

CHAPTER ELEVEN

TRANSPORT AND COMMUNICATION

For the socio-economic development of a country, a sophisticated and well-planned transport and communication system plays a vital and immeasurable role. It is very much necessary to make a developed and integrated transport and communication system that will connect Bangladesh with international and regional road network as well as with other ICT networks. The total length of highways in the country is 22,476 km up to February 2023. Government has taken various initiatives for ensuring a disciplined road transport sector and controlling road accident by applying modern technology to national highways. From this point of view, Padma Bridge, Metro-rail, Bus Rapid Transit, Dhaka Elevated Expressway, Karnaphuli Tunnel and some other mega-projects are being implemented on priority basis. To operate Railway as an environment-friendly, safe, affordable and dependable means of transport, total number of 230 projects costing of Tk. 5,53,662.00 crore have been included in newly approved railway master plan and those projects are being implemented at six stages from July 2016 to June 2045. At present, total length of railway is 3,101 km. Several measures have been taken for development and maintenance of navigability of different river routes, ensuring safe movement of water crafts, development of inland river ports, creating infrastructure facilities to carry container goods in inland waterways etc. About 92 percent international trade is happening through Chattogram seaport. In the FY2021-22 the average growth rate of import-export was 3.77 percent for cargoes and 7.16 percent for containers. As national flagship carrier Biman Bangladesh Airlines Limited is conducting 7 national and 21 international flights in different routes. In FY2021-22 Biman has carried 22.77 lakh passengers and 43,975 tons of cargo. At present Bangladesh Submarine Cable Company Limited (BSCCL) alone is satisfying about 60% demand in the case of the country's overall internet bandwidth, whose amount is about 2524 Gbps (Gigabyte Per Second) up to 29 March 2023. Various development projects and programs are in progress to ensure the application of information and communication technology based on four pillars of information technology infrastructure development, human resources development in information technology, establishment of e-governance and development of information and communication technology industry.

A modern and planned transport and communication system is a vital physical infrastructure which acts as a prerequisite for the socio economic development of a country. The high importance of connectivity with the regional and international transport networking is unanimously admitted in the context of globalization and modern market economy. According to Bangladesh Bureau of Statistics (BBS), the contribution of the transport and communication sector to GDP is 7.34 percent and 7.32 percent at constant price during FY 2021-22 and FY 2022-23 respectively and the rate of growth is 5.75 percent and 5.99 percent at

constant price during FY 2021-22 and FY 2022-23 respectively considering the base year 2015-16. In this context, for implementation of 8th Five Year Plan, Perspective Plan keeping consistency with the targets of SDG-2030, the government has taken various development initiatives over the years.

A. Roads Communication

Roads and Highways Department (RHD)

There are about 22,476 km highways of various types under the management of Roads and Highways Department. Out of this highway network, 18 percent is National Highway, 22 percent is Regional Highway and remaining 60

percent is Zilla roads. In addition, RHD has 4,404 bridges and 15,084 culverts under its control. Even though the length of road network under RHD has not increased significantly during last few years, the standard and the width of different important road segments have been improved including improvement to 4, 6 or 8 lanes. RHD is currently operating 57 numbers of

ferry ghats of which 12 ferry ghats got administrative clearance. 35 ferry ghats are also under the process of administrative approval. Currently the ferry service is provided by 148 numbers of ferry boats, 140 numbers of pontoons and 114 numbers of gangways. The Table 11.1 provides a thirteen-year time series data on RHD road lengths.

Table 11.1: Various Categories of Roads under Roads and Highways Department

(Length in kilometer)

Year	National Highway	Regional Highway	Zilla Road	Total
2010	3478	4222	13248	20948
2011	3492	4268	13280	21040
2012	3538	4276	13458	21272
2013	3570	4323	13678	21571
2014	3544	4278	13659	21481
2015	3813	4247	13242	21302
2016	3813	4247	13242	21302
2017	3813	4247	13242	21302
2018	3813	4247	13242	21302