescue training around the base or stand by at the base.

It is assumed that each boat cruises for about an hour for 21 days every month, based on the assumption to conduct the training for about one hour on the engaged day.

(2) Annual Fuel Oil / Lubricant Cost

Based on the above, the annual fuel cost and lubricant cost of the 20 m type rescue boat are estimated as shown in Table 2-4 and Table 2-5.

Table 2-4 Operation Indicators and Rescue Works

		Monsoon Season	Period other than Monsoon	Engaged Period in Rescue Operation
Number of Cruising Day		126 days	126 days	12 days
Cruising Time (/day)		4 hours	1 hour	7 hours
Cruising Speed		15 knots	15 knots	24 knots
Max. Output of Main Engine		1,440 kW		
Load (Load Factor)		460 kW (32%)	460 kW (32%)	1,050 kW (73%)
Fuel Oil Consumption Rate		214g (0.26L) / kW / hour		
Annual F. O. Consumption Volume		60.3kL	15.1kL	22.9kL
	Total	**98.3k**L		
Fuel Oil Price		66 Taka / L		

Table 2-5 Annual Fuel and Lubricant Cost (for each 20m type Boat)

Fuel Oil / Lubricant	Consumption（kL）	Cost（thousand Taka）
Fuel Oil	98.3	6,488
Lubricant (5% of fuel cost)	-	324
Total		**6,812**

(3) Expected Annual Maintenance Expenses

Based on the survey data on the annual maintenance cost of Riverine Patrol Boat (length 22 m), which size is close to the 20 m type rescue boat among the existing BCG boats, annual maintenance cost including the above fuel oil cost and lubricant cost is assumed to be as shown in Table 2-6.

Table 2-6 Expected Annual Maintenance Expenses

Item	Cost (thousand Taka)	Remarks
Fuel Oil Cost	6,812	
Repairing Cost for Machinery	1,500	
Repairing Cost for Hull	4,000	including Dry Docking Cost
Total	approx. 12,500	

According to listening from BCG, it has been confirmed that the Ministry of Home Affairs of Bangladesh will budget the sufficient amount for the necessary fuel oil / lubricant cost and maintenance expenses as described above for the new rescue boats.

(4) Current Budget

The expenses for the operation and management of the BCG are covered by the budget allocation from the Ministry of Home Affairs. The transition of the budget for the past three years is shown in Table 2-7.

Table 2-7 Budget related to Operation of BCG (unit : million Taka)

Item	2014 - 2015	2015 - 2016	2016 - 2017
for Procurement of Ships	1,994.0	1,080.0	4,980.0
for Fuel Oil / Lubricant	160.0	200.0	350.0
for Ship's Maintenance	123.0	97.0	180.0
for Procurement and Maintenance of Communication Facilities	3.0	4.5	5.0
for Procurement and Maintenance of other Equipment	100.0	198.5	340.0
for Education and Training of Personnel	3.5	4.5	15.0
Total	**2,383.5**	**1,584.5**	**5,870.0**

(source : BCG)

In order to examine the influence on the BCG budget due to the increase in the number of boats, the displacement, for which the value of each vessel / boat is clear, is used as a common index related to each vessel size. Total displacement of 111 vessels currently owned by BCG is about 6,820 tons. Meanwhile, Table 2-7 shows that the operation budget excluding ship procurement costs and education and training expenses is 875 million Taka in fiscal year 2016 - 2017. As the displacement of four 20 m type rescue

boats is about 160 tons, which is only 2.3% increase in the ratio of displacement, it is thought that the annual maintenance cost shown in Table 3-7 needs to be greatly increased from the present situation.

The operation-related budget of BCG from 2014 to 2017 has fluctuated in the range of 1,500 to 6,000 million Taka. Although the ship procurement budget may change greatly depending on the fiscal year, the budget for direct operation such as fuel oil and lubricant cost, maintenance expenses, etc. has increased enough for BCG to carry out the prescribed activities.

Chapter 3 Project Evaluation

Chapter 3 Project Evaluation

3-1 Preconditions

- The legal position and work contents of BCG do not change.
- BCG properly operates and maintains new rescue boat.

3-2 Necessary Inputs by Recipient Country

- Complement for the new rescue boats
  - Twenty-four (24) complements for four (4) 20 m type rescue boats to be secured.
  - Sixty (60) complements for twenty (20) 10 m type rescue boats to be secured.

- Facilities
  - The mooring facility for the new rescue boats to be secured.
  - The facility for repair and maintenance of the new rescue boats to be secured.

- Operation and maintenance cost
  - The annual operation and maintenance cost of about 50 million Taka to be secured for the four (4) new 20 m type rescue boats (excluding personnel expenses)

3-3 Important Assumptions

- The political situation and security conditions in Bangladesh and neighbor countries not to become worse
- Unexpected natural disaster not to occur.

3-4 Project Evaluation

3-4-1 Relevance

Implementation of this project with Japan grant aid is considered relevant from the view points of the content, degree of the effects, capability for the operation and maintenance of the new rescue boats as follows.

(1) Implementation of the project is aimed at strengthening the BCG's capabilities on SAR operation to cope with maritime/river accidents and natural disasters in the coastal area and inland waters of Bangladesh by providing the rescue boats with BCG, thereby contribute to the prompt and

efficient rescue and relief activities when maritime/river accidents or natural disasters occur in such areas mainly in the western part and the southern part of Bangladesh.

(2) BCG, which is the executing agency of this project, already owns and operates rescue boats and patrol boats, and can operate and maintain the new rescue boats without problems.

(3) There is no problem in terms of environmental destruction and social and environmental considerations due to the rescue and relief activities on maritime/river accidents and natural disasters by the new rescue boats, and the evaluation in the JICA Guidelines for Environmental and Social Considerations is Category C.

(4) The project can be carried out without any difficulty, the planned new rescue boats at are built and manufactured in Japanese shipyard and manufacturer through Japan's grant aid cooperation system.

Since approving the independence of the Bangladesh in 1972, prior to Western countries, Japan consistently maintains friendly relations and actively participates in efforts toward economic and social development of Bangladesh as a major donor. In ODA (Official Development Assistance) "Country Assistance Policy to the People's Republic of Bangladesh" (June 2012), the basic policy of aid is to support efforts to overcome vulnerability to natural disasters such as cyclones and floods, and it is a priority area to support disaster prevention and climate change countermeasures and overcome social vulnerability. This project conforms to this policy.

Furthermore, it contributes to cooperation for promoting sustainable development based on the ocean, and support in climate change and disaster prevention field, expressed in the "comprehensive partnership" established at the Japan - Bangladesh Summit Meeting held in May 2014. In addition, it contributes to realization of "Investing in disaster risk reduction for resilience" that has been stated as one of priorities for action in "Sendai Framework for Disaster Risk Reduction 2015-2030" adopted at the 3rd UN World Conference on Disaster Risk Reduction, held in Sendai in March 2015.

3-4-2 Effectiveness

(1) Quantitative Effectiveness

Index	Base Line (2017)	Target (2020) (3 years after completion of the Project)
1) Total Accommodatable Number of Rescued Persons	230	520

2) Required Time to arrive at Site (*1)	1 hour	40 minutes (10 m type Boat) 24 minutes (20 m type Boat)
3) Seaworthiness (Operable Conditions) (*2)	Less than Beaufort Scale 2	Less than Beaufort Scale 3 (10 m type Boat) Less than Beaufort Scale 4 (20 m type Boat)
4) Oily Water Removal Capability	0	about 9 m^3/hour/unit

(*1) Assumed distance to Site : 10 nautical miles

(*2) Beaufort Scale 2 : Wave height 0.1 m - 0.5 m

Beaufort Scale 3 : Wave height 0.5 m - 1.25 m

Beaufort Scale 4 : Wave height 1.25 m - 2.5 m

(2) Qualitative Effectiveness

1) To contribute to the prevention of the rapid spreading of oil flowing into the sea or water area, and the protection of the natural environment and resources in the coastal and inland waters area by collecting.

2) To contribute to the improvement of safety of transportation in the coastal and inland waters area.

As mentioned above, it is considered that the implementation of this project has high relevance and effectiveness to be expected.

［Appendices］

Appendix 1 : Member List of the Study Team

Appendix 1　Member List of the Study Team

(1) Preparatory Survey Team

Leader	ISHIMA Toshitaka	Senior Advisor Infrastructure and Peacebuilding Department Japan International Cooperation Agency
Cooperation Planning	MURATA Kenji	Deputy Director Team 2, Transportation and ICT Group Infrastructure and Peacebuilding Department Japan International Cooperation Agency
Chief Consultant / Planning of Shipbuilding / Maintenance Management	ISOZAKI Yoshio	Shipbuilding Research Centre of Japan
Operation Planning / Machinery Design	NISHIGUCHI Masafumi	Shipbuilding Research Centre of Japan
Procurement Planning / Cost Estimation	GOTO Akitoshi	Shipbuilding Research Centre of Japan

(2) Draft Report Explanation Team

Leader	ISHIMA Toshitaka	Senior Advisor Infrastructure and Peacebuilding Department Japan International Cooperation Agency
Cooperation Planning	MANIWA Taisuke	Team 2, Transportation and ICT Group Infrastructure and Peacebuilding Department Japan International Cooperation Agency
Chief Consultant / Planning of Shipbuilding / Maintenance Management	ISOZAKI Yoshio	Shipbuilding Research Centre of Japan
Operation Planning / Machinery Design	NISHIGUCHI Masafumi	Shipbuilding Research Centre of Japan
Procurement Planning / Cost Estimation	GOTO Akitoshi	Shipbuilding Research Centre of Japan

Appendix 2 : Survey Schedule

Appendix 2　Survey Schedule

(1) Site Survey (June 2017)

Day	Date		Survey Activities
1	6/3	Sat.	JICA and Consultant Team Departed Japan, Arrived at Dhaka.
2	6/4	Sun.	Pre-meeting at JICA Bangladesh Office.
			Visit BCG HQs to explain and discuss the outline of the site survey.
3	6/5	Mon.	Visit BCG HQs to make courtesy call on Director General (DG) of BCG. Have a meeting with Director Engineering（DE）and other officers of BCG to explain the Inception Report and itinerary of the survey.
4	6/6	Tue.	Visit Economic Relations Division, Ministry of Finance to explain the project.
			Visit BCG HQs to discuss the project. Survey the Communication Room shared by BCG HQs and Dhaka Zonal HQs.
			Visit Ministry of Home Affair (MOHA) to discuss Minute of Meeting (MOM).
5	6/7	Wed.	Visit Narayangon Station and Chandpur Station in Dhaka Zone to survey Coastal Crisis Management Centre (CCMC), patrol boats, mooring quay and other facilities.
6	6/8	Thu.	Visit JICA Office to explain the survey summary.
			Visit Embassy of Japan to explain the survey summary.
			JICA Team departed Dhaka.
			Visit BCG HQs to discuss the Memorandum of Technical Discussion (MOTD) and other issues.
7	6/9	Fri.	Data Collection
8	6/10	Sat.	Move to Khulna
9	6/11	Sun.	Visit Khulna Shipyard to inspect the ship building and repair facility.
			Visit BCG West Zone HQs to survey the operation/communication room, the boat repair pool, mooring quay and other facilities.
			Visit Harbaria Station in West Zone to survey mooring and other facilities.
10	6/12	Mon.	Visit Nalian Station in West Zone to survey the mooring and other facilities and CCMC.
			Visit Agrajatra Base in South Zone to survey the training facility.
11	6/13	Tue.	Visit Payra Port and interview a staff of Port Authority on the status of the Port and future plans.
			Visit Rabnabad Station in South Zone to survey mooring and other facilities
			Visit Nijampur Station in South Zone to survey mooring and other facilities and CCMC
12	6/14	Wed.	Visit Tajumuddin Outpost in South Zone to survey CCMC and a fishing boat hired by BCG.

			Visit BCG South Zone HQs to survey operation/communication room and other facilities.
13	6/15	Thu.	Move back to Dhaka.
14	6/16	Fri.	Organize the collected information and prepare MOTD and the survey report.
15	6/17	Sat.	-Ditto-
16	6/18	Sun.	Visit JICA Office to report the survey result.
			Visit BCG HQs. to discuss the draft of MOTD and the questionnaires.
17	6/19	Mon.	Visit Bangladesh Meteorological Department to collect the information on cyclones and other weather data in Bangladesh.
			Visit BCG HQs to discuss MOTD. After discussion, sign MOTD between BCG and Consultant.
18	6/20	Tue.	Consultant Team departed Dhaka.
19	6/21	Wed.	Consultant Team arrived at Japan.

(2) Draft Report Explanation (November 2017)

Day	Date		Survey Activities
1	11/25	Sat.	JICA and Consultant Team Departed Japan, Arrived at Dhaka.
2	11/26	Sun.	Pre-meeting at JICA Bangladesh Office.
			Visit BCG HQs to make courtesy call on DG of BCG. After courtesy call, having a meeting with DE and other officers to explain the draft report and discuss the project.
3	11/27	Mon.	Move to Chittagong. Visit Chittagong Port to survey port facilities. Visit BCG Chittagong Base to survey mooring quay and boar repair facilities. Move back to Dhaka
4	11/28	Tue.	Visit BCG HQs to discuss the project, MOT and MOTD
			Visit JICA Office to discuss the schedule.
5	11/29	Wed.	Visit MOHA to explain the specification of rescue boats and discuss the MOT. Discuss MOTD with BCG officers.
6	11/30	Thu.	Visit BCG HQs to discuss MOTD. After discussion, sign MOTD between BCG and Consultant.
			JICA and Consultant Team departed Dhaka.
7	12/1	Fri.	JICA and Consultant Team arrived at Japan.

Appendix 3 : List of Parties Concerned in the Recipient Country

Appendix 3　List of Parties Concerned in the Recipient Country

(1) Site Survey

1) Ministry of Home Affairs

Dr. Kamal Uddin Ahmed	Secretary
Mr. Sheikh Sakil Uddin Ahmad	Public Security Division
Mr. Debashish Kumar DAS	Assistant Chief, PSD

2) Bangladesh Coast Guard

① BCG HQ

Rear Admiral Aurangzeb Chowdhury	Director General, BCG
Captain M Maksud Alam	Director Engineering
Captain M Mamunur Rashid	Director Plans & Acquisition
Commander Jamal Chowdhury	Deputy Director (operation)
Lt. Commander Ahmad Redwan Hossain	Assistant Director (planning)
Mr. Anisuzzaman Chowdhur	Deputy Program Manager

② BCG Dhaka Zone

Commander A T M Rezaul Hasan	Zonal Commander Dhaka Zone
Lt. commander Taskeen Reza	Staff Officer, Operation, Dhaka Zone HQs
Lt. Commander Jamal	Chandpur Station Commander

③ BCG West Zone

Captain Mohammed Ali Chowdhury	Zonal Commander West Zone
Commander M Mostafa Kamal Rashid	Chief Staff of West Zone HQs, Commanding Officer Coast Guard Base Mongla
Lt. Commander M A Alim	Executive Officer, Coast Guard Base Mongla
Lt. Commander S M Fajlul Karim	Commanding officer Coast Guard Ship TAMJEED
Lt. Commander Kazi Md idwanuzzaman	Staff Officer (Electrical)
Lt. Commander M Fariduzzaman Khan	Staff Officer (Operations)
Lt. Commander Mostafa Tarik Haider	Staff Officer (Engineer)
Lieutenant Tahsin Amin	Suuply Officer
Sub-lt. Proshanta Kumar Ghatak Roy	Medical Officer
Sub-lieutenant M H I Siddiqe	Executive Officer Coast Guard Ship TAMJEED
Sub-lieutenant Atahar Ali	Maintenance Officer
Mr. Masum Reza	Law Officer
Sub-lieutenant M Nazir Ahmad	OIC, Coast Guard Ship PABNA
Master Chief Petty Officer Hamid	Contingency Hanbaria Station Commander
Petty Officer Mabbubu	Contingency Nalian Station Commander

④ BCG South Zone

Captain Mosayed Hossain	Zonal Commander South Zone
Commander Enamul Islam	Chief Staff
Lieutenant Hassan	Rabnabad and Nijampur Station Commander
Petty Officer Erfan	Contingency Commander Tajumuddin Outpost

⑤ BCG Agrajator Base

Commander S Ehsan Mahiuddin BN	Executive Officer and Training Commander
Lieutenant Najiur	Principal Lecturer

3) Economic Relations Division, Ministry of Finance

Mr. Shahidul Islam	Additional Secretary

4) Department of Disaster Managemanst, Ministry of Disaster Management and Relief

Mr. Naoki Matsumura	Country Programme Coordinator (Disaster Management)

5) Bangladesh Meteorological Department

Mr. Shamsuddin Ahmed	Director
Mr. Md. Momenul Islam	Meteorologist
Mr. Ahmed Arif Rashid	Senior Mechanical Engineer Project Manager Improvement of Meteorological Radar System in Dhaka & Rangpur

6) Khulna Shipyard, Ltd.

Commodore K Kamrul Kasson	Managing Director
Commander M Farhad Hossen	Deputy General Manager (Shipbuilding)

7) Payra Port Authority

Lieutenant K M Jahangir Alam	General Manager

(2) Draft Report Explanation (November 2017)

1) Ministry of Home Affairs

Mr. Md. Moshiur Rahman	Additional Secretary
Mr. Sheikh Sakil Uddin Ahmad	Public Security Division
Mr. Debashish Kumar DAS	Assistant Chief, PSD

2) Bangladesh Coast Guard

① BCG HQ

Rear Admiral Aurangzeb Chowdhury	Director General, BCG
Captain M Maksud Alam	Director Engineering
Lt. Commander M Shahid Hossain	Assistant Director (Works) Engineering Directorate
Lt. Commander Ruddraw MD Nabt	Assistant Director Engineering

② BCG East Zone

Captain Waseem Mansood	Chief Staff Officer
Commander SM Moyeenuddin	Commanding Officer CG Base Chittagong
Lt. Commander Mahamud	Lt. Commander Mahamud

Appendix 4 : Minutes of Meeting (MoM)

Appendix 4 (1) Minutes of Meeting at Preparatory Survey
Appendix 4 (2) Minutes of Technical Discussions at Preparatory Survey
Appendix 4 (3) Minutes of Meeting at Draft Report Explanation
Appendix 4 (4) Minutes of Technical Discussions at Draft Report Explanation

Appendix 4 (1)

MINUTES OF MEETING
ON
THE PREPARATORY SURVEY
FOR
THE PROJECT FOR IMPROVEMENT OF RESCUE CAPACITIES AT THE COASTAL AND INLAND WATERS
IN
THE PEOPLE'S REPUBLIC OF BANGLADESH

In response to the request from the Government of the People's Republic of Bangladesh, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") of the Project for Improvement of Rescue Capacities at the Coastal and Inland Waters (hereinafter referred to as "the Project"), headed by Toshitaka ISHIMA, Senior Advisor for Maritime Safety and Security of JICA, from June 3rd to 20, 2017. The Team held a series of discussions with the officials of the Government of the People's Republic of Bangladesh and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Dhaka, 07 November, 2017

Hitoshi ARA
Senior Representative
Japan International Cooperation Agency
Bangladesh Office

Shahidul Islam
Additional Secretary
Economic Relations Division
Ministry of Finance

Captain M. Mamunur Rashid
(TAS, afwc, psc, BN)
Director (Plan and Acquisition)
Bangladesh Coast Guard

Md. Moshur Rahman
Additional Secretary (Development)
Ministry of Home Affairs

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen Bangladesh Coast Guard's capabilities on Search and Rescue operation, to cope with maritime/river accidents and natural disasters through improvement of vessels and equipment of Bangladesh Coast Guard, thereby contributing to reduction damages by maritime/river accidents and natural disasters in coastal and inland waters of Bangladesh.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Project for Improvement of Rescue Capacities at the Coastal and Inland Waters".

3. Project Site

Both sides confirmed that the initial sites of the Project is Chandpur Inland Port, Mongla Port, and Payra Port, and Chittagong Port, of which location map is shown in Annex 1.

4. Responsible Authorities for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

4-1. Bangladesh Coast Guard (BCG) will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization chart of BCG is shown in Annex 2.

4-2. The line ministry of the Executing Agency is the Ministry of Home Affair(MOHA). The MOHA shall be responsible for supervising the Executing Agency on behalf of the Government of People's Republic of Bangladesh.

5. Items requested by the Government of Bangladesh

5-1. As a result of discussions between both sides, the items shown in the following table were finally requested by the Government of People's Republic of Bangladesh.

Scope of the Project
1. 4 Coastal Rescue Boats (Approx. 20 meters length) 2-High Speed marine diesel engine, 2 Propellers, Radar for Coastal Surveillance and Monitoring Maximum speed: 25 knot (full load) Complement: 6 Crews
2. 20 Rescue Boats (Approx. 10 meter length) 2-Outboard engines (small and diesel engine is preferred).

	Detachable Canopy Maximum speed: 15 knot (full load) Complement: 3 Crews
3.	4 set of Portable Marine Pollution Control Equipment

5-2. The Bangladesh side explained the Team about the initial berthing ports of each boats under the Project are as shown below;

2 Coastal Rescue Boats: Mongla port in West Zone
2 Coastal Rescue Boats: Payra port in South Zone
4 Rescue Boats: Dhaka Zone
8 Rescue Boats: West Zone
8 Rescue Boats: South Zone
Portable Marine Pollution Control Equipment: Dhaka, Bhola, Chittagong, Mongla

The Bangladesh side agreed to consolidate enough and proper berthing facilities for all vessels provided by the Project before signing the Grant Agreement (G/A), and confirmed that all anchorage facilities for the vessels are under full BCG's control and operation.

5-3. JICA will assess the feasibility of the above requested items through the survey and will report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Bangladesh side agreed that the procedures and basic principles of Japanese Grant as described in Annex 3 shall be applied to the Project.

6-2. The Bangladesh side agreed to take the necessary measures, as described in Annex 4, for smooth implementation of the Project. The contents of the Annex 4 will be elaborated and refined during the Preparatory Survey and agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report. Annex 4 will eventually be used as an attachment to the Grant Agreement (G/A).

6-3. As for the monitoring of the implementation of the Project, JICA requires the Bangladesh side to submit the Project Monitoring Report, the form of which is attached as Annex 5.

7. Schedule of the Survey

7-1. The Team will proceed with further survey in Bangladesh until June 20, 2017.

7-2. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Bangladesh in order to explain its contents around late November 2017.

7-3. If the contents of the draft Preparatory Survey Report are accepted and the undertakings for the Project are fully agreed by the Bangladesh side, JICA will finalize the Preparatory Survey Report and send it to the Bangladesh side around middle of April 2018.

7-4. The above schedule is tentative and subject to change due to the result of this Preparatory Survey and examination procedures in the Government of Japan.

8. Approval of Development Project Proposal (DPP) by Executive Committee of National Economic Council (ECNEC)

The Bangladesh side agreed to obtain ECNEC approval for DPP for the Project no later than signing of Exchange of Note (E/N).

9. Other Relevant Issues

9-1 The Bangladesh side shall, at its own expense, provide the Team with the following items in cooperation with other organizations concerned:

(1) Data and information related to the Preparatory Survey;
(2) Counterpart personnel;
(3) Responding to the Questionnaires sent by the Team by 13th June 2017.
(4) Accompanying of BCG's staff to the Team's field survey;
(5) Credentials or identification cards;
(6) Permits for entry, photography and other necessary for the Team members to conduct field surveys;
(7) Support in obtaining other privileges and benefits, if necessary;
(8) Security-related information as well as measures to ensure the safety of the Team; and
(9) Information as well as support in obtaining medical service.

9-2 The Bangladesh side explained to the Team that BCG is an independent and civilian institution under the direct command of Ministry of Home Affairs, and absolutely cut from the chain of command of military forces.

9-3 The Bangladesh side assured that vessels and equipment to be provided by the Project shall be used for civilian purposes only such as search and rescue operations, maritime pollution preventing activities etc. The Team would examine the specification of vessels and equipment under the Project based on civilian use purpose.

9-4 The Bangladesh side understood the principle of the Japan's Development Cooperation Charter (Annex 6), which stresses that Japan's ODA must not be utilized for military purpose or promoting international conflicts, and agreed to following conditions regarding the vessels and equipment to be procured in the Project ;

Vessels and equipment under the Project;

i) shall never be used for any military purposes including logistic support under any circumstances;

ii) shall never be transferred to any third party without prior consultation with the Japanese Government;

iii) shall need prior notification to the Japanese Government for major alteration such as permanent installation of machine guns; and

iv) shall be monitored by the Embassy of Japan in Bangladesh and JICA Bangladesh Office in accordance with procedures designated by the Government of Japan.

The Bangladesh side also agreed to report the status of utilization of the vessels and equipment under the Project to the Embassy of Japan in Bangladesh and JICA Bangladesh Office upon requests at any time.

9-5 Both sides confirmed that Bangladesh side retains a right to condemn vessels and equipment under the Project after the expiration of reasonable expected life time of each vessel and equipment with a prior consultation with JICA.

9-6 The Bangladesh side agreed that custom duties, internal taxes and other fiscal levies which may be imposed in the People's Republic of Bangladesh with respect to the purchase of the products and/or services procured by Japanese Grant under the Project should be exempted.
BCG agreed to take necessary actions for tax exemption for smooth implementation of the Project and apply to National Board of Revenue through MOHA for tax exemption for the Project

9-7 Both sides agreed that the contents of the Preparatory Survey Report excluding cost estimation of the Project will be disclosed to the public after completion of the Preparatory Survey. All the contents of the Preparatory Survey Report including cost estimation of the Project will be disclosed to the public after the contract for supply of the Project vessels and equipment is concluded. Nevertheless of the above, both can discuss the parts of the Preparatory Report that should not be disclosed to the public from security aspect, and exclude those parts from disclosure before the Preparatory Report is published.

9-8 The Bangladesh side agreed to provide physical and non-physical security measures including providing BCG armed guards, upon requests from Japanese side, for all

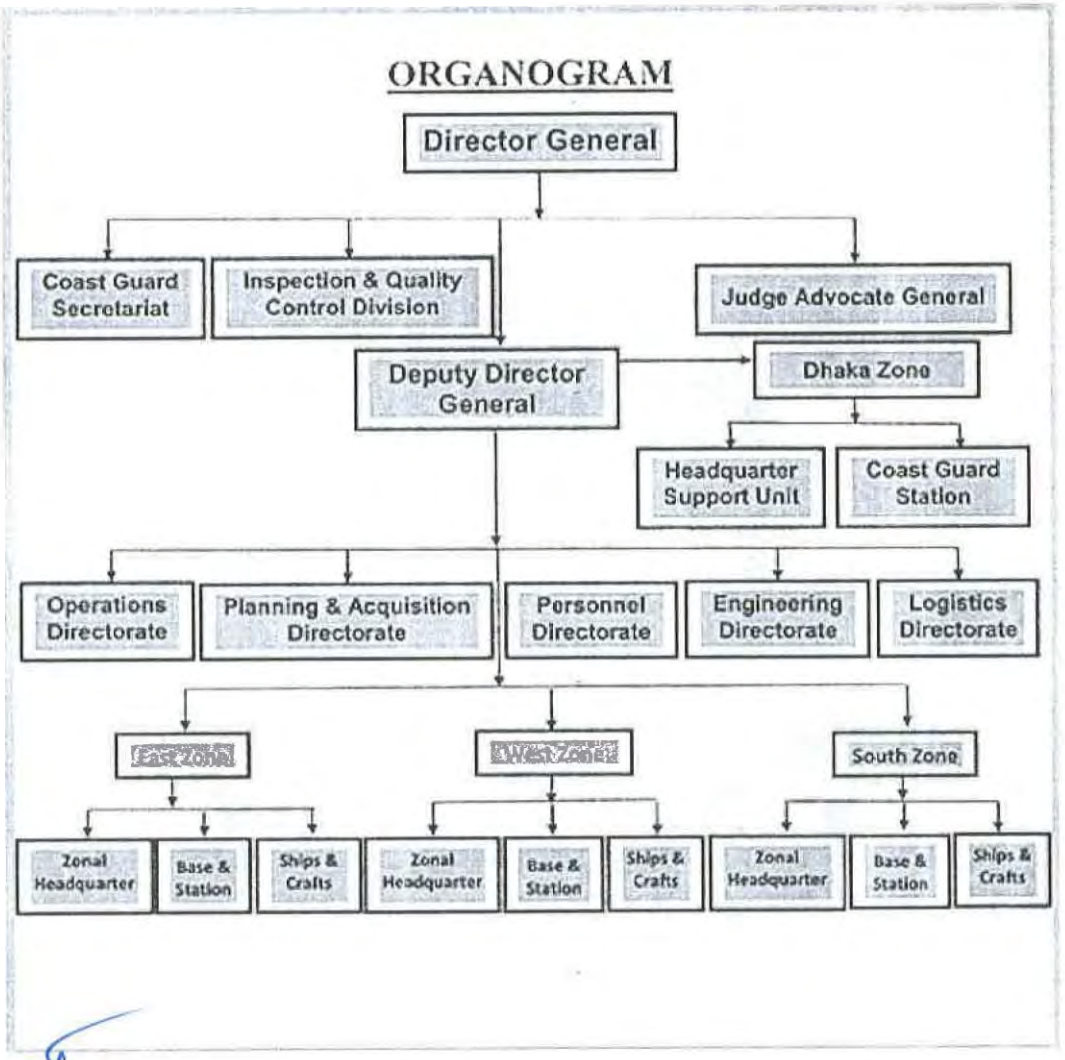
concerned Japanese and third-country nationals working for the Project in Bangladesh during their stay in Bangladesh.

Annex 1: Project Site
Annex 2: Organization Chart
Annex 3: Japanese Grant
Annex 4: Major Undertakings to be taken by the Government of the People's Republic of Bangladesh
Annex 5: Project Monitoring Report (template)
Annex 6: Japan Development Cooperation Charter (Provisional Translation)

PROJECT SITE

Annex 2

ORGANIZATION CHART OF BANGLADESH COAST GUARD



JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "Attachment-1: Procedures of Japanese Grant" for details):

(1) Preparation
- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal
- Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")
- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")
- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement
- Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation
- Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the Recipient necessary for the implementation of the

Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

2) Banking Arrangements (B/A) (See "Attachment 2: Financial Flow of Japanese Grant (A/P

Type)" for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the

Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.

b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.

2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

PROCEDURES OF JAPANESE GRANT

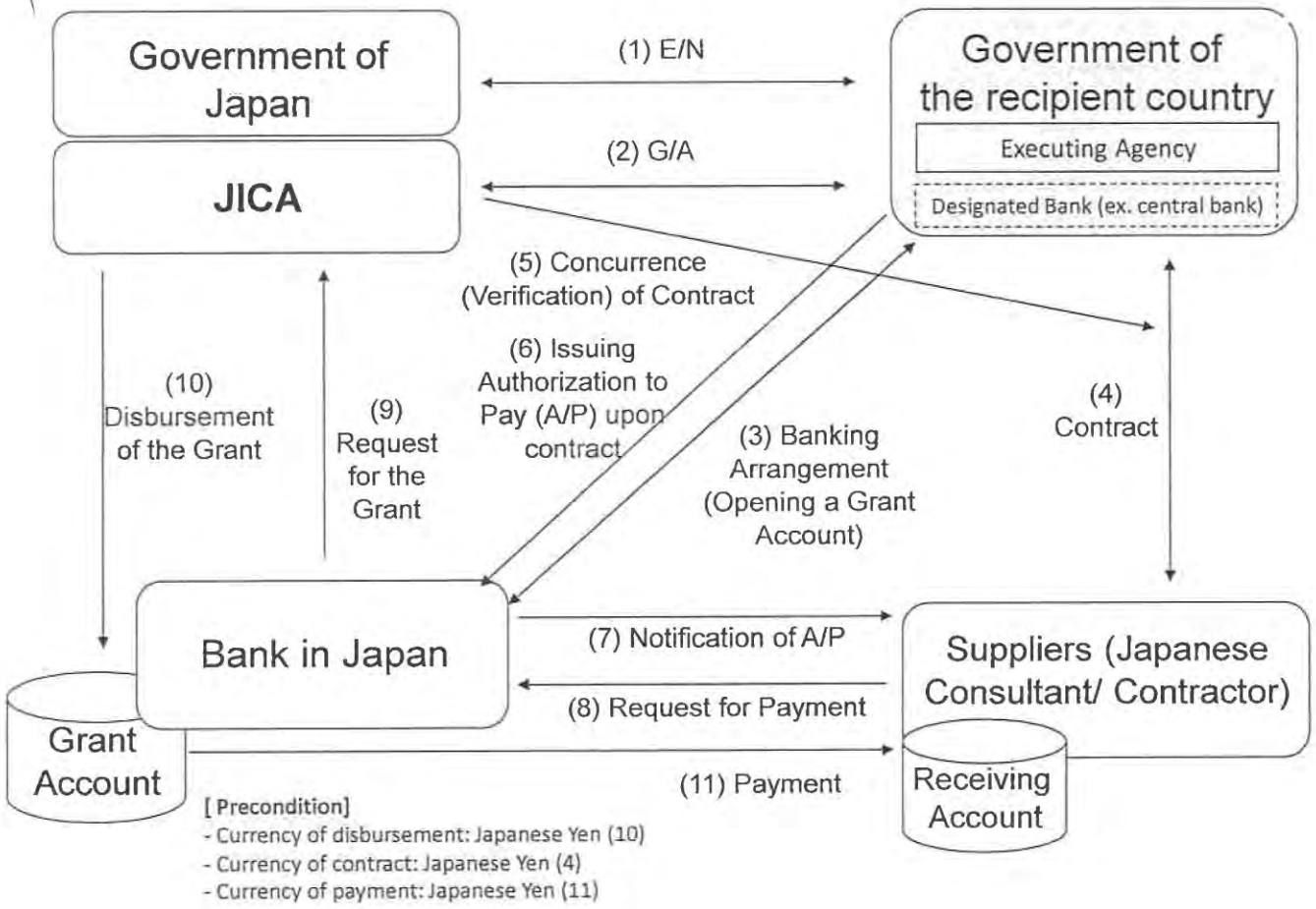
Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2)Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3)Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

Notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.

2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

FINANCIAL FLOW OF JAPANESE GRANT (A/P TYPE)



MAJOR UNDERTAKINGS TO BE TAKEN BY THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

1. Specific obligations of the Government of the People's Republic of Bangladesh which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	Obtaining ECNEC's approval for DPP for the Project	Before E/N signing	MOHA/ BCG		
2	Consolidating enough and proper berthing facilities for all vessels provided by the Project	Before G/A signing	MOHA/ BCG		
3	To open bank account (B/A)	within 1 month after the signing of the G/A	MOHA/ BCG		
4	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of the contract with Consultant	MOHA/ BCG		
5	To submit Project Monitoring Report (with the result of Detail Design)	before preparation of bidding documents	MOHA/ BCG		

Note: B/A: Banking Arrangement, A/P: Authorization to pay,

During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Contractor(s) and Supplier(s)	within 1 month after the signing of the contract(s) with Contractor(s) and Supplier(s)	MOHA/ BCG		
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A		MOHA/ BCG		
	1) Advising commission of A/P	within 1 month after the signing of the contract(s) with Contractor(s) and Supplier(s)			

	2) Payment commission for A/P	every payment for Consultant, Contractor(s) and Supplier(s)			
3	To secure sites and spaces for installation of the equipment	1 month before installation of each equipment	BCG		
4	To enable provision of electric power supply for the equipment	1 month before installation of each equipment	BCG		
5	To ensure prompt unloading and customs clearance at ports of disembarkation in recipient country and to assist the Contractor(s) and/or Supplier(s) with internal transportation therein	during the Project	MOHA/ BCG		
6	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MOHA/ BCG		
7	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services	during the Project	MOHA/ BCG		
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MOHA/ BCG		
9	To submit Project Monitoring Report after each work under the contract(s) such as shipping, hand over, installation and operational training	within 1 month after completion of each work	BCG		
10	To submit Project Monitoring Report (final)	within 1 month after signing of Certificate of Completion for the works under the contract(s)	BCG		
	To submit a report concerning completion of the Project	within 6 months after completion of the Project	BCG		
11	Providing physical and non-physical security measures upon requests from Japanese side, for all concerned Japanese nationals working for the Project in Bangladesh during their stay in Bangladesh.	during the the Project	MOHA/ BCG		
12	To take necessary measure for safety of construction and installation.	during the the Project	MOHA/ BCG		

(2) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	after completion of the construction	BCG		

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge (Designation) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	Person in Charge (Designation) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Line Ministry	Person in Charge (Designation) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

1: Project Description

1-1 Project Objective

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original *(at the time of outline design)* name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual *(PMR)*

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original *(at the time of outline design)*
Actual *(PMR)*

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original *(at the time of outline design)*

Actual *(PMR)*

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks *(at the time of outline design)*

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
- Contractor's Main Staff List

4. Check list for the Contract (including Record of Amendment of the Contract/ Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
8. Pictures (by JPEG style by CD-R) (PMR (final)only)
9. Equipment List (PMR (final)only)
10. Drawing (PMR (final)only)
11. Report on RD (After project)

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C−D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

-
-
-

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

(Provisional Translation)

Cabinet decision on the Development Cooperation Charter

February 10, 2015

Japan's Official Development Assistance Charter, decided by the Cabinet in 1992 and revised in 2003, has been the foundation of Japan's Official Development Assistance (ODA) policy.

Currently, as it commemorates the 60th anniversary of its ODA, Japan and the international community are at a major crossroads. In this new era, Japan must strongly lead the international community, as a nation that contributes even more proactively to securing peace, stability and prosperity of the international community from the perspective of "Proactive Contribution to Peace" based on the principle of international cooperation, while continuing to adhere to the course that it has taken to date as a peace-loving nation. This is also a juncture at which Japan's ODA activities should further evolve so as to strengthen further its role as an equal partner of developing countries in the joint efforts to address challenges facing the international community.

In the international community today, a huge amount of private funding flows to the developing countries, and various actors including the private sector, local governments, and non-governmental organizations (NGOs) are involved in global activities. These actors play important roles in dealing with development challenges and promoting sustainable growth in developing countries. Under these circumstances, Japan needs to address such development challenges not only through ODA but also by mobilizing various other resources.

Based on this recognition, the Government of Japan revises the ODA Charter and hereby establishes the Development Cooperation Charter, also bearing in mind the National Security Strategy decided by the Cabinet on December 17, 2013.

For the purpose of this Charter, the term "development cooperation" refers to "international cooperation activities that are conducted by the government and its affiliated agencies for the main purpose of development in developing regions." In this connection, "development" in this Charter is used in a broader sense rather than in the narrow sense; it also encompasses such activities as peacebuilding and governance, promotion of basic human rights and humanitarian assistance.

Such development cooperation needs to enhance synergetic effects for development through strengthened collaboration with other funding and activities of the Government of Japan and its affiliated agencies such as Other Official Flows (OOFs) and United Nations Peacekeeping operations (PKOs) as well as with private funding and activities whose objective is development or which contribute to development (i.e., funding and activities of various entities such as the private sector, local governments and NGOs).

Development Cooperation Charter
-For peace, prosperity and a better future for everyone-

At present the international community is in the midst of a transformation. It is experiencing changes in the global power balance on an unprecedented scale, an expansion of international economic activity due to rapid progress in globalization and technological innovation, deepening interdependency, and the growing influence of various non-state actors. Against this background, all kinds of risks in every part of the world can have a direct negative impact on the peace, stability and prosperity of the world including Japan. These risks range from transboundary challenges such as environmental issues and climate change, water-related issues, natural disasters, food crises and hunger, energy issues, and infectious disease, threats to the peace and stability of the international community such as international terrorism, transnational organized crimes, and piracy, to humanitarian issues in fragile states, regional conflicts, and political instability. In addition, as emerging and developing countries are taking on more economic importance, economic growth in these countries will affect the course of the growth of the global economy. Inclusive, sustainable and resilient growth in these countries is thus essential for the stable growth of the global economy as a whole. Furthermore, in light of Japan's current economic and social situation, deepening its cooperative relations with the international community including the emerging and developing countries and tapping into their vigor are the keys to its own sustainable prosperity. Amid all these changes, a peaceful, stable and prosperous international community is increasingly intertwined with the national interests of Japan. To secure its national interests, it is essential for Japan, as a "Proactive Contributor to Peace" based on the principle of international cooperation, to work together with the international community including developing countries to address global challenges.

The development challenges confronting the world have also changed significantly. While many countries, notably emerging countries, achieved progress in development, even such countries are experiencing problems such as political and economic instability owing to poor governance and other factors, internal disparities, sustainability issues, and the "middle income trap." Furthermore, countries such as small island countries have particular vulnerability and other issues that have emerged which cannot be assessed by income levels alone. In addition, countries are being left behind in terms of growth due to various vulnerabilities resulting from internal conflicts and political instability as well as their geological and climate conditions. To overcome such vulnerabilities, these countries are urgently in need not only of humanitarian assistance but also securing the stable foundations of development such as peace, stability, rule of law, governance and democratization, as well as setting in motion the process of development. In addition, in context of inclusive development that leaves no one behind, it is important to ensure that a wide range of stakeholders in society including women participate in every phase of development. As such, the world is facing more diverse and complex challenges. These challenges are increasingly widespread, transcending national borders as the world is increasingly globalized. In the world faced with such difficult challenges, individual countries are required more than ever to exercise ingenuity and take action.

I. Philosophy

Bearing in mind the recognition described above, Japan will implement development cooperation, that is, "international cooperation activities conducted by the government and its

affiliated agencies for the main purpose of development in developing regions", based on the philosophy described below.

(1) Objectives of development cooperation

Japan recognizes that all peoples of the world have the right to live in peace, free from fear and want. Since 1954, when it joined the Colombo Plan, Japan has consistently sought peace and prosperity of the international community, supported the development efforts of developing countries through development cooperation that centers on its official development assistance (ODA), and made efforts to solve global issues. This embodies the basic stance of Japan to earnestly tackle challenges facing the international community as a responsible major player. Many years of Japan's steady down-to-earth efforts to this end has won the respect and confidence of the international community, which expects Japan to play a more proactive role for the peace, stability and prosperity of the international community in a way commensurate with its national capabilities.

Japan overcame a range of problems and realized a period of high economic growth and a peaceful stable society with a small economic disparity to become the first developed country in Asia. At the same time, Japan has taken advantage of its philosophy in development cooperation, experience and expertise to deliver distinctive cooperation to Asian and other countries to support their economic growth. In these processes, it has experienced many successes and failures, and has accumulated a wealth of experience, expertise and lessons learned. The experience, expertise and lessons thus learned are not limited to those from the postwar high-growth period but also those from addressing present challenges such as declining and aging population, and reconstruction after the earthquake. Such experience, expertise and lessons learned contribute to addressing development challenges facing the world today, and the international community also has high expectations in this regard.

Bearing in mind the expectations of the international community, Japan, as a responsible major player in the world, will contribute more actively and exert strong leadership in addressing challenges facing the international community - especially development challenges and humanitarian concerns. Doing so is of great significance from the perspective of solidifying the confidence that the international community has in Japan.

In today's international community, it is no longer possible for any nation to secure peace and prosperity by itself. Under such circumstances, the path Japan should take to continue developing a prosperous and peaceful society lies in a serious effort to tackle various global challenges in cooperation with the international community, including developing countries, for a peaceful, stable and prosperous international community, and, in this process, to build solid and constructive relationships with various actors in the international community. Development cooperation provides one of the most important means for Japan in its agile implementation of such diplomacy; it carries significance as an "investment for the future."

Based on this recognition, Japan will promote development cooperation in order to contribute more proactively to the peace, stability and prosperity of the international community. Such cooperation will also lead to ensuring Japan's national interests such as maintaining its peace and security, achieving further prosperity, realizing an international environment that provides stability, transparency and predictability, and maintaining and protecting an international order based on universal values.

In the present international community, various actors including private companies, local governments and non-governmental organizations (NGOs) play an increasingly important role in addressing development challenges and supporting sustained growth of developing countries. It is therefore important to mobilize a wider range of resources that are not limited to ODA. In this context, ODA, as the core of various activities that contribute to development, will serve as a catalyst for mobilizing a wide range of resources in cooperation with various funds and actors and, by extension, as an engine for various activities aimed at securing peace, stability and prosperity of the international community.

(2) Basic policies

Japan's development cooperation for the objectives described above should be based on the philosophy that has been formed over its long history and should be further developed. In this context, the directions for development cooperation are defined as basic policies below:

A. Contributing to peace and prosperity through cooperation for non-military purposes

Japan's development cooperation has contributed to peace and prosperity of the world through cooperation for non-military purposes, which is one of the most suitable modalities for international contribution. Japan has consistently followed the path of a peace-loving nation since the end of World War II. Japan's development cooperation has been highly regarded by the international community as an embodiment of the country's sincere aspirations for peace and prosperity of the international community. Japan will continue to uphold this policy and comply with the principle of avoiding any use of development cooperation for military purposes or for aggravation of international conflicts, in proactively contributing to securing peace, stability and prosperity of the international community.

B. Promoting human security

Human security - a concept that pursues the right of individuals to live happily and in dignity, free from fear and want, through their protection and empowerment - is the guiding principle that lies at the foundation of Japan's development cooperation. Japan will thus focus its development cooperation on individuals - especially those liable to be vulnerable such as children, women, persons with disabilities, the elderly, refugees and internally-displaced persons, ethnic minorities, and indigenous peoples - and provide cooperation for their protection and empowerment so as to realize human security. At the same time, Japan will make efforts so that this basic policy will be understood and accepted widely among its partner countries, thereby mainstreaming the concept even further in the international community. Likewise, from the standpoint of its people-centered approach, Japan will also proactively contribute to promoting basic human rights, including women's rights.

C. Cooperation aimed at self-reliant development through assistance for self-help efforts as well as dialogue and collaboration based on Japan's experience and expertise

In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together. These are some of the good traditions of Japan's cooperation which have supported self-help efforts of developing countries and aimed at future self-reliant development. On the basis of these traditions, Japan will continue to provide cooperation aimed at developing countries'

self-reliant development by emphasizing their own initiatives and self-help efforts as well as further deepening dialogue and collaboration with them while taking advantage of Japan's experience and expertise. In these processes, Japan will attach importance to building the foundations of self-help efforts and self-reliant development such as human resources, socio-economic infrastructure, regulations and institutions. It will also go beyond waiting for requests from partner countries by focusing on dialogue and collaboration with diverse actors not limited to governments and regional agencies of these countries, including proactively presenting proposals while giving full consideration to policies, programs and institutions related to development in the country concerned.

II. Priority policies

(1) Priority issues

In line with the philosophy described above, Japan sets out the following priority issues for development cooperation, while taking note of the inter-relationships between them, in order to deal with development challenges that are becoming more diverse, complex and broadly based, and also to achieve peace, stability and prosperity of the international community.

A. "Quality growth" and poverty eradication through such growth

The world's poor population is still large in number, and reducing poverty, especially eradicating absolute poverty, is the most fundamental development challenge. Especially as regards fragile states that have not been able to grasp the opportunities for development for different reasons and as regards people in vulnerable situations, it is important to provide both assistance from a humanitarian point of view and assistance designed to set the development process in motion and overcome vulnerability.

At the same time, in order to resolve the poverty issue in a sustainable manner, it is essential to achieve economic growth through human resources development, infrastructure development and establishment of regulations and institutions as well as the growth of the private sector enabled by the aforementioned actions, which are aimed at self-reliant development of developing countries. However, such growth should not be merely quantitative in nature, given that some of the countries that have achieved a measure of economic growth face challenges such as widening disparities, sustainability issues, inadequate social development, and political and economic instability. Rather, it should be "quality growth". Such growth is *inclusive* in that the fruits of growth are shared within society as a whole, leaving no one behind. It is *sustainable* over generations in terms of consideration to, among other aspects, harmony with the environment, sustained socioeconomic growth, and addressing global warming. And it is *resilient*, able to withstand and recover from economic crises, natural disasters and other shocks. These are some of the challenges Japan has tackled in its postwar history. Japan will take advantage of its own experience, expertise and technology as well as lessons learned in order to provide assistance to realize "quality growth" and poverty eradication through such growth.

From this perspective, Japan will provide assistance necessary to secure the foundations and the driving force for economic growth. Its scope includes: the development of industrial infrastructure and industries through improvements in such areas as infrastructure, finance and trade and investment climate; sustainable cities; introduction of information and communications technology (ICT) and high technology; promotion of science, technology and innovation; research and development; economic policy; vocational training and industrial human resources development; employment creation; and the promotion of agriculture, forestry and fisheries that includes the development of food value chains. At the

same time, Japan will provide assistance necessary to promote people-centered development that supports basic human life, taking full account of the importance of human and social development. It encompasses health care, safe water and sanitation, food and nutrition, quality education for all, disparity reduction, empowerment of women, culture and sports that brings about spiritual affluence.

B. Sharing universal values and realizing a peaceful and secure society

Stable development through "quality growth" will not be achieved unless the rights of individuals are guaranteed, people can engage in economic and social activities with a sense of safety, and the society is managed equitably and stably. With a view to solidifying the foundations for such development, Japan will provide assistance so as to share universal values such as freedom, democracy, respect for basic human rights and the rule of law as well as to realize a peaceful, stable and secure society.

The establishment of the rule of law, the realization of good governance, the promotion and consolidation of democratization, and respect for basic human rights including women's rights constitute the basis for effective, efficient and stable economic and social activities, and thereby support social and economic development. They also hold the key to realizing an equitable and inclusive society including reducing disparities. Japan will thus provide the necessary assistance in such areas as: development of legal and judicial systems that involves the development of positive law and the training of legal and judicial experts including experts in the correction and rehabilitation of offenders; development of economic and social systems; improvements in governance which include the training of civil servants and institutional capacity building for anti-corruption and other purposes; development of a democratic political structure including an electoral system; and democratization process with a focus on the media and education for democracy.

Peace, stability and security are prerequisites for nation-building and development. Accordingly, Japan will comprehensively address a wide range of factors causing conflict and instability, including poverty. It will also provide seamless assistance for peacebuilding from conflict prevention, emergency humanitarian assistance in the conflict situation, and promotion of conflict termination to emergency humanitarian assistance and assistance for recovery, reconstruction, and development in the post-conflict stage. Such assistance will address a range of needs such as: humanitarian assistance for refugees and internally-displaced persons; protection and participation of women and the socially vulnerable; reconstruction of social and human capital; the restoration of governance functions based on a trusting relationship between the government and the public; the removal of landmines and unexploded ordnance and the collection of small arms; and the restoration of public order. In natural disasters and other emergencies, Japan will provide prompt assistance taking into account longer-term recovery and reconstruction. In view of the fact that threats to stability and security can hamper socio-economic development, Japan will also provide assistance to enhance capacities in developing countries such as: the capacity of law enforcement authorities including capabilities to ensure maritime safety; the capacity of security authorities including capabilities to combat terrorism and transnational organized crime including drug trafficking and trafficking in persons; and the capacity of developing countries in relation to global commons such as seas, outer space, and cyberspace.

C. Building a sustainable and resilient international community through efforts to address global challenges

Transboundary challenges facing humanity include environmental issues and climate change, water related issues, major natural disasters, infectious diseases, food issues, and energy issues. These challenges significantly affect not only developing countries but also the international community as a whole, causing damage to many people with particularly serious impact likely on the poor and other vulnerable people.

These global challenges cannot be dealt with by a single country and require united efforts at the regional level or by the international community as a whole. Taking full account of the international development goals such as the Millennium Development Goals (MDGs), the post-2015 development agenda and the discussions regarding these goals, Japan will take the lead in addressing these challenges including through participation in the formulation of international goals and guidelines and active efforts to achieve these goals. Through these efforts, Japan will seek to contribute to building a sustainable and resilient international community.

In this context, Japan will address challenges such as: actions against climate change including the creation of a low carbon society and adaptation to adverse effects of climate change; infectious diseases control; promotion of universal health coverage; mainstreaming disaster risk reduction; disaster risk reduction and post-disaster recovery measures; conservation of biodiversity and the sustainable use of resources from forests, farmlands and oceans; promotion of a sound water cycle; environmental management and other environmental-related initiatives; responses to demographic challenges including an aging population; food security and nutrition; sustainable access to resources and energy; closing the digital divide.

(2) Priority policy issues by region

In view of the increasingly diverse, complex, and broader-based development challenges and the progress in globalization in the international community today, it is necessary to implement cooperation that cater to the needs and characteristics of each region while maintaining a global perspective. Bearing in mind the priority policy issues for each region mentioned below, Japan will provide more focused cooperation in a strategic, effective and agile manner while coping flexibly with ever changing situations. In this process, attention will be paid to the increasing relevance of recent developments such as: moves toward regional integration such as establishment of regional communities; efforts to address trans-boundary issues at the regional level; efforts toward greater-area development; efforts to strengthen inter-regional connectivity; and increasing connectivity among regions. In addition, Japan will extend necessary cooperation to countries based on their actual development needs and affordability. These include countries that despite progress in development, are laden with challenges that hamper sustained economic growth, notably the so-called "middle income trap," as well as with development challenges including global challenges such as exposure to natural disasters, infectious diseases, and environmental issues and climate change; small island countries and others that are faced with special vulnerabilities despite having attained a certain level of per capita income.

Asia is a region that has a close relationship with Japan and high relevance to its security and prosperity. With this recognition, Japan will extend development cooperation to the region.

Particularly with respect to the Association of Southeast Asian Nations (ASEAN) region, Japan will support the establishment of the ASEAN Community as well as the comprehensive and sustained development of ASEAN as a whole. This will include a focus on the

development of both physical and non-physical infrastructure including that which is needed for strengthening connectivity and the reduction of disparities both within the region and within individual countries. Japan will specifically strengthen assistance to the Mekong region as well as continue its assistance to countries that have already achieved a certain level of economic growth to keep them from being caught in the "middle income trap" through assistance to promote increased productivity and technical innovations such as human resources development. At the same time, priority will be attached to assistance that raises disaster risk reduction and disaster relief capabilities and promotes the rule of law, which constitutes the basis for stable economic and social activities. Japan will also promote cooperation with ASEAN as a regional organization to support united efforts to tackle its challenges.

With respect to South Asia, Japan will support regional stability and the fulfillment of a variety of level of regional potential. This will involve cooperation for building the foundations for economic development through growth, including cooperation on improving trade and investment climate especially by developing infrastructure and strengthening connectivity in the Asian region. Japan will also extend cooperation on basic human needs such as health care, sanitation and education, and on socio-economic infrastructure development for narrowing the gap between the rich and the poor.

With respect to Central Asia and the Caucasus, Japan will support nation-building and regional cooperation for the long-term stability and sustainable development of the region and its neighboring regions, while taking into consideration the disparities within the region.

With respect to Africa, Japan will provide assistance through joint efforts of the public and the private sector through the process of the Tokyo International Conference on African Development (TICAD) so that Africa's remarkable growth in recent years based on expanding trade, investment and consumption will lead to further development for both Japan and Africa. Japan will take particular note of Africa's initiatives toward regional development and integration at the sub-regional level. Meanwhile, Africa still has countries that are prone to conflict or are burdened with an accumulation of serious development challenges. Bearing this in mind, Japan will continue to actively engage in assistance for peacebuilding and assistance to fragile states from the perspective of human security, providing necessary assistance with a view towards establishing and consolidating peace and stability, and solving serious development challenges in the region.

The Middle East is an important region not only for Japan but also for the international community as a whole in terms of peace, stability and stable energy supply. With a view to proactively contributing to the peace and stability of the region and to the coexistence and mutual prosperity of Japan and the Middle East, necessary assistance will be provided to address challenges such as peacebuilding, reducing disparity and human resources development.

With respect to Central and Eastern Europe, Japan will support the moves toward the integration of Europe, which shares universal values such as freedom, democracy, respect for basic human rights and the rule of law, by providing assistance necessary to this end.

With respect to Latin America, Japan will provide assistance to foster an environment more conducive to economic development through trade and investment among others, and to extend necessary cooperation against a backdrop of internal disparities which exist even in

countries that have achieved considerable progress in development. Consideration will be given to the presence of ethnic Japanese ("*Nikkei*") communities in the region, which serves as a strong bond between Japan and the region.

With respect to small island countries in Oceania, the Caribbean and other regions also have vulnerabilities that are peculiar to small island countries. They are also faced with the challenge of coping with the effects of global environmental problems including: water scarcity, damage due to sea level rise and natural disasters associated with climate change. Japan will provide assistance based on individual development needs while bearing in mind the peculiarities of small island countries.

III. Implementation

(1) Implementation principles

Efforts will be made to implement development cooperation effectively and efficiently, while taking into account international discussion including on development effectiveness, so as to obtain maximum effect towards realizing the philosophy and implementing the priority policies described above. It is also necessary to give full consideration to the impacts of cooperation to the recipient countries and societies, and to the appropriateness of cooperation. Based on such considerations, Japan will implement development cooperation in accordance with the following principles.

A. Principles for effective and efficient development cooperation

(a) A more strategic approach

A more strategic approach should be taken to maximize the impact of Japan's development cooperation. In other words, it is important for the government and implementing agencies to work as one – in cooperation with diverse stakeholders – and to mobilize various resources available to Japan. It is also important to engage in the development cooperation cycle of policymaking, implementation and evaluation in an integrated manner.

On policymaking, it is necessary to fully recognize that development cooperation is one of the most important tools of Japan's foreign policy, which calls for strategic and agile responses to ever-changing international affairs. With this recognition, Japan will formulate strategic and effective policies and goals concerning development cooperation, prioritizing as appropriate, based on its foreign policy. In the process, Japan will thoroughly assess diverse factors such as: the state of affairs in the international community including developing countries; the development policies and programs of developing countries; and the strategic importance of the recipient country and the development challenges being addressed in relation to Japan. In addition, for the purpose of clarifying its development cooperation policies, thematic policies, regional policies, and country policies will be structured under this Charter.

In implementing development cooperation, Japan will enhance synergies between ODA and non-ODA finance/cooperation so as to make the most of resources of the government and its affiliated agencies. Furthermore, from the standpoint of its foreign policy and more effective and efficient development cooperation, Japan will organically combine technical cooperation, loan assistance and grant aid. It will also strive to increase the speed of implementation, improve related systems and operate them flexibly.

In the light of the importance of evaluation not only for improving effectiveness and efficiency but for accountability to the public, Japan will conduct evaluations at the policy and program/project levels and feed the results back to the decision-making and program/project

implementation processes. Such evaluations, while focusing on outcomes, will take into account the peculiarities and conditions of the recipients. Efforts will be made to undertake evaluation from a diplomatic point of view as well.

(b) Cooperation that takes advantage of Japan's strengths

Japan's human resources, expertise, advanced technology and systems today were developed in the process of overcoming various challenges as it underwent high economic growth and rapid demographic changes. These assets can be beneficial for developing countries in addressing similar challenges, both present and future; in fact, expectations for Japan are high in this regard. In implementing development cooperation, Japan will proactively adopt proposals from various actors in the private and other sectors. It will also work with universities and research institutions to make good use of their expertise and seek out their untapped capabilities. Japan's assistance in infrastructure development will not be limited to constructing physical infrastructure. It will also address the non-physical aspects that encompass developing systems for operating and maintaining such infrastructure as well as human resources development and institution building. Such an integrated approach will enable active utilization of Japan's experience and expertise. In addition, given that Japan's distinctive characteristics such as Japanese values and occupational culture are highly regarded by the international community, it will take into account the possibility of utilizing its soft power including the Japanese language.

(c) Proactive contribution to international discussions

Japan will strive to make its development cooperation policies better understood by the international community, and for this purpose, categorize the experiences and expertise gained in its development cooperation. To ensure that Japan's policies are adequately reflected in the process of shaping the philosophy and trends in international development cooperation, Japan will proactively participate in and contribute to relevant discussions at the United Nations, international financial institutions, the Organisation for Economic Co-operation and Development (OECD), especially its Development Assistance Committee (DAC), and other international frameworks.

B. Principles for securing the appropriateness of development cooperation

So as to secure the appropriateness of its development cooperation policies and individual programs/projects and to give consideration to the various impacts of such cooperation on the recipient countries and societies, Japan's development cooperation will be provided in accordance with the principles described below, and by comprehensively taking into account developing countries' development needs and socio-economic conditions, as well as Japan's bilateral relations with each recipient country.

(a) Situation regarding consolidation of democratization, the rule of law and the protection of basic human rights

Japan will pay adequate attention to the situation in the recipient countries regarding the process of democratization, the rule of law and the protection of basic human rights, with a view to promoting the consolidation of democratization, the rule of law and the respect for basic human rights.

(b) Avoidance of any use of development cooperation for military purposes or for aggravation of international conflicts

Japan will avoid any use of development cooperation for military purposes or for aggravation of international conflicts. In case the armed forces or members of the armed forces in

recipient countries are involved in development cooperation for non-military purposes such as public welfare or disaster-relief purposes, such cases will be considered on a case-by-case basis in light of their substantive relevance.

(c) Situation regarding military expenditures, development and production of weapons of mass destruction and missiles, export and import of arms, etc.

Japan will pay close attention to the situation in recipient countries regarding military expenditures, development and production of weapons of mass destruction and missiles, and export and import of arms, etc. This is done with a view to maintaining international peace and stability including the prevention of terrorism and the non-proliferation of weapons of mass destruction, and based on the position that developing countries should allocate their resources appropriately and preferentially for their own socio-economic development.

(d) Impact of development on the environment and climate change

In order to make development compatible with the environment and to achieve sustainable development, Japan will give thorough consideration to the impact of development on the environment and climate change, and implement development cooperation which takes full account of the environment.

(e) Ensuring equity and consideration to the socially vulnerable

In implementing development cooperation, Japan will pay full attention to the social impact and give full consideration to ensuring equity, while making efforts for participation of wide-ranging stakeholders in every phase of development cooperation, with a view to reducing disparities and in consideration of the socially vulnerable such as children, persons with disabilities, the elderly, ethnic minorities and indigenous peoples.

(f) Promoting women's participation

In the context of gender equality and greater role of women in development, Japan will encourage the participation of women at every phase of development cooperation and be more proactive in ensuring that women share equitably in the fruits of development, while giving consideration to the possible vulnerabilities of women and their special needs.

(g) Preventing fraud and corruption

It is necessary to prevent fraud and corruption in implementing development cooperation. While taking measures to encourage establishment of a compliance system by bid winners, Japan will work with recipient countries to create an environment conducive to preventing fraud and corruption, including the strengthening of governance in these countries. In this context, Japan will ensure adherence to appropriate procedures and strive to ensure transparency in the implementation process.

(h) Security and safety of development cooperation personnel

In order to ensure security and safety of development cooperation personnel, Japan will pay adequate attention to strengthening security and safety management capacity, gathering security information, taking security measures, and ensuring safety of workers in construction sites. Particularly in relation to assistance in politically unstable or unsafe areas such as assistance for peacebuilding, special security measures and arrangements will be implemented.

(2) Implementation arrangements

In view of the increasingly diverse, complex, and wider-based development challenges as well as the increasingly diverse development actors and development-related funds, Japan will strive to improve the implementation architecture of the government and the implementing agencies, strengthen collaboration at different levels, and reinforce the foundations for sustained implementation of development cooperation.

A. Improvement of the implementation architecture of the government and the implementing agencies

In implementing its development cooperation, the government will improve collaboration among the relevant ministries and agencies, with the Ministry of Foreign Affairs serving as a hub in charge of coordinating the planning of development cooperation policies. It will also ensure close collaboration between the government, which is responsible for planning policies, and the Japan International Cooperation Agency (JICA), which is responsible for implementation. At the same time, the government and JICA will further strive to develop the capacities of these organizations as well as to improve relevant systems and institutions, while clarifying the division of their roles and responsibilities. Especially to improve the competitiveness of its development cooperation, the government and JICA will address issues such as agility, expertise, knowledge accumulation, research capacity, reinforcement of the functions of offices abroad, human resources development and arrangements for emergency humanitarian relief. Consideration will be given to the role of JICA domestic offices as a node for various actors, including companies, NGOs, local governments, universities and research institutions, and the public at large.

B. Strengthening partnerships

In the international community today, various non-governmental actors play an increasingly important role in the development of developing countries. With this recognition, collaboration between JICA and other agencies responsible for other official funds such as the Japan Bank for International Cooperation (JBIC), Nippon Export and Investment Insurance (NEXI), and the Japan Overseas Infrastructure Investment Corporation for Transport and Urban Development (JOIN) will be strengthened. The government will also enhance mutually beneficial partnerships with various actors so as to serve as a catalyst for mobilizing a wide range of resources, including the private sector.

(a) Public-private partnerships and partnerships with local governments

Official funds including ODA will continue to play an important role in the development of developing countries. However, given that private flows currently far exceed official flows into developing countries, adequate consideration should be given to the fact that activities of the private sector now serve as a powerful engine for economic growth of developing countries. In Asia, hard (physical) and soft (non-physical) basic infrastructure built with development cooperation has contributed to improving the investment climate. Development cooperation's role as a catalyst promoted private investment, which in turn has led to economic growth and poverty reduction in the recipient countries. It is important to recognize that, through these processes, Asia has developed into an important market and investment destination for Japanese private companies, and therefore, an extremely important region for the Japanese economy. In addition, experience and expertise of Japanese local governments play an increasingly significant role in addressing many of the challenges facing developing countries.

In light of the above, the government will promote development cooperation through public-private partnerships and partnerships with local governments utilizing the resources of

the private sector and local governments and promoting private-led growth, in order to support economic development of developing countries more vigorously and effectively and to enable such development to lead to robust growth of the Japanese economy. Specifically, partnerships with Japanese companies including small and medium-sized enterprises, local governments, universities and research institutions, and other actors will be strengthened in order to implement cooperation aimed at creating an environment conducive to the promotion of trade and investment among others in such areas as human resources development, development of legislation and institutions, and development of infrastructure and relevant systems from planning to implementation phases in a consistent manner.

In promoting public-private partnerships, Japan's development cooperation will seek to serve as a catalyst for expanding economic activities, while utilizing excellent technology and expertise, and ample funds of the private sector for addressing the challenges faced by developing countries. In addition, taking full account of the priority policies of development cooperation described earlier, Japan will give consideration to ensuring inclusiveness, sustainability and resilience of growth as well as promoting capacity building so that private investment that is made along with development cooperation will contribute to "quality growth" in developing countries.

(b) Coordination in emergency humanitarian assistance and international peace cooperation

In the context of increasingly severe and frequent disasters, there is plenty of scope for contribution by Japan, a country known for its disaster risk reduction. For effective implementation of disaster relief and other emergency humanitarian assistance, coordination with international organizations, NGOs and other actors that have relevant expertise will be strengthened.

In addition, Japan will continue to promote coordination with international peace cooperation activities such as UN peacekeeping operations (PKOs) to maximize their effective implementation.

(c) Partnerships with international, regional and sub-regional organizations

With their expertise, impartiality and wide networks, international organizations can implement effective and efficient cooperation in sectors or regions that are less accessible in bilateral cooperation and by taking advantage of their distinctive characteristics. Such multilateral cooperation can bring about synergies if combined with bilateral cooperation. Japan will therefore continue its proactive collaboration with international organizations in such areas as humanitarian assistance, peacebuilding, governance and global issues. In addition, in view of the role played by international organizations in shaping philosophy and trends in international development cooperation, Japan, as a responsible member of the international community, will strive to increase its influence and presence in international organizations and, by extension, the international community so that it can play a leading role in creating international norms. Furthermore, Japan will hold regular consultations with individual international organizations for policy coordination to create synergies with bilateral cooperation. Special attention will be paid to ensuring accountability to the public as regards the impacts and evaluation of development cooperation through international organizations.

Japan will also reinforce its partnerships with regional and sub-regional organizations in view of the trend towards regional integration and the importance of a transboundary approach at the regional level.

(d) Partnerships with donors, emerging countries and other actors

Like Japan, other donors have accumulated experience and expertise over many years of their development cooperation. Donor partnerships are required for greater development effectiveness. From this perspective, Japan will continue to promote partnerships with other donors in development cooperation to maximize its effectiveness, bearing in mind the perspective of its foreign policy.

In implementing development cooperation, it is also important to take advantage of expertise, human resources and their networks, and other assets that have been accumulated in the recipient countries during the many years of Japan's development cooperation. Japan's triangular cooperation involving emerging and other countries capitalizes on such assets. In view of the high regard held by the international community, Japan will continue to promote triangular cooperation.

(e) Partnerships with the civil society

Partnerships with the civil society in and outside of Japan, including NGOs, civil society organizations (CSOs) and private foundations, are important both for greater cooperation effectiveness and for the equitable and stable development of the recipient countries as they can accurately assess varying views and needs on the ground and take timely flexible actions. With this recognition, the government will strategically strengthen partnerships with NGOs/CSOs, including reinforcing their participation and collaboration in development cooperation. From this standpoint, the government will support excellent development cooperation projects of Japanese NGOs/CSOs and their capacity development. In this regard, the Ministry of Foreign Affairs and JICA will focus on developing human resources and systems in the social development sector.

The government will also encourage the participation of its people from all walks of life in development cooperation and promote utilization of their expertise in society, with a view to expanding those involved in development cooperation, including the recruitment of JICA Volunteers. In this regard, the government will provide adequate information to the public and listen to the voice of the people at all levels including suggestions regarding development cooperation.

C. Strengthening the foundations for implementation

In order for Japan's development cooperation to fulfil the required role of realizing its philosophy and implementing its priority policies, the foundations for its sustained implementation including financial and human resources must be strengthened. Necessary efforts will be made to this end while being mindful of the internationally-agreed target of increasing ODA to 0.7% of gross national income (GNI) and fully recognizing its extremely severe fiscal situation.

(a) Information disclosure and promoting understanding of the public and the international community

Development cooperation is financed by tax revenues from the public. The public's understanding and support are therefore essential to secure necessary funds for the sustained implementation of development cooperation. For this purpose, the government will strive for effective public relations on development cooperation in Japan, timely and adequate disclosure of information on implementation, evaluation and other aspects of development cooperation to the wider public in a transparent manner. The government will also provide easy-to-understand explanations on the policies, significance, outcomes and evaluation of

Japan's development cooperation by the international community among other aspects. The government will also actively engage in public information abroad as it is important to make Japan's development cooperation and its achievements better known and understood by the international community including developing countries.

(b) Promoting development education

The government will promote development education at school and various other places. The objective is for the public to develop the capacity to assess various aspects of development challenges facing the world, understand how these challenges relate to Japan, regard the challenges as their own for independent analysis, and participate in actions to address these challenges.

(c) Developing human resources and solidifying the intellectual foundations for development cooperation

Fostering human resources for development cooperation remains an important issue in the face of diversifying development challenges. In particular, promoting development cooperation in such areas as the rule of law, governance, finance and ICT calls for strengthening the institutional structure such as by training and securing the necessary human resources. The government, industry and the academia will therefore work as one to promote the training and development of globally competent human resources with specialized expertise among consultants, researchers, students, and employees at universities, private sector and NGOs/CSOs in addition to the personnel of the Ministry of Foreign Affairs and JICA. Efforts will also be made to increase opportunities for such persons to fulfill their capacity within and outside Japan and to make institutional and structural improvements.

In order to play a leading role in shaping the philosophy and trends in international development cooperation by making use of its strength, the government will also work with universities and research institutions among others to reinforce the intellectual foundations, including research capabilities to plan and disseminate development cooperation. This may take the form of joint policy research by researchers from Japan and developing countries or intellectual networking of such researchers.

(3) Reporting on the status of the implementation of the Development Cooperation Charter

The government will report the status of the implementation of the Development Cooperation Charter in the "White Paper on Development Cooperation," which is reported annually to the Cabinet.

February 10, 2015
Cabinet Decision

Appendix 4 (2)

MINUTES OF TECHNICAL DISCUSSIONS
ON
PREPARATORY SURVEY
FOR
THE PROJECT FOR IMPROVEMENT OF RESCUE CAPACITIES AT THE COASTAL AND INLAND WATERS
IN
THE PEOPLE'S REPUBLIC OF BANGLADESH

From 4th June to 19th June, 2017, the Preparatory Survey Team for the Site Survey (hereinafter referred to as "the Team") held a series of technical discussions with the officials of Bangladesh Coast Guard (hereinafter referred to as "BCG") at Bangladesh and carried out the site survey at Narayanganj, Chandpur, Mongla, Harbaria, Nalian, Agrajatra, Pyra, Rabnabad, Nijampur, Tojumuddin, Bhola and Khulna Shipyard.

As the result of the discussion and the site survey, the both parties confirmed the items described below in this Minutes of Technical Discussions.

Dhaka, 19th June, 2017

Yoshio Isozaki
Chief of the Consultant
Shipbuilding Research Centre of Japan

Captain M Maksud Alam
for Director General
Bangladesh Coast Guard
Ministry of Home Affair

On the basis of the technical items mentioned below, the Team will proceed further the Preparatory Survey of the new Rescue Boats through the analysis to be carried out in Japan, and outline design will be finalized with due consideration of the objectives and necessity of the Project within the frame work of the Japanese Grant with discussion between higher authorities of the Government of Japan.

Depending on the situation as described above, the contents of the discussed technical items may be changed.

1. Outline Specifications of New Rescue Boats

Referring to the Application Form for Japan's Grant Aid for Cooperation on Rescue Operation and Security Enhancement dated 25 August, 2014, the Team discussed with BCG regarding outline specifications of the new Rescue Boats and made the preliminary Outline Specifications as described below.

1.1 Coastal Rescue Boat

(1) Outline Specifications

1) Principal Dimensions

Length Loa	:	approx. 20 m
Breadth	:	not less than 4.5 m
Depth	:	approx. 2.4 m
Draft	:	approx. 1.5 m

2) Boat Construction Material

Hull	:	High-Tensile Steel
Superstructure	:	Aluminum Alloy

3) Speed

Maximum Speed (at Sea Trail with Half Load) : not less than 25 knots

Maximum Speed (at Full Load Condition) : 23 knots

4) Endurance

300 nautical miles at a cruising speed of 16 to 18 knots

5) Complement

Crew	:	Six (6) persons
Others	:	Thirty (30) persons (rescued people)

6) Accommodation

Wheel House	:	Three (3) - Pilot Chair
		Two (2) - Bench with a Table

Bed : Two (2) - Two Tiers Bed

Two (2) - One Tier Bed (for officer)

*Officer's beds are arranged in a space separated by a curtain.

One (1) - Treatment Bed (folding type)

Lavatory : One (1) - Toilet

One (1) - Wash Basin

One (1) - Shower

*Separated toilet and facilities for women is not necessary.

Detachable Bench : One (1) set on the Deck

7) Design Condition for Air Conditioning

Outside air temperature : 38°C

Inside air temperature : 24°C

Water temperature : 38°C (muddy water)

8) Life-saving Appliance

Life Raft : One (1) - For ten (10) men

Life Jacket : Thirty-six (36) (inflatable)

9) Medical Equipment

One (1) set - First Aid Kit

10) Anchor & Anchor Chain

One (1) - Danforth Type Anchor

One (1) - Anchor Chain

*Diameter and length to be investigated by the Consultant.

Two (2) - Towing Rope 22mm dia., 110m long

One (1) - Mooring Rope 20mm dia., 80m long

Three (3) - Mooring Rope 20mm dia., 40m long

11) Air-Conditioning System

Two (2) - Condensing Unit

Four (4) - Cooling Unit

One (1) - Cooling Pump

12) Galley & Sanitary Equipment

One (1) - Refrigerator approx. 300 liter

One (1) - Electric Heater

One (1) - Sink & Water trap

13) Wiper & Window Washer

Three (3) - Electric Wiper

Three (3) - Window Washer

14) Main Engine

Two (2) - 4cycle High-speed Diesel Engine, Battery Start, Water-cooled

*Capacity to be investigated by the Consultant.

15) Propulsion System

Two (2) - Fixed Pitch Propeller

16) Alternating Current Generator

Two (2) - Alternating Current Generator, AC420V, 50Hz, Diesel Engine driven

*One generator set to supply the whole load of the Boat.

17) Electric Voltage

Shore Connection : 420V, 50Hz

Inboard Electricity Source : 220V, 50Hz

18) Marine Monitoring System (Multi-Function Display)

One (1) - Radar (4kW, Range: over 36 nautical miles)

One (1) - Chart Plotter

One (1) - Automatic Identification System (AIS)

19) Direction Finder System

One (1) - Magnetic Compass

One (1) - GPS Compass (Satellite Compass)

20) Satellite Navigation System

One (1) - DGPS Navigation System

21) Echo Sounder

One (1) - Echo Sounder, Measuring Range 2m – 200m

22) Ship Light

One (1) set - Navigation Light

One (1) set - Towing Light

One (1) - Anchor Light

Two (2) - Red / Blue Flashing Light

Two (2) - Not Under Command Light

One (1) - Navigation Light Indicator

One (1) - Searchlight (AC220V, 300W)

23) Radio Equipment

One (1) - MF/HF Radio Equipment

One (1) - VHF Radio Equipment

One (1) - VHF Air Craft Rescue Radio Equipment

One (1) - International NAVTEX Receiver

One (1) - Satellite EPRIB

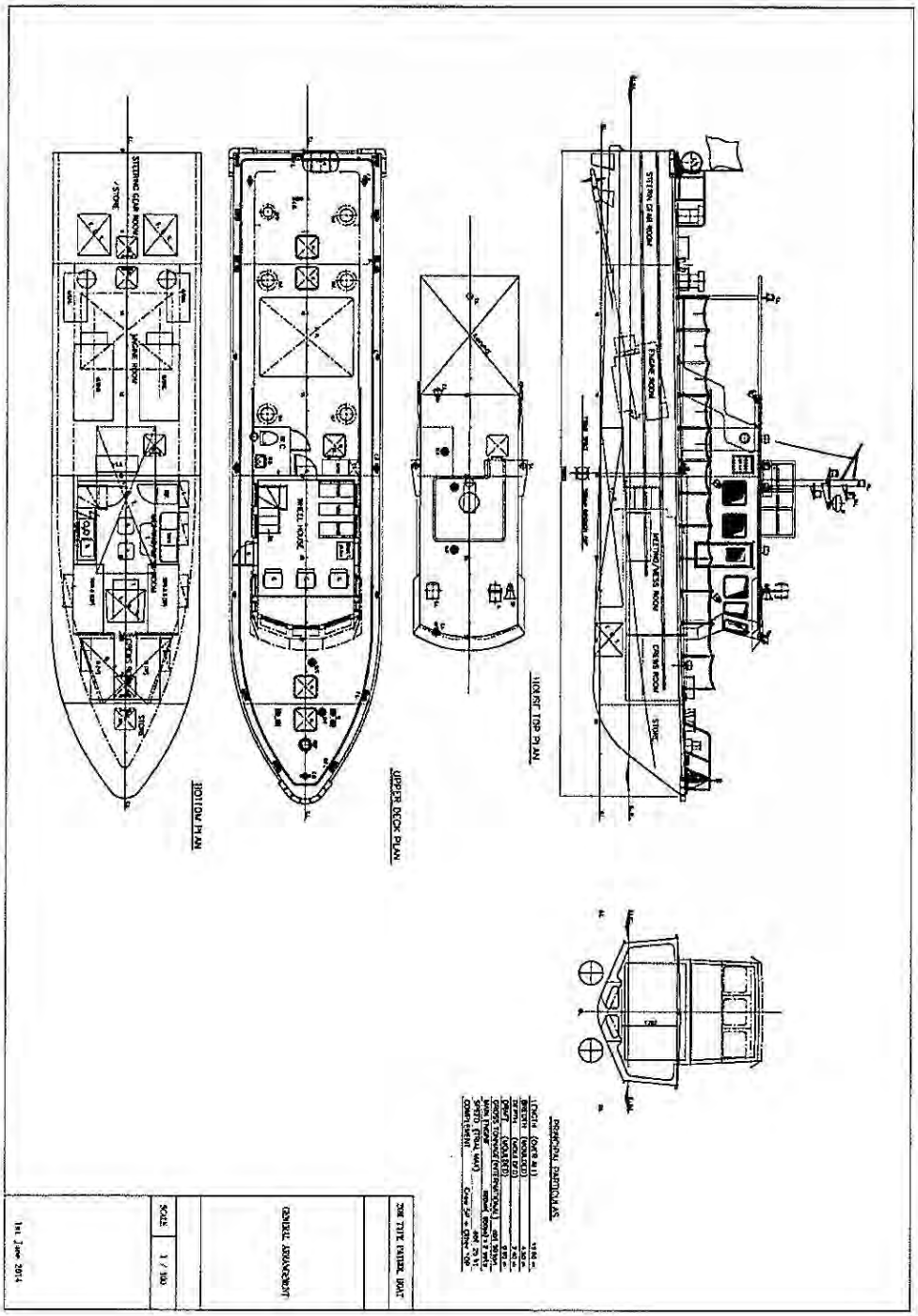
One (1) - SART

One (1) - Portable Two-Way Radio Telephone

Four (4) - Portable Radio Telephone System on Board

(2) General Arrangement (G/A)

The discussions was held based on the general arrangement shown below for reference. The G/A was basically accepted as a design base. But, some items shall be modified based on the Outline Specifications described above and according to the progress of the design.



1.2 Rescue Boat

(1) Outline Specifications

1) Principal Dimensions

Length Loa : approx. 10 m

Breadth : approx. 3 m

*Despite the request of "8 - 9m long boats" and "9 - 10m long boats" as described in the Application Form, all boats have the same design of the length of approximately 10m.

2) Hull Construction Material

Hull : FRP

*Durability when keeping in floating condition shall be investigated by the Consultant.

3) Speed

Maximum Speed (at Full Load Condition) : 15 knots

Cruising Speed (at Full Load Condition) : 12 knots

4) Complement

Crew : 3 persons

Others : 20 persons (rescued people)

*Number of others may be changed depending on the examination on stability carried out by the Consultant.

5) Propulsion System

One (1) - Inboard Diesel Engine

One (1) - Outboard Engine (for emergency use)

6) Navigation Equipment

One (1) - Automatic Identification System (AIS)

One (1) - GPS Plotter

One (1) - Magnetic Compass

6) Radio Equipment

One (1) - VHF Radio Equipment

7) Other Facilities

One (1) - Canopy to protect from rain and sunlight (detachable type)

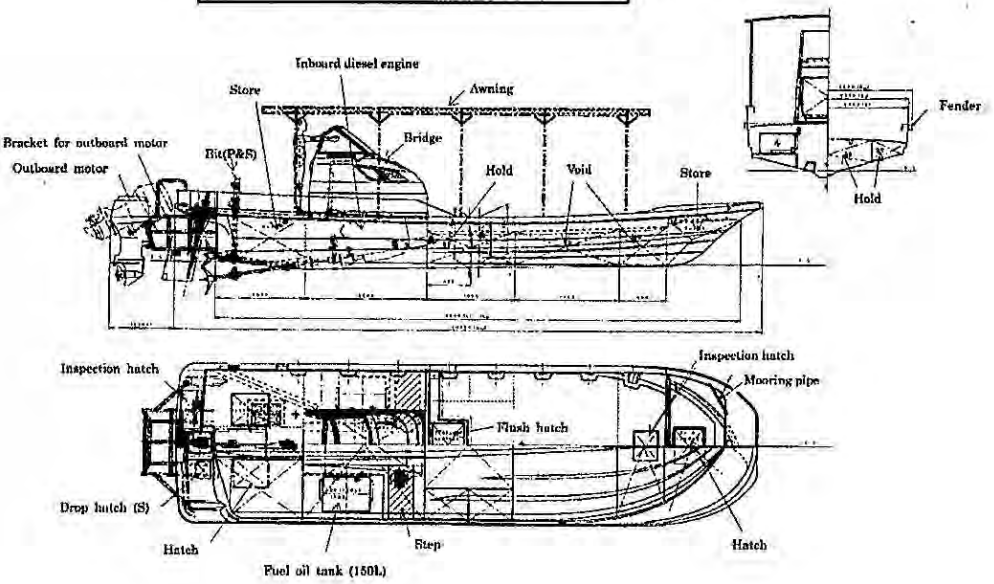
One (1) lot - Small Soft Eye (for rescued people to hold)

(2) General Arrangement (G/A)

The discussions was held based on the general arrangement shown below for reference. The G/A was basically accepted as a design base. But, some items shall be modified based on the Outline Specifications described above and according to the

progress of the design.

General Arrangement of 10m Rescue Boat



1.3 Portable Marine Pollution Control Equipment

Four (4) sets of portable marine pollution control equipment are provided.

As the system, the following equipment are contained in a container, which will be transported by other platforms.

One (1) - 100m long Solid Type Oil Boom (river type)

One (1) - Micro Oil Skimmer

Regardless of the above specifications, if procurement of all boat and equipment exceeds the budget, four (4) sets of portable marine pollution control equipment may be decreased to three (3) sets.

2. Operation and Maintenance of new Rescue Boats

1) BCG explained that among the four (4) 20m Coastal Rescue Boats, the two (2) boats will be deployed to the West Zone and the other two (2) boats to the South Zone in order to rescue the people when accidents or natural disasters occur and to give the rescued personnel the first aid treatment onboard while being transported

to the nearest medical treatment facilities, and also act as mother vessel for the small rescue boats.

2) BCG explained that among the twenty (20) 10m small rescue boats, the four (4) boats will be deployed to the Dhaka Zone, the other eight (8) boats to the West Zone and the remaining eight (8) boats to the South Zone in order to rescue the personnel specially in the shallow water and transport rescued personnel to the nearest BCG facilities, which will be replaced with the old boats having similar length supplied previously under the Japanese Grant.

3) The Team confirmed that BCG will secure enough budget, man power and training necessary for the proper operation and maintenance.

4) The Team confirmed that BCG will take necessary measures to maintain the new Rescue Boats in good conditions by providing their own workshops and by placing the professional staffs.

5) BCG explained that the new Rescue Boats will be inspected and maintained periodically on the slipway facilities in the shipyard such as Dockyard and Engineering Works Ltd. and Khulna Shipyard Ltd.

The Team visited Khulna Shipyard Ltd. and confirmed that the shipyard have the sufficient facilities and capabilities to carry out the maintenance works of the new Rescue Boats.

3. Berthing Facility of new Rescue Boats

1) The Team visited several bases and stations of BCG to investigate the existing conditions of the berthing facilities, and confirmed that plural vessels and boats are moored at the floating pontoons constructed in Bangladesh and used as berthing facilities, and their maintenance conditions are good. The Team confirmed that as far as investigating at the visited bases and stations, it is sufficient facilities as a berthing facility.

2) BCG explained that the necessary jetties and pontoons are prepared to receive the new Rescue Boats at their own expense before hand-over of the boats.

4. Others

1) Two (2) years standard spare parts recommended by manufacturers are to be

supplied by the shipbuilder. Also, manufacturers list to show the contact information is to be supplied by the shipbuilder at the hand-over of the new Rescue Boats.

2) The Team explained that all of twenty-four (24) new Rescue Boats and containers containing portable marine pollution control equipment will be transported by a cargo ship at once. The Team explained that Chittagong international port seemed more suitable than Mongla international port from the viewpoint that the distance from the open sea is much shorter and the convenience of access from the capital Dhaka is more excellent.

Appendix 4 (3)

MINUTES OF MEETING
ON
THE PREPARATORY SURVEY
FOR
THE PROJECT FOR THE IMPROVEMENT OF RESCUE CAPACITIES IN THE COASTAL AND INLAND WATERS
(Explanation on Draft Preparatory Survey Report)

With reference to the minutes of meeting signed between Bangladesh Coast Guard (hereinafter referred to as "BCG"), Economic Relations Division (hereinafter referred to as "ERD"), Public Security Division (PSD), Ministry of Home Affairs (hereinafter referred to as "MoHA") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on "November 7, 2017", JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the Project for the Improvement of Rescue Capacities in the Coastal and Inland Waters (hereinafter referred to as "the Project"), headed by Toshitaka ISHIMA, Senior Advisor for Maritime Safety and Security of JICA, to the People's Republic of Bangladesh (hereinafter referred to as "Bangladesh") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") of the Project from November 26 to 30, 2017.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Dhaka, December 17th, 2017

Hitoshi ARA
Senior Representative
Bangladesh Office
Japan International Cooperation Agency

Bashir Ahamed
Deputy Secretary
Economic Relations Division
Ministry of Finance

Captain M. Mamunur Rashid
(TAS, afwc, psc, BN)
Director (Plan and Acquisition)
Bangladesh Coast Guard

Md. Moshiur Rahman
Additional Secretary (Development)
Public Security Division
Ministry of Home Affairs

ATTACHEMENT

1. Objective of the Project
   The objective of the Project is to strengthen Bangladesh Coast Guard's capabilities on Search and Rescue operation, to cope with maritime/river accidents and natural disasters through improvement of vessels and equipment of Bangladesh Coast Guard, thereby contributing to reduction damages by maritime/river accidents and natural disasters in coastal and inland waters of Bangladesh.

2. Project Site
   Coastal and Inland Waters of Bangladesh

3. Responsible Authorities for the Project
   Both sides confirmed the authorities responsible for the Project are as follows:

3-1. Bangladesh Coast Guard (BCG) will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization chart of BCG is shown in Annex 2.

3-2. The line ministry of the Executing Agency is the Public Security Division (PSD) Ministry of Home Affair (MoHA). The PSD shall be responsible for supervising the Executing Agency on behalf of the Government of People's Republic of Bangladesh.

4. Contents of the Draft Report
   After the explanation of the contents of the Draft Report by the Team, the Bangladesh side agreed to its contents.

5. Cost estimate
   The Team explained to the Bangladesh side that the rough estimate of the Project Cost as described in Annex 3. Both sides confirmed that the cost estimate is provisional and will be examined further by the Government of Japan for its approval.

6. Confidentiality of the cost estimate and technical specifications
   Both sides confirmed that the cost estimate and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts under the Project are concluded.

7. Timeline for the project implementation
   The Team explained to the Bangladesh side that the expected timeline for the project implementation is as attached in Annex 4

8. Procedures and Basic Principles of Japanese Grant

8-1. The Bangladesh side agreed that the procedures and basic principles of Japanese Grant as described in Annex 5 shall be applied to the Project.

8-2. The Bangladesh side agreed to take the necessary measures, as described in Annex 6, for smooth implementation of the Project. Annex 6 will eventually be used as an attachment to the Grant Agreement (G/A).

8-3. As for the monitoring of the implementation of the Project, JICA requires the

Bangladesh side to submit the Project Monitoring Report, the form of which is attached as Annex 7.

9. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Bangladesh side will be responsible for the achievement of agreed key indicators targeted in year 2023 and shall monitor the progress based on those indicators.

[Quantitative indicators]

Index	Base Line (2017)	Target (2020) (3 years after completion of the Project)
1) Total Accommodatable Number of Rescued Persons	230	520
2) Required Time to arrive at Site (*1)	1 hour	40 minutes (10 m type Boat) 24 minutes (20 m type Boat)
3) Seaworthiness (Operable Conditions) (*2)	Less than Beaufort Scale 2	Less than Beaufort Scale 3 (10 m type Boat) Less than Beaufort Scale 4 (20 m type Boat)
4) Oily Water Removal Capability	0	about 9 m^3/hour/unit

(*1) Assumed distance to Site : 10 nautical miles

(*2) Beaufort Scale 2 : Wave height 0.1 m - 0.5 m
Beaufort Scale 3 : Wave height 0.5 m - 1.25 m
Beaufort Scale 4 : Wave height 1.25 m - 2.5 m

[Qualitative indicators]

1). To contribute to the prompt rescue and evacuation operation of local residents and vessel crews in case of maritime accident or natural disaster occurring in the coastal and inland waters areas of Bangladesh.
2). To enable the prompt prevention of oil spill from vessels and to contribute to the conservation of natural environment and resources in the coastal and inland waters areas of Bangladesh.
3). To contribute to the safe and smooth marine transportation, the safe fishery activities, the prompt emergency rescue of local residents, and the support of other socio-economic activities in the coastal and inland waters areas of Bangladesh.
4). Contribute to the prevention of maritime crimes such as smuggling, poaching and stowing away in the coastal and inland waters areas of Bangladesh.

10. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 6. With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in (2) - 7 of Annex 6, both sides confirmed that such customs duties, internal taxes and other fiscal levies include VAT, commercial tax, income tax and corporate tax, which shall be clarified in the bid documents by BCG during the implementation stage of the Project.

Bangladesh side also agreed that such customs duties, internal taxes and other fiscal levies which may be imposed in the People's Republic of Bangladesh with respect to the purchase of the products and/or services procured by Japanese Grant under

the Project should be exempted or be paid by BCG without using the Grant.

BCG assured to prepre Development Project Proposal (DPP) based on the Draft Report as soon as possible and obtain DPP approval for the Project before the signing of Exchange of Note in order to ensure the necessary budget allocation including the aboved mentioned customs duties, internal taxes and other fiscal levies which are preconditions of implementation of the Project.

11. Monitoring during the implementation
The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 7 The timing of submission of the PMR is described in Annex 6

12. Project completion
Both sides confirmed that the Project completes when all the equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

13. Ex-Post Evaluation
JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Bangladesh side is required to provide necessary support for the data collection.

14. Schedule of the Study
JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Bangladesh side around the beginning of the March, 2018.

15. Environmental and Social Considerations
The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as C because the Project is likely to have minimal adverse impact on the environment under the Guidelines.

16. Other Relevant Issues

16-1. The Bangladesh side explained to the Team that BCG is an independent and civilian institution under the direct command of Public Security Division, Ministry of Home Affairs, and absolutely cut from the chain of command of military forces.

16-2. The Bangladesh side assured that vessels and equipment to be provided by the Project shall be used for civilian purposes only such as search and rescue operations, maritime pollution preventing activities etc.

16-3. The Bangladesh side understood the principle of the Japan's Development Cooperation Charter (Annex 8), which stresses that Japan's ODA must not be utilized for military purpose or promoting international conflicts, and agreed to following conditions regarding the vessels and equipment to be procured in the Project; Vessels and equipment under the Project;

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

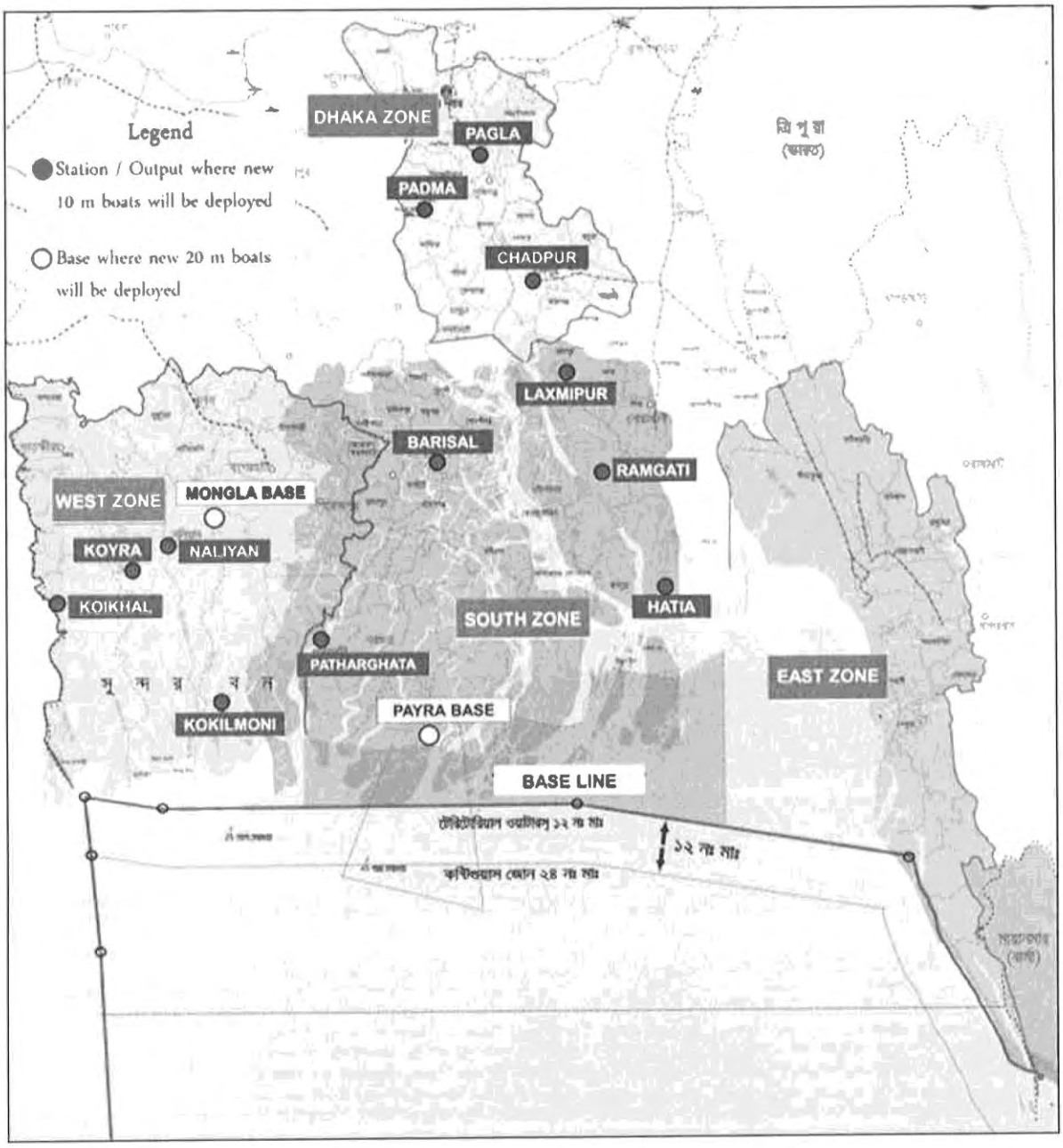
3. Basic Principles of Project Grants

(1) Implementation Stage

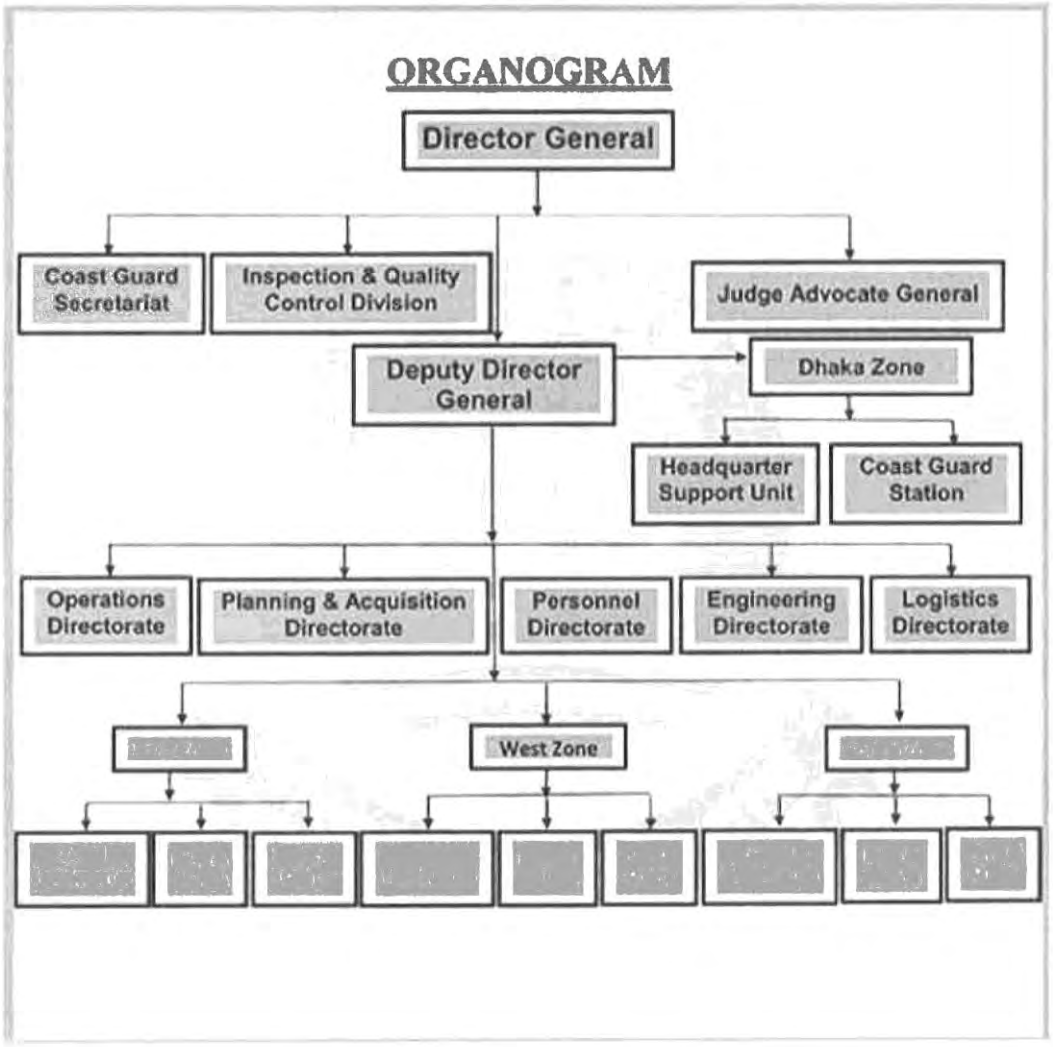
1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

PROJECT SITE



ORGANIZATION CHART OF BANGLADESH COAST GUARD



CONFIDENTIAL

Annex 3 : Cost Estimate of the Project

1. Cost Estimate borne by government of Japan

This item is closed due to the confidentiality.

2. Cost Estimate borne by government of Bangladesh

Item	Detail	Estimated Cost (MillionTk)	Estimated Cost (Million yen)
Commissions for Banking services	Commissions to the Japanese bank for banking services based upon the Banking Arrangement (B/A), including Advising commission of Authorization to Pay (A/P). and Payment commission	1.97	2.75
Cost / expenses for domestic transportation	Fuel and LubeOil to be consumed for the domestic transportation of the new rescue boats from the unloading port to the designated birthing / mooring area and transportation of the portable marine pollution control equipment.	0.96	1.3
CDVAT	To handle duty (Tax) exemption procedures (payment of Custom Duty Value Added Tax : CDVAT), provide requisite legal and/or administrative documentations for customs clearance to customs broker/forwarder to be employed by the Contractor and make payment of all demurrage required at the port of disembarkation for the materials and equipment imported for the Project.	621.7 + (Demurrage) (CDVAT: 33% of the equipment & transport cost) + (Demurrage)	868.56 + (Demurrage)
VAT	VAT imposed in Government of Bangladesh on the products and/or services procured by Japanese company for the implementation of the Project	293.1 (VAT: 15% of the contract(s) with Contractor(s) and Supplier(s)	409.4
Total		917.7 + (Demurrage)	1,282.0 + (Demurrage)

Notes:

1) Conditions of cost estimation
   - Estimated timing: September 2017
   - Exchange rates: USD 1.00= JPY 112.84
     Tk1.00 = JPY 1.397

2) Others
   The project is implemented in accordance with the system of Japanese Grant. The above cost estimation does not assure the ceiling cost on the E/N and will be reviewed by the Government of Japan before the conclusion of E/N between the two governments. Cost estimate borne by the Government of Bangladesh in the above is provisional, and requires review for implementation.

Annex 4 : Project Implementation Schedule

Estimated Timeline for the Project Implementation is as follows:

Approval of DPP	February 2018
E/N and G/A	March 2018
Detailed Design and Procurement of the Contractor	April – September 2018
Manufacturing, and Delivering of the Equipment (including operation and maintenance training in Japan)	October 2018 – May 2020
Defect Liability Inspection	May - 2021

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal

-Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

-Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

-Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.

b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.

2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

Attachment 1 (Annex 5)

PROCEDURES OF JAPANESE GRANT

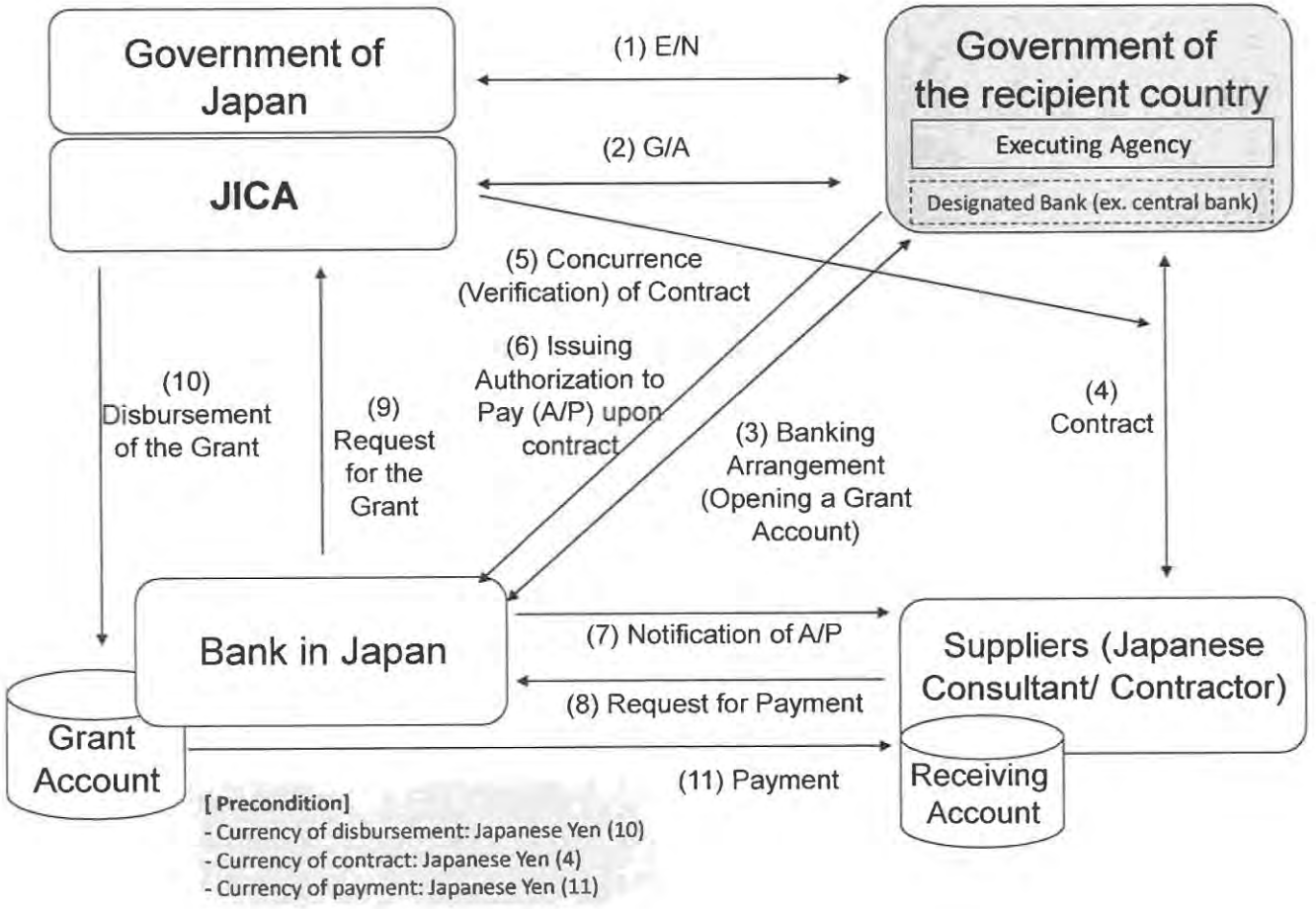
Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2)Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3)Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

Notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.

2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

FINANCIAL FLOW OF JAPANESE GRANT (A/P TYPE)



Annex 6

MAJOR UNDERTAKINGS TO BE TAKEN BY THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

1. Specific obligations of the Government of the People's Republic of Bangladesh which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	Obtaining ECNEC's approval for DPP for the Project	Before E/N signing	PSD/ BCG	N/A	
2	Consolidating enough and proper berthing facilities for all vessels provided by the Project	Before G/A signing	PSD/ BCG	N/A	
3	To open bank account (B/A)	within 1 month after the signing of the G/A	PSD/ BCG	N/A	
4	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of the contract with Consultant	PSD/ BCG	N/A	
5	To submit Project Monitoring Report (with the result of Detail Design)	before preparation of bidding documents	PSD/ BCG	N/A	

Note: B/A: Banking Arrangement, A/P: Authorization to pay,

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Contractor(s) and Supplier(s)	within 1 month after the signing of the contract(s) with Contractor(s) and Supplier(s)	PSD/ BCG	N/A	
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A		PSD/ BCG	1.97 million TK	
	1) Advising commission of A/P	within 1 month after the signing of the contract(s) with Contractor(s) and Supplier(s)			
	2) Payment commission for A/P	every payment for Consultant, Contractor(s) and Supplier(s)			
3	To secure sites and spaces for installation of the equipment	1 month before installation of each equipment	BCG	N/A	
4	To enable provision of electric power supply for the equipment	1 month before installation of each equipment	BCG	N/A	
5	To ensure prompt unloading and customs clearance at ports of disembarkation in recipient country and to assist the Contractor(s) and/or Supplier(s) with internal transportation therein	during the Project	PSD/ BCG	N/A	
6	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	PSD/ BCG	N/A	
7	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted	during the Project	PSD/ BCG	914.8 million Tk + (Demurrage)	
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	PSD/ BCG	N/A	
9	To submit Project Monitoring Report after each work under the contract(s) such as shipping, hand over, installation and operational training	within 1 month after completion of each work	BCG	N/A	
10	To submit Project Monitoring Report (final)	within 1 month after signing of Certificate of Completion for the works under the contract(s)	BCG	N/A	
	To submit a report concerning completion of the Project	within 6 months after completion of the Project	BCG	N/A	

2. Other obligations of the Government of Bangladesh funded with the Grant

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:
Executing Agency	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:
Line Ministry	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

1: Project Description

1-1 Project Objective

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original *(at the time of outline design)* name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual *(PMR)*

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original *(at the time of outline design)*
Actual *(PMR)*

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original *(at the time of outline design)*

Actual *(PMR)*

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (*at the time of outline design*)

Potential Risks	**Assessment**
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):

Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
- Contractor's Main Staff List

4. Check list for the Contract (including Record of Amendment of the Contract/ Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
8. Pictures (by JPEG style by CD-R) (PMR (final)only)
9. Equipment List (PMR (final)only)
10. Drawing (PMR (final)only)
11. Report on RD (After project)

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C−D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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-

-

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

(Provisional Translation)

Cabinet decision on the Development Cooperation Charter

February 10, 2015

Japan's Official Development Assistance Charter, decided by the Cabinet in 1992 and revised in 2003, has been the foundation of Japan's Official Development Assistance (ODA) policy.

Currently, as it commemorates the 60th anniversary of its ODA, Japan and the international community are at a major crossroads. In this new era, Japan must strongly lead the international community, as a nation that contributes even more proactively to securing peace, stability and prosperity of the international community from the perspective of "Proactive Contribution to Peace" based on the principle of international cooperation, while continuing to adhere to the course that it has taken to date as a peace-loving nation. This is also a juncture at which Japan's ODA activities should further evolve so as to strengthen further its role as an equal partner of developing countries in the joint efforts to address challenges facing the international community.

In the international community today, a huge amount of private funding flows to the developing countries, and various actors including the private sector, local governments, and non-governmental organizations (NGOs) are involved in global activities. These actors play important roles in dealing with development challenges and promoting sustainable growth in developing countries. Under these circumstances, Japan needs to address such development challenges not only through ODA but also by mobilizing various other resources.

Based on this recognition, the Government of Japan revises the ODA Charter and hereby establishes the Development Cooperation Charter, also bearing in mind the National Security Strategy decided by the Cabinet on December 17, 2013.

For the purpose of this Charter, the term "development cooperation" refers to "international cooperation activities that are conducted by the government and its affiliated agencies for the main purpose of development in developing regions." In this connection, "development" in this Charter is used in a broader sense rather than in the narrow sense; it also encompasses such activities as peacebuilding and governance, promotion of basic human rights and humanitarian assistance.

Such development cooperation needs to enhance synergetic effects for development through strengthened collaboration with other funding and activities of the Government of Japan and its affiliated agencies such as Other Official Flows (OOFs) and United Nations Peacekeeping operations (PKOs) as well as with private funding and activities whose objective is development or which contribute to development (i.e., funding and activities of various entities such as the private sector, local governments and NGOs).

Development Cooperation Charter
-For peace, prosperity and a better future for everyone-

At present the international community is in the midst of a transformation. It is experiencing changes in the global power balance on an unprecedented scale, an expansion of international economic activity due to rapid progress in globalization and technological innovation, deepening interdependency, and the growing influence of various non-state actors. Against this background, all kinds of risks in every part of the world can have a direct negative impact on the peace, stability and prosperity of the world including Japan. These risks range from transboundary challenges such as environmental issues and climate change, water-related issues, natural disasters, food crises and hunger, energy issues, and infectious disease, threats to the peace and stability of the international community such as international terrorism, transnational organized crimes, and piracy, to humanitarian issues in fragile states, regional conflicts, and political instability. In addition, as emerging and developing countries are taking on more economic importance, economic growth in these countries will affect the course of the growth of the global economy. Inclusive, sustainable and resilient growth in these countries is thus essential for the stable growth of the global economy as a whole. Furthermore, in light of Japan's current economic and social situation, deepening its cooperative relations with the international community including the emerging and developing countries and tapping into their vigor are the keys to its own sustainable prosperity. Amid all these changes, a peaceful, stable and prosperous international community is increasingly intertwined with the national interests of Japan. To secure its national interests, it is essential for Japan, as a "Proactive Contributor to Peace" based on the principle of international cooperation, to work together with the international community including developing countries to address global challenges.

The development challenges confronting the world have also changed significantly. While many countries, notably emerging countries, achieved progress in development, even such countries are experiencing problems such as political and economic instability owing to poor governance and other factors, internal disparities, sustainability issues, and the "middle income trap." Furthermore, countries such as small island countries have particular vulnerability and other issues that have emerged which cannot be assessed by income levels alone. In addition, countries are being left behind in terms of growth due to various vulnerabilities resulting from internal conflicts and political instability as well as their geological and climate conditions. To overcome such vulnerabilities, these countries are urgently in need not only of humanitarian assistance but also securing the stable foundations of development such as peace, stability, rule of law, governance and democratization, as well as setting in motion the process of development. In addition, in context of inclusive development that leaves no one behind, it is important to ensure that a wide range of stakeholders in society including women participate in every phase of development. As such, the world is facing more diverse and complex challenges. These challenges are increasingly widespread, transcending national borders as the world is increasingly globalized. In the world faced with such difficult challenges, individual countries are required more than ever to exercise ingenuity and take action.

I. Philosophy

Bearing in mind the recognition described above, Japan will implement development cooperation, that is, "international cooperation activities conducted by the government and its

affiliated agencies for the main purpose of development in developing regions", based on the philosophy described below.

(1) Objectives of development cooperation

Japan recognizes that all peoples of the world have the right to live in peace, free from fear and want. Since 1954, when it joined the Colombo Plan, Japan has consistently sought peace and prosperity of the international community, supported the development efforts of developing countries through development cooperation that centers on its official development assistance (ODA), and made efforts to solve global issues. This embodies the basic stance of Japan to earnestly tackle challenges facing the international community as a responsible major player. Many years of Japan's steady down-to-earth efforts to this end has won the respect and confidence of the international community, which expects Japan to play a more proactive role for the peace, stability and prosperity of the international community in a way commensurate with its national capabilities.

Japan overcame a range of problems and realized a period of high economic growth and a peaceful stable society with a small economic disparity to become the first developed country in Asia. At the same time, Japan has taken advantage of its philosophy in development cooperation, experience and expertise to deliver distinctive cooperation to Asian and other countries to support their economic growth. In these processes, it has experienced many successes and failures, and has accumulated a wealth of experience, expertise and lessons learned. The experience, expertise and lessons thus learned are not limited to those from the postwar high-growth period but also those from addressing present challenges such as declining and aging population, and reconstruction after the earthquake. Such experience, expertise and lessons learned contribute to addressing development challenges facing the world today, and the international community also has high expectations in this regard.

Bearing in mind the expectations of the international community, Japan, as a responsible major player in the world, will contribute more actively and exert strong leadership in addressing challenges facing the international community - especially development challenges and humanitarian concerns. Doing so is of great significance from the perspective of solidifying the confidence that the international community has in Japan.

In today's international community, it is no longer possible for any nation to secure peace and prosperity by itself. Under such circumstances, the path Japan should take to continue developing a prosperous and peaceful society lies in a serious effort to tackle various global challenges in cooperation with the international community, including developing countries, for a peaceful, stable and prosperous international community, and, in this process, to build solid and constructive relationships with various actors in the international community. Development cooperation provides one of the most important means for Japan in its agile implementation of such diplomacy; it carries significance as an "investment for the future."

Based on this recognition, Japan will promote development cooperation in order to contribute more proactively to the peace, stability and prosperity of the international community. Such cooperation will also lead to ensuring Japan's national interests such as maintaining its peace and security, achieving further prosperity, realizing an international environment that provides stability, transparency and predictability, and maintaining and protecting an international order based on universal values.

In the present international community, various actors including private companies, local governments and non-governmental organizations (NGOs) play an increasingly important role in addressing development challenges and supporting sustained growth of developing countries. It is therefore important to mobilize a wider range of resources that are not limited to ODA. In this context, ODA, as the core of various activities that contribute to development, will serve as a catalyst for mobilizing a wide range of resources in cooperation with various funds and actors and, by extension, as an engine for various activities aimed at securing peace, stability and prosperity of the international community.

(2) Basic policies

Japan's development cooperation for the objectives described above should be based on the philosophy that has been formed over its long history and should be further developed. In this context, the directions for development cooperation are defined as basic policies below:

A. Contributing to peace and prosperity through cooperation for non-military purposes

Japan's development cooperation has contributed to peace and prosperity of the world through cooperation for non-military purposes, which is one of the most suitable modalities for international contribution. Japan has consistently followed the path of a peace-loving nation since the end of World War II. Japan's development cooperation has been highly regarded by the international community as an embodiment of the country's sincere aspirations for peace and prosperity of the international community. Japan will continue to uphold this policy and comply with the principle of avoiding any use of development cooperation for military purposes or for aggravation of international conflicts, in proactively contributing to securing peace, stability and prosperity of the international community.

B. Promoting human security

Human security - a concept that pursues the right of individuals to live happily and in dignity, free from fear and want, through their protection and empowerment - is the guiding principle that lies at the foundation of Japan's development cooperation. Japan will thus focus its development cooperation on individuals - especially those liable to be vulnerable such as children, women, persons with disabilities, the elderly, refugees and internally-displaced persons, ethnic minorities, and indigenous peoples - and provide cooperation for their protection and empowerment so as to realize human security. At the same time, Japan will make efforts so that this basic policy will be understood and accepted widely among its partner countries, thereby mainstreaming the concept even further in the international community. Likewise, from the standpoint of its people-centered approach, Japan will also proactively contribute to promoting basic human rights, including women's rights.

C. Cooperation aimed at self-reliant development through assistance for self-help efforts as well as dialogue and collaboration based on Japan's experience and expertise

In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together. These are some of the good traditions of Japan's cooperation which have supported self-help efforts of developing countries and aimed at future self-reliant development. On the basis of these traditions, Japan will continue to provide cooperation aimed at developing countries'

self-reliant development by emphasizing their own initiatives and self-help efforts as well as further deepening dialogue and collaboration with them while taking advantage of Japan's experience and expertise. In these processes, Japan will attach importance to building the foundations of self-help efforts and self-reliant development such as human resources, socio-economic infrastructure, regulations and institutions. It will also go beyond waiting for requests from partner countries by focusing on dialogue and collaboration with diverse actors not limited to governments and regional agencies of these countries, including proactively presenting proposals while giving full consideration to policies, programs and institutions related to development in the country concerned.

II. Priority policies

(1) Priority issues

In line with the philosophy described above, Japan sets out the following priority issues for development cooperation, while taking note of the inter-relationships between them, in order to deal with development challenges that are becoming more diverse, complex and broadly based, and also to achieve peace, stability and prosperity of the international community.

A. "Quality growth" and poverty eradication through such growth

The world's poor population is still large in number, and reducing poverty, especially eradicating absolute poverty, is the most fundamental development challenge. Especially as regards fragile states that have not been able to grasp the opportunities for development for different reasons and as regards people in vulnerable situations, it is important to provide both assistance from a humanitarian point of view and assistance designed to set the development process in motion and overcome vulnerability.

At the same time, in order to resolve the poverty issue in a sustainable manner, it is essential to achieve economic growth through human resources development, infrastructure development and establishment of regulations and institutions as well as the growth of the private sector enabled by the aforementioned actions, which are aimed at self-reliant development of developing countries. However, such growth should not be merely quantitative in nature, given that some of the countries that have achieved a measure of economic growth face challenges such as widening disparities, sustainability issues, inadequate social development, and political and economic instability. Rather, it should be "quality growth". Such growth is *inclusive* in that the fruits of growth are shared within society as a whole, leaving no one behind. It is *sustainable* over generations in terms of consideration to, among other aspects, harmony with the environment, sustained socioeconomic growth, and addressing global warming. And it is *resilient*, able to withstand and recover from economic crises, natural disasters and other shocks. These are some of the challenges Japan has tackled in its postwar history. Japan will take advantage of its own experience, expertise and technology as well as lessons learned in order to provide assistance to realize "quality growth" and poverty eradication through such growth.

From this perspective, Japan will provide assistance necessary to secure the foundations and the driving force for economic growth. Its scope includes: the development of industrial infrastructure and industries through improvements in such areas as infrastructure, finance and trade and investment climate; sustainable cities; introduction of information and communications technology (ICT) and high technology; promotion of science, technology and innovation; research and development; economic policy; vocational training and industrial human resources development; employment creation; and the promotion of agriculture, forestry and fisheries that includes the development of food value chains. At the

same time, Japan will provide assistance necessary to promote people-centered development that supports basic human life, taking full account of the importance of human and social development. It encompasses health care, safe water and sanitation, food and nutrition, quality education for all, disparity reduction, empowerment of women, culture and sports that brings about spiritual affluence.

B. Sharing universal values and realizing a peaceful and secure society

Stable development through "quality growth" will not be achieved unless the rights of individuals are guaranteed, people can engage in economic and social activities with a sense of safety, and the society is managed equitably and stably. With a view to solidifying the foundations for such development, Japan will provide assistance so as to share universal values such as freedom, democracy, respect for basic human rights and the rule of law as well as to realize a peaceful, stable and secure society.

The establishment of the rule of law, the realization of good governance, the promotion and consolidation of democratization, and respect for basic human rights including women's rights constitute the basis for effective, efficient and stable economic and social activities, and thereby support social and economic development. They also hold the key to realizing an equitable and inclusive society including reducing disparities. Japan will thus provide the necessary assistance in such areas as: development of legal and judicial systems that involves the development of positive law and the training of legal and judicial experts including experts in the correction and rehabilitation of offenders; development of economic and social systems; improvements in governance which include the training of civil servants and institutional capacity building for anti-corruption and other purposes; development of a democratic political structure including an electoral system; and democratization process with a focus on the media and education for democracy.

Peace, stability and security are prerequisites for nation-building and development. Accordingly, Japan will comprehensively address a wide range of factors causing conflict and instability, including poverty. It will also provide seamless assistance for peacebuilding from conflict prevention, emergency humanitarian assistance in the conflict situation, and promotion of conflict termination to emergency humanitarian assistance and assistance for recovery, reconstruction, and development in the post-conflict stage. Such assistance will address a range of needs such as: humanitarian assistance for refugees and internally-displaced persons; protection and participation of women and the socially vulnerable; reconstruction of social and human capital; the restoration of governance functions based on a trusting relationship between the government and the public; the removal of landmines and unexploded ordnance and the collection of small arms; and the restoration of public order. In natural disasters and other emergencies, Japan will provide prompt assistance taking into account longer-term recovery and reconstruction. In view of the fact that threats to stability and security can hamper socio-economic development, Japan will also provide assistance to enhance capacities in developing countries such as: the capacity of law enforcement authorities including capabilities to ensure maritime safety; the capacity of security authorities including capabilities to combat terrorism and transnational organized crime including drug trafficking and trafficking in persons; and the capacity of developing countries in relation to global commons such as seas, outer space, and cyberspace.

C. Building a sustainable and resilient international community through efforts to address global challenges

Transboundary challenges facing humanity include environmental issues and climate change, water related issues, major natural disasters, infectious diseases, food issues, and energy issues. These challenges significantly affect not only developing countries but also the international community as a whole, causing damage to many people with particularly serious impact likely on the poor and other vulnerable people.

These global challenges cannot be dealt with by a single country and require united efforts at the regional level or by the international community as a whole. Taking full account of the international development goals such as the Millennium Development Goals (MDGs), the post-2015 development agenda and the discussions regarding these goals, Japan will take the lead in addressing these challenges including through participation in the formulation of international goals and guidelines and active efforts to achieve these goals. Through these efforts, Japan will seek to contribute to building a sustainable and resilient international community.

In this context, Japan will address challenges such as: actions against climate change including the creation of a low carbon society and adaptation to adverse effects of climate change; infectious diseases control; promotion of universal health coverage; mainstreaming disaster risk reduction; disaster risk reduction and post-disaster recovery measures; conservation of biodiversity and the sustainable use of resources from forests, farmlands and oceans; promotion of a sound water cycle; environmental management and other environmental-related initiatives; responses to demographic challenges including an aging population; food security and nutrition; sustainable access to resources and energy; closing the digital divide.

(2) Priority policy issues by region

In view of the increasingly diverse, complex, and broader-based development challenges and the progress in globalization in the international community today, it is necessary to implement cooperation that cater to the needs and characteristics of each region while maintaining a global perspective. Bearing in mind the priority policy issues for each region mentioned below, Japan will provide more focused cooperation in a strategic, effective and agile manner while coping flexibly with ever changing situations. In this process, attention will be paid to the increasing relevance of recent developments such as: moves toward regional integration such as establishment of regional communities; efforts to address trans-boundary issues at the regional level; efforts toward greater-area development; efforts to strengthen inter-regional connectivity; and increasing connectivity among regions. In addition, Japan will extend necessary cooperation to countries based on their actual development needs and affordability. These include countries that despite progress in development, are laden with challenges that hamper sustained economic growth, notably the so-called "middle income trap," as well as with development challenges including global challenges such as exposure to natural disasters, infectious diseases, and environmental issues and climate change; small island countries and others that are faced with special vulnerabilities despite having attained a certain level of per capita income.

Asia is a region that has a close relationship with Japan and high relevance to its security and prosperity. With this recognition, Japan will extend development cooperation to the region.

Particularly with respect to the Association of Southeast Asian Nations (ASEAN) region, Japan will support the establishment of the ASEAN Community as well as the comprehensive and sustained development of ASEAN as a whole. This will include a focus on the

development of both physical and non-physical infrastructure including that which is needed for strengthening connectivity and the reduction of disparities both within the region and within individual countries. Japan will specifically strengthen assistance to the Mekong region as well as continue its assistance to countries that have already achieved a certain level of economic growth to keep them from being caught in the "middle income trap" through assistance to promote increased productivity and technical innovations such as human resources development. At the same time, priority will be attached to assistance that raises disaster risk reduction and disaster relief capabilities and promotes the rule of law, which constitutes the basis for stable economic and social activities. Japan will also promote cooperation with ASEAN as a regional organization to support united efforts to tackle its challenges.

With respect to South Asia, Japan will support regional stability and the fulfillment of a variety of level of regional potential. This will involve cooperation for building the foundations for economic development through growth, including cooperation on improving trade and investment climate especially by developing infrastructure and strengthening connectivity in the Asian region. Japan will also extend cooperation on basic human needs such as health care, sanitation and education, and on socio-economic infrastructure development for narrowing the gap between the rich and the poor.

With respect to Central Asia and the Caucasus, Japan will support nation-building and regional cooperation for the long-term stability and sustainable development of the region and its neighboring regions, while taking into consideration the disparities within the region.

With respect to Africa, Japan will provide assistance through joint efforts of the public and the private sector through the process of the Tokyo International Conference on African Development (TICAD) so that Africa's remarkable growth in recent years based on expanding trade, investment and consumption will lead to further development for both Japan and Africa. Japan will take particular note of Africa's initiatives toward regional development and integration at the sub-regional level. Meanwhile, Africa still has countries that are prone to conflict or are burdened with an accumulation of serious development challenges. Bearing this in mind, Japan will continue to actively engage in assistance for peacebuilding and assistance to fragile states from the perspective of human security, providing necessary assistance with a view towards establishing and consolidating peace and stability, and solving serious development challenges in the region.

The Middle East is an important region not only for Japan but also for the international community as a whole in terms of peace, stability and stable energy supply. With a view to proactively contributing to the peace and stability of the region and to the coexistence and mutual prosperity of Japan and the Middle East, necessary assistance will be provided to address challenges such as peacebuilding, reducing disparity and human resources development.

With respect to Central and Eastern Europe, Japan will support the moves toward the integration of Europe, which shares universal values such as freedom, democracy, respect for basic human rights and the rule of law, by providing assistance necessary to this end.

With respect to Latin America, Japan will provide assistance to foster an environment more conducive to economic development through trade and investment among others, and to extend necessary cooperation against a backdrop of internal disparities which exist even in

countries that have achieved considerable progress in development. Consideration will be given to the presence of ethnic Japanese ("*Nikkei*") communities in the region, which serves as a strong bond between Japan and the region.

With respect to small island countries in Oceania, the Caribbean and other regions also have vulnerabilities that are peculiar to small island countries. They are also faced with the challenge of coping with the effects of global environmental problems including: water scarcity, damage due to sea level rise and natural disasters associated with climate change. Japan will provide assistance based on individual development needs while bearing in mind the peculiarities of small island countries.

III. Implementation

(1) Implementation principles

Efforts will be made to implement development cooperation effectively and efficiently, while taking into account international discussion including on development effectiveness, so as to obtain maximum effect towards realizing the philosophy and implementing the priority policies described above. It is also necessary to give full consideration to the impacts of cooperation to the recipient countries and societies, and to the appropriateness of cooperation. Based on such considerations, Japan will implement development cooperation in accordance with the following principles.

A. Principles for effective and efficient development cooperation

(a) A more strategic approach

A more strategic approach should be taken to maximize the impact of Japan's development cooperation. In other words, it is important for the government and implementing agencies to work as one – in cooperation with diverse stakeholders – and to mobilize various resources available to Japan. It is also important to engage in the development cooperation cycle of policymaking, implementation and evaluation in an integrated manner.

On policymaking, it is necessary to fully recognize that development cooperation is one of the most important tools of Japan's foreign policy, which calls for strategic and agile responses to ever-changing international affairs. With this recognition, Japan will formulate strategic and effective policies and goals concerning development cooperation, prioritizing as appropriate, based on its foreign policy. In the process, Japan will thoroughly assess diverse factors such as: the state of affairs in the international community including developing countries; the development policies and programs of developing countries; and the strategic importance of the recipient country and the development challenges being addressed in relation to Japan. In addition, for the purpose of clarifying its development cooperation policies, thematic policies, regional policies, and country policies will be structured under this Charter.

In implementing development cooperation, Japan will enhance synergies between ODA and non-ODA finance/cooperation so as to make the most of resources of the government and its affiliated agencies. Furthermore, from the standpoint of its foreign policy and more effective and efficient development cooperation, Japan will organically combine technical cooperation, loan assistance and grant aid. It will also strive to increase the speed of implementation, improve related systems and operate them flexibly.

In the light of the importance of evaluation not only for improving effectiveness and efficiency but for accountability to the public, Japan will conduct evaluations at the policy and program/project levels and feed the results back to the decision-making and program/project

implementation processes. Such evaluations, while focusing on outcomes, will take into account the peculiarities and conditions of the recipients. Efforts will be made to undertake evaluation from a diplomatic point of view as well.

(b) Cooperation that takes advantage of Japan's strengths

Japan's human resources, expertise, advanced technology and systems today were developed in the process of overcoming various challenges as it underwent high economic growth and rapid demographic changes. These assets can be beneficial for developing countries in addressing similar challenges, both present and future; in fact, expectations for Japan are high in this regard. In implementing development cooperation, Japan will proactively adopt proposals from various actors in the private and other sectors. It will also work with universities and research institutions to make good use of their expertise and seek out their untapped capabilities. Japan's assistance in infrastructure development will not be limited to constructing physical infrastructure. It will also address the non-physical aspects that encompass developing systems for operating and maintaining such infrastructure as well as human resources development and institution building. Such an integrated approach will enable active utilization of Japan's experience and expertise. In addition, given that Japan's distinctive characteristics such as Japanese values and occupational culture are highly regarded by the international community, it will take into account the possibility of utilizing its soft power including the Japanese language.

(c) Proactive contribution to international discussions

Japan will strive to make its development cooperation policies better understood by the international community, and for this purpose, categorize the experiences and expertise gained in its development cooperation. To ensure that Japan's policies are adequately reflected in the process of shaping the philosophy and trends in international development cooperation, Japan will proactively participate in and contribute to relevant discussions at the United Nations, international financial institutions, the Organisation for Economic Co-operation and Development (OECD), especially its Development Assistance Committee (DAC), and other international frameworks.

B. Principles for securing the appropriateness of development cooperation

So as to secure the appropriateness of its development cooperation policies and individual programs/projects and to give consideration to the various impacts of such cooperation on the recipient countries and societies, Japan's development cooperation will be provided in accordance with the principles described below, and by comprehensively taking into account developing countries' development needs and socio-economic conditions, as well as Japan's bilateral relations with each recipient country.

(a) Situation regarding consolidation of democratization, the rule of law and the protection of basic human rights

Japan will pay adequate attention to the situation in the recipient countries regarding the process of democratization, the rule of law and the protection of basic human rights, with a view to promoting the consolidation of democratization, the rule of law and the respect for basic human rights.

(b) Avoidance of any use of development cooperation for military purposes or for aggravation of international conflicts

Japan will avoid any use of development cooperation for military purposes or for aggravation of international conflicts. In case the armed forces or members of the armed forces in

recipient countries are involved in development cooperation for non-military purposes such as public welfare or disaster-relief purposes, such cases will be considered on a case-by-case basis in light of their substantive relevance.

(c) Situation regarding military expenditures, development and production of weapons of mass destruction and missiles, export and import of arms, etc.

Japan will pay close attention to the situation in recipient countries regarding military expenditures, development and production of weapons of mass destruction and missiles, and export and import of arms, etc. This is done with a view to maintaining international peace and stability including the prevention of terrorism and the non-proliferation of weapons of mass destruction, and based on the position that developing countries should allocate their resources appropriately and preferentially for their own socio-economic development.

(d) Impact of development on the environment and climate change

In order to make development compatible with the environment and to achieve sustainable development, Japan will give thorough consideration to the impact of development on the environment and climate change, and implement development cooperation which takes full account of the environment.

(e) Ensuring equity and consideration to the socially vulnerable

In implementing development cooperation, Japan will pay full attention to the social impact and give full consideration to ensuring equity, while making efforts for participation of wide-ranging stakeholders in every phase of development cooperation, with a view to reducing disparities and in consideration of the socially vulnerable such as children, persons with disabilities, the elderly, ethnic minorities and indigenous peoples.

(f) Promoting women's participation

In the context of gender equality and greater role of women in development, Japan will encourage the participation of women at every phase of development cooperation and be more proactive in ensuring that women share equitably in the fruits of development, while giving consideration to the possible vulnerabilities of women and their special needs.

(g) Preventing fraud and corruption

It is necessary to prevent fraud and corruption in implementing development cooperation. While taking measures to encourage establishment of a compliance system by bid winners, Japan will work with recipient countries to create an environment conducive to preventing fraud and corruption, including the strengthening of governance in these countries. In this context, Japan will ensure adherence to appropriate procedures and strive to ensure transparency in the implementation process.

(h) Security and safety of development cooperation personnel

In order to ensure security and safety of development cooperation personnel, Japan will pay adequate attention to strengthening security and safety management capacity, gathering security information, taking security measures, and ensuring safety of workers in construction sites. Particularly in relation to assistance in politically unstable or unsafe areas such as assistance for peacebuilding, special security measures and arrangements will be implemented.

(2) Implementation arrangements

In view of the increasingly diverse, complex, and wider-based development challenges as well as the increasingly diverse development actors and development-related funds, Japan will strive to improve the implementation architecture of the government and the implementing agencies, strengthen collaboration at different levels, and reinforce the foundations for sustained implementation of development cooperation.

A. Improvement of the implementation architecture of the government and the implementing agencies

In implementing its development cooperation, the government will improve collaboration among the relevant ministries and agencies, with the Ministry of Foreign Affairs serving as a hub in charge of coordinating the planning of development cooperation policies. It will also ensure close collaboration between the government, which is responsible for planning policies, and the Japan International Cooperation Agency (JICA), which is responsible for implementation. At the same time, the government and JICA will further strive to develop the capacities of these organizations as well as to improve relevant systems and institutions, while clarifying the division of their roles and responsibilities. Especially to improve the competitiveness of its development cooperation, the government and JICA will address issues such as agility, expertise, knowledge accumulation, research capacity, reinforcement of the functions of offices abroad, human resources development and arrangements for emergency humanitarian relief. Consideration will be given to the role of JICA domestic offices as a node for various actors, including companies, NGOs, local governments, universities and research institutions, and the public at large.

B. Strengthening partnerships

In the international community today, various non-governmental actors play an increasingly important role in the development of developing countries. With this recognition, collaboration between JICA and other agencies responsible for other official funds such as the Japan Bank for International Cooperation (JBIC), Nippon Export and Investment Insurance (NEXI), and the Japan Overseas Infrastructure Investment Corporation for Transport and Urban Development (JOIN) will be strengthened. The government will also enhance mutually beneficial partnerships with various actors so as to serve as a catalyst for mobilizing a wide range of resources, including the private sector.

(a) Public-private partnerships and partnerships with local governments

Official funds including ODA will continue to play an important role in the development of developing countries. However, given that private flows currently far exceed official flows into developing countries, adequate consideration should be given to the fact that activities of the private sector now serve as a powerful engine for economic growth of developing countries. In Asia, hard (physical) and soft (non-physical) basic infrastructure built with development cooperation has contributed to improving the investment climate. Development cooperation's role as a catalyst promoted private investment, which in turn has led to economic growth and poverty reduction in the recipient countries. It is important to recognize that, through these processes, Asia has developed into an important market and investment destination for Japanese private companies, and therefore, an extremely important region for the Japanese economy. In addition, experience and expertise of Japanese local governments play an increasingly significant role in addressing many of the challenges facing developing countries.

In light of the above, the government will promote development cooperation through public-private partnerships and partnerships with local governments utilizing the resources of

the private sector and local governments and promoting private-led growth, in order to support economic development of developing countries more vigorously and effectively and to enable such development to lead to robust growth of the Japanese economy. Specifically, partnerships with Japanese companies including small and medium-sized enterprises, local governments, universities and research institutions, and other actors will be strengthened in order to implement cooperation aimed at creating an environment conducive to the promotion of trade and investment among others in such areas as human resources development, development of legislation and institutions, and development of infrastructure and relevant systems from planning to implementation phases in a consistent manner.

In promoting public-private partnerships, Japan's development cooperation will seek to serve as a catalyst for expanding economic activities, while utilizing excellent technology and expertise, and ample funds of the private sector for addressing the challenges faced by developing countries. In addition, taking full account of the priority policies of development cooperation described earlier, Japan will give consideration to ensuring inclusiveness, sustainability and resilience of growth as well as promoting capacity building so that private investment that is made along with development cooperation will contribute to "quality growth" in developing countries.

(b) Coordination in emergency humanitarian assistance and international peace cooperation

In the context of increasingly severe and frequent disasters, there is plenty of scope for contribution by Japan, a country known for its disaster risk reduction. For effective implementation of disaster relief and other emergency humanitarian assistance, coordination with international organizations, NGOs and other actors that have relevant expertise will be strengthened.

In addition, Japan will continue to promote coordination with international peace cooperation activities such as UN peacekeeping operations (PKOs) to maximize their effective implementation.

(c) Partnerships with international, regional and sub-regional organizations

With their expertise, impartiality and wide networks, international organizations can implement effective and efficient cooperation in sectors or regions that are less accessible in bilateral cooperation and by taking advantage of their distinctive characteristics. Such multilateral cooperation can bring about synergies if combined with bilateral cooperation. Japan will therefore continue its proactive collaboration with international organizations in such areas as humanitarian assistance, peacebuilding, governance and global issues. In addition, in view of the role played by international organizations in shaping philosophy and trends in international development cooperation, Japan, as a responsible member of the international community, will strive to increase its influence and presence in international organizations and, by extension, the international community so that it can play a leading role in creating international norms. Furthermore, Japan will hold regular consultations with individual international organizations for policy coordination to create synergies with bilateral cooperation. Special attention will be paid to ensuring accountability to the public as regards the impacts and evaluation of development cooperation through international organizations.

Japan will also reinforce its partnerships with regional and sub-regional organizations in view of the trend towards regional integration and the importance of a transboundary approach at the regional level.

(d) Partnerships with donors, emerging countries and other actors

Like Japan, other donors have accumulated experience and expertise over many years of their development cooperation. Donor partnerships are required for greater development effectiveness. From this perspective, Japan will continue to promote partnerships with other donors in development cooperation to maximize its effectiveness, bearing in mind the perspective of its foreign policy.

In implementing development cooperation, it is also important to take advantage of expertise, human resources and their networks, and other assets that have been accumulated in the recipient countries during the many years of Japan's development cooperation. Japan's triangular cooperation involving emerging and other countries capitalizes on such assets. In view of the high regard held by the international community, Japan will continue to promote triangular cooperation.

(e) Partnerships with the civil society

Partnerships with the civil society in and outside of Japan, including NGOs, civil society organizations (CSOs) and private foundations, are important both for greater cooperation effectiveness and for the equitable and stable development of the recipient countries as they can accurately assess varying views and needs on the ground and take timely flexible actions. With this recognition, the government will strategically strengthen partnerships with NGOs/CSOs, including reinforcing their participation and collaboration in development cooperation. From this standpoint, the government will support excellent development cooperation projects of Japanese NGOs/CSOs and their capacity development. In this regard, the Ministry of Foreign Affairs and JICA will focus on developing human resources and systems in the social development sector.

The government will also encourage the participation of its people from all walks of life in development cooperation and promote utilization of their expertise in society, with a view to expanding those involved in development cooperation, including the recruitment of JICA Volunteers. In this regard, the government will provide adequate information to the public and listen to the voice of the people at all levels including suggestions regarding development cooperation.

C. Strengthening the foundations for implementation

In order for Japan's development cooperation to fulfil the required role of realizing its philosophy and implementing its priority policies, the foundations for its sustained implementation including financial and human resources must be strengthened. Necessary efforts will be made to this end while being mindful of the internationally-agreed target of increasing ODA to 0.7% of gross national income (GNI) and fully recognizing its extremely severe fiscal situation.

(a) Information disclosure and promoting understanding of the public and the international community

Development cooperation is financed by tax revenues from the public. The public's understanding and support are therefore essential to secure necessary funds for the sustained implementation of development cooperation. For this purpose, the government will strive for effective public relations on development cooperation in Japan, timely and adequate disclosure of information on implementation, evaluation and other aspects of development cooperation to the wider public in a transparent manner. The government will also provide easy-to-understand explanations on the policies, significance, outcomes and evaluation of

Japan's development cooperation by the international community among other aspects. The government will also actively engage in public information abroad as it is important to make Japan's development cooperation and its achievements better known and understood by the international community including developing countries.

(b) Promoting development education

The government will promote development education at school and various other places. The objective is for the public to develop the capacity to assess various aspects of development challenges facing the world, understand how these challenges relate to Japan, regard the challenges as their own for independent analysis, and participate in actions to address these challenges.

(c) Developing human resources and solidifying the intellectual foundations for development cooperation

Fostering human resources for development cooperation remains an important issue in the face of diversifying development challenges. In particular, promoting development cooperation in such areas as the rule of law, governance, finance and ICT calls for strengthening the institutional structure such as by training and securing the necessary human resources. The government, industry and the academia will therefore work as one to promote the training and development of globally competent human resources with specialized expertise among consultants, researchers, students, and employees at universities, private sector and NGOs/CSOs in addition to the personnel of the Ministry of Foreign Affairs and JICA. Efforts will also be made to increase opportunities for such persons to fulfill their capacity within and outside Japan and to make institutional and structural improvements.

In order to play a leading role in shaping the philosophy and trends in international development cooperation by making use of its strength, the government will also work with universities and research institutions among others to reinforce the intellectual foundations, including research capabilities to plan and disseminate development cooperation. This may take the form of joint policy research by researchers from Japan and developing countries or intellectual networking of such researchers.

(3) Reporting on the status of the implementation of the Development Cooperation Charter

The government will report the status of the implementation of the Development Cooperation Charter in the "White Paper on Development Cooperation," which is reported annually to the Cabinet.

February 10, 2015
Cabinet Decision

Appendix 4 (4)

MINUTES OF TECHNICAL DISCUSSIONS
ON
PREPARATORY SURVEY
FOR
THE PROJECT FOR IMPROVEMENT OF RESCUE CAPACITIES AT THE COASTAL AND INLAND WATERS
IN
THE PEOPLE'S REPUBLIC OF BANGLADESH
(Explanation on Draft Preparatory Survey Report)

From November 26th to 29th, 2017, the Preparatory Survey Team for the explanation on the Preparatory Survey Report (Draft) (hereinafter referred to as "the Draft Report") held a series of technical discussion with the officials of Bangladesh Coast Guard (hereinafter referred to as "BCG") in Bangladesh

As the result of the above discussions, the both parties confirmed the items described in the attached sheet.

Dhaka, November 29th, 2017

Yoshio Isozaki	Captain M Maksud Alam
Chief of the Consultant	for Director General
Shipbuilding Research Centre of Japan	Bangladesh Coast Guard
JICA Preparatory Survey Team	Ministry of Home Affairs

The both parties have discussed on the Draft Report and confirmed as follows;

1. 2-2-2 Basic Specifications / P.13 -- Item (1) 2) Hull Part, a) Hull Construction

   The both parties agreed to amend material of the upper deck as "Upper deck shall be made of aluminum alloy or high-tensile steel". BCG declared to prefer the high-tensile steel deck.

2. 2-2-2 Basic Specifications / P.13 -- Item (1) 2) Hull Part, a) Hull Construction

   BCG requested to provide a bulwark of approx. 0.5m height together with 0.5m high handrail on the top of bulwark. A slit is provided for easy anchor handling at each side.

   <Background>
   BCG requested to provide the bulwark.

   The team pointed out the following points;
   - The bulwark may interfere with rescue operation in the bow area.
   - The bulwark may be damaged when approaching the berth or another vessel from the bow.
   - The bulwark may restrict the anchor handling operation.

   BCG confirmed the above-mentioned points can be managed well by BCG and the provision of slit in the bulwark can afford the smooth anchor handling operation.

3. 2-2-2 Basic Specifications / P.21 -- Item (2) 2) Hull Part, c) Steering Console

   BCG requested to provide the wheel house without the rear door and with the sliding type side windows.

4. 2-2-2 Basic Specifications / P.21 -- Item (2) 2) Hull Part, g) Other Provisions, Deck Awning

   BCG requested to cancel the installation of the detachable deck awning. But, sockets for the detachable stanchion shall be provided for future installation by BCG.

As a result of the examination after the Preparatory Survey, if possible, requests from BCG described above in the item 2, 3 and 4 will be reflected to the Technical Specifications of the rescue boats in detailed design stage, to the extent that the cost estimate to be agreed in the Minutes of Meeting is not exceed.

5. 2-4-3 Scope of Works / P.32 -- Item (1) 4)

The both parties confirmed that both 20m type boats and 10m type boats are transported to Chittagong port, as the both types of boats are currently planned to be transported onboard the same cargo vessel at the same time.
Necessary tug boats to transfer the rescue boats to the jetty of Chittagong Base of BCG East Zone after unloading from the cargo vessel are prepared by BCG at their own expense.
The necessary area for the confirmation tests of the rescue boats are managed by BCG.

The both parties confirmed that other items than the above relating to the technical issues are acceptable as they are in the Draft Report.

End

Appendix 5 : Project Monitoring Report (1st Version)

Appendix 5 Project Monitoring Repot (1st Version)

Organizational Information

Signer of the G/A (Recipient)	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:
Executing Agency	Bangladesh Coast Guard (BCG) Person in Charge (Designation) Contacts Address: Phone/FAX: Email:
Line Ministry	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____mil. Government of (_____): _____

1: Project Description

1-1 Project Objective

The objective of the Project is to strengthen Bangladesh Coast Guard's capabilities on Search and Rescue operation, to cope with maritime/river accidents and natural disasters through improvement of vessels and equipment of Bangladesh Coast Guard, thereby contributing to reduction damages by maritime/river accidents and natural disasters in coastal and inland waters of Bangladesh.

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1) Implementation of the project is aimed at strengthening the BCG's capabilities on SAR operation to cope with maritime/river accidents and natural disasters in the coastal area and inland waters of Bangladesh by providing the rescue boats with BCG, thereby contribute to the prompt and efficient rescue and relief activities when maritime/river accidents or natural disasters occur in such areas mainly in the western part and the southern part of Bangladesh.
2) BCG, which is the executing agency of this project, already owns and operates rescue boats and patrol boats, and can operate and maintain the new rescue boats without problems.
3) There is no problem in terms of environmental destruction and social and environmental considerations due to the rescue and relief activities on maritime/river accidents and natural disasters by the new rescue boats, and the evaluation in the JICA Guidelines for Environmental and Social Considerations is Category C.
4) The project can be carried out without any difficulty, the planned new rescue boats at are built and manufactured in Japanese shipyard and manufacturer through Japan's grant aid cooperation system.

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr 2017)	Target (Yr 2020)
1) Total Accommodatable Number of Rescued Persons	230	520
2) Required Time to arrive at Site (*1)	1 hour	40 minutes (10 m type Boat) 24 minutes (20 m type Boat)
3) Seaworthiness (Operable Conditions) (*2)	Less than Beaufort Scale 2	Less than Beaufort Scale 3 (10 m type Boat) Less than Beaufort Scale 4 (20 m type Boat)
(*1) Assumed distance to Site : 10 nautical miles (*2) Beaufort Scale 2 : Wave height 0.1 m - 0.5 m Beaufort Scale 3 : Wave height 0.5 m - 1.25 m Beaufort Scale 4 : Wave height 1.25 m - 2.5 m		
Qualitative indicators to measure the attainment of project objectives		
1). To enable the prompt prevention of oil spill from vessels and to contribute to the conservation of natural environment and resources in the coastal and inland waters areas of Bangladesh. 2). To contribute to the safe and smooth marine transportation, the safe fishery activities, the prompt emergency rescue of local residents, and the support of other socio-economic activities in the coastal and		

inland waters areas of Bangladesh.

2: Details of the Project

2-1 Location

Components	Original *(proposed in the outline design)*	Actual
1. 20 m type rescue boats	refer to Attachment 1	
2. 10 m type rescue boats	refer to Attachment 1	

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1. 20 m type rescue boats	・ Number of boats : 4 boats ・ Length (overall) : Approx. 20 m ・ width : Not less than 4.5 m ・ Displacement : Approx. 40 tons ・ Complement : 36 persons ・ Maximum Speed (at sea trial) : Not less than 25 knots ・ Endurance : Approx. 300 N.M. (at 15 knots) ・ Provisions : Marine Pollution Control Equipment (Oil spreading Prevention Devices, Oil Recovery, Oil Adsorbent and Container)	
2. 10 m type rescue boats	・ Number of boats : 20 boats ・ Length (overall) : Approx. 10 m ・ width : Approx. 3.0 m ・ Complement : 23 persons ・ Maximum Speed (at sea trial) : Not less than 15 knots ・ Endurance : Approx. 100 N.M. (at 12 knots) ・ Material : FRP ・ Provisions : Deck Awning (1 - Detachable, for sun and rain shade, from bow to stern)	

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	
Cabinet Approval	2/2018		
E/N	3/2018		
G/A	3/2018		
Detailed Design	4/2018-7/2018		
Tender Notice	7/2018		
Tender	9/2018		
(Lot 1) Construction Period of 20 m type rescue boats	10/2018-5/2020		
(Lot 2) Construction Period of 10 m type rescue boats	10/2018-5/2020		
Defect Liability Period	5/2021		
Project Completion	5/2020		

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant (<u>Confidential until the Bidding</u>)

Components			Cost (Million Yen)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
Equipment	1. 24 Rescue Boats			
	2. Transportation from Japan to the unloading port			
Consulting Services	Detailed Design and Supervision Work			
Total				

Note: 1) Date of estimation: September 2017
2) Exchange rate: 1 US Dollar = Yen, 1 Taka = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (Million Taka)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
24 Rescue Boats	1. Cost / expenses for domestic transportation		0.96	
			0.96	

Note: 1) Date of estimation: September 2017
2) Exchange rate: 1 US Dollar = 112.84 Yen, 1 Taka = 1.397 Yen

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original *(at the time of outline design)* name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual *(PMR)*

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original *(at the time of outline design)*

The newly required costs arising from the operation of the new rescue boats are as follows for the 20 m type rescue boats. For the 10 m type rescue boats, new expenses will not be incurred as they will replace the existing same type boats.

<Operation Procedure of 20 m Type Rescue Boat>

The newly operated rescue boats will make patrols in the season of monsoon and cyclone, because the necessity of search and rescue activities will be high. But regular patrols will not be planned in other seasons. And, the ratio between the operational days and the non-operation days will be 70% and 30%.

If the patrol system of the 20 m type rescue boats is inferred from the Japanese same type boats, it is appropriate to depart in the morning and return in the evening. Since the operation meeting and equipment inspections will be conducted (for about 1 hour) before departure in the morning and the work reporting, fuel loading and equipment inspections will be conducted (for about one hour) after returning in the evening, the daily patrol time is assumed to be about seven hours from around 9 AM until around 4 PM.

Based on these assumptions, the operation of the 20 m type rescue boat can be assumed as follows.

1) Monsoon Period from May to November (including post monsoon season)

The average days of operation per month are assumed to be 21 days, i.e. 126 days in total (berthing at the base : 9 days per month, 54 days in total). The daily patrol time is 7 hours in each boat. During the patrol, the boat will stop at each station and outpost, visit each port, etc. Therefore, it is assumed that the rescue boat will cruise at the cruising speed of about 15 knots for around 4 hours.

On the other hand, when natural disaster such as flood occurs, each boat will depart from the base, and will engage in the operation with the maximum speed of 24 knots to rescue and evacuate the residents. It is assumed that these incidents occur about 2 days each month during the monsoon season, and each rescue boat engages in rescue and relief operations for 7 hours a day.

2) Period other than Monsoon from December to May

During this period, each boat will not engage in regular patrols, and conduct search and rescue training around the base or stand by at the base.

It is assumed that each boat cruises for about an hour for 21 days every month, based on the assumption to conduct the training for about one hour on the engaged day.

Actual *(PMR)*

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original *(at the time of outline design)*

(1) Expected Annual Operation/Maintenance Expenses

Based on the survey data on the annual maintenance cost of Riverine Patrol Boat (length 22 m), which size is close to the 20 m type rescue boat among the existing BCG boats, annual operation/maintenance cost including the fuel oil cost and lubricant cost is assumed to be as shown in Table 1.

Table 1 Expected Annual Maintenance Expenses

Item	Cost (thousand Taka)	Remarks
Fuel Oil Cost	6,812	
Repairing Cost for Machinery	1,500	
Repairing Cost for Hull	4,000	including Dry Docking Cost
Total	approx. 12,500	

According to listening from BCG, it has been confirmed that the Ministry of Home Affairs of Bangladesh will budget the sufficient amount for the necessary fuel oil / lubricant cost and maintenance expenses as described above for the new rescue boats.

(2) Current Budget

The expenses for the operation and management of the BCG are covered by the budget allocation from the Ministry of Home Affairs. The transition of the budget for the past three years is shown in Table 2.

Table 2 Budget related to Operation of BCG (unit：million Taka)

(source ： BCG)

Item	2014 - 2015	2015 - 2016	2016 - 2017
for Procurement of Ships	1,994.0	1,080.0	4,980.0
for Fuel Oil / Lubricant	160.0	200.0	350.0
for Ship's Maintenance	123.0	97.0	180.0
for Procurement and Maintenance of Communication Facilities	3.0	4.5	5.0
for Procurement and Maintenance of other Equipment	100.0	198.5	340.0
for Education and Training of Personnel	3.5	4.5	15.0
Total	**2,383.5**	**1,584.5**	**5,870.0**

Total displacement of 111 vessels currently owned by BCG is about 6,820 tons. Meanwhile, Table 2 shows that the operation budget excluding ship procurement costs and education and training expenses is 875 million Taka in fiscal year 2017. As the displacement of four 20 m type rescue boats is about 160 tons, the annual maintenance cost shown in Table 2 will not change significantly from the present situation for the ratio with displacement.

The operation-related budget of BCG from 2014 to 2017 has changed in the range of 1,500 to 6,000 million Taka. Although the ship procurement budget may fluctuate greatly depending on the fiscal year, the budget for direct operation such as fuel oil and lubricant cost, maintenance expenses, etc. has increased enough for BCG to carry out the prescribed activities.

Actual *(PMR)*

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (*at the time of outline design)*

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

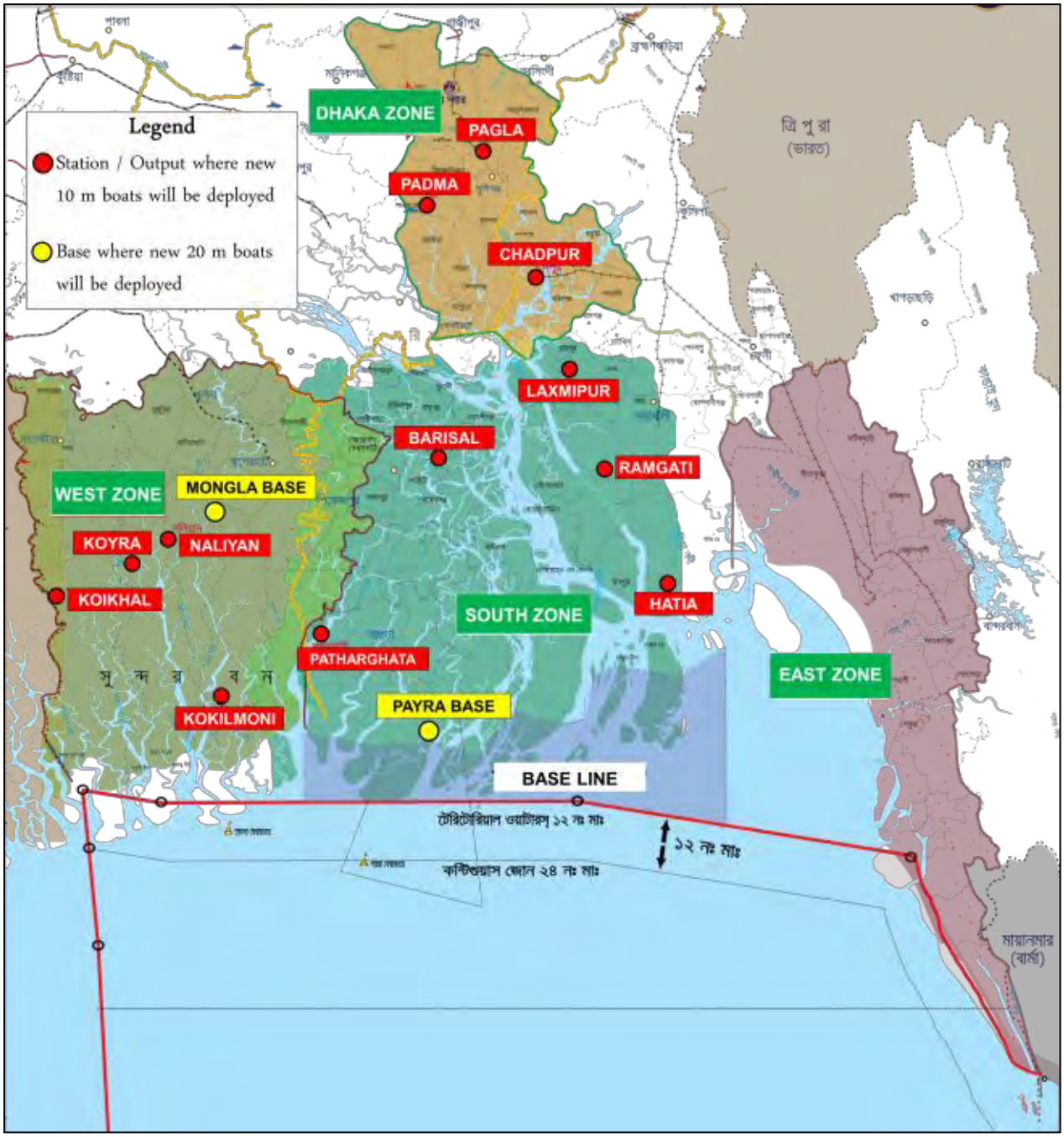
1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
- Contractor's Main Staff List

4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
8. Pictures (by JPEG style by CD-R) (PMR (final)only)
9. Equipment List (PMR (final)only)
10. Drawing (PMR (final)only)
11. Report on RD (After project)

Attachment 1

PROJECT LOCATION MAP



Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C－D	Price (Increased) F=C＋D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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-
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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
（Actual Expenditure by Construction and Equipment each）

		Domestic Procurement （Recipient Country） A	Foreign Procurement （Japan） B	Foreign Procurement （Third Countries） C	Total D
Construction Cost		(A/D%)	(B/D%)	(C/D%)	
	Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
	others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost		(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost		(A/D%)	(B/D%)	(C/D%)	
Total		(A/D%)	(B/D%)	(C/D%)	

Appendix 6 : References

Appendix 6 References

No.	Title	Form (Book, Video, Map, etc.)	Original or Copy
1	7th Five Year Plan FY2016 – FY2020	Book	Copy
2	South-South Cooperation in the Regional Context (Background paper for the preparation of the 7th Five Year Plan)	Book	Copy
3	Opportunities and Strategies for Ocean and River Resources Management (Background paper for preparation of the 7th Five Year Plan)	Paper	Copy
4	Environment, Forestry and Biodiversity Conservation （Background Paper for Seventh Five Year Plan）	Paper	Copy
5	Nutrition Background Paper to inform the preparation of the 7th Five Year Plan	Paper	Copy
6	Development Planning in Bangladesh : 7th Five Year Plan and SDG Implementation	Book	Copy
7	Roadmap for Implementing SDGs in the 7th Five Year Plan of Bangladesh	Book	Copy
8	National Plan for Disaster Management 2010-2015	Book	Copy
9	2016 Statistical Year Book Bangladesh	Book	Copy
10	Statistical Pocket Book Bangladesh 2016	Book	Copy
11	Climate of Bangladesh	Book	Copy
12	Climate Change and Disaster Management （Sectoral inputs towards the formulation of Seventh Five Year Plan (2016 – 2021)）	Paper	Copy
13	Standing Orders on Disaster	Paper	Copy
14	The Coast Guard Act, 1994	Paper	Copy
15	Territorial Waters and Maritime Zones Act, 1974	Paper	Copy
16	Bangladesh Gadget, Additional, March 13, 2016	Paper	Copy
17	MOHA Organogram	Paper	Copy
18	BCG Organogram	Paper	Copy
19	BCG Base, Station and Outpost	Paper	Copy
20	SAR Operation by Bangladesh Coast Guard Force	Paper	Copy
21	Information Relating to the CG Activities : Year 2014 – 2016	Paper	Copy
22	Coast Guard Order (Coast Guard Order Regarding Paint Scheme, Colour Shade and Identification Marking on Hull of BCG Ships and Craft)	Book	Copy
23	Questionnaire for JICA	Paper	Original
24	Location Map for Deployed Rescue Boats	Paper	Original
25	BCG West Zone HQ Organogram	Paper	Original
26	Presentation on BCG West Zone	Paper	Original
27	Brief on Coast Guard West Zone	Paper	Original
28	Briefing Format - Station NALIAN	Paper	Original
29	Presentation on Khulna Shipyard Limited	Paper	Original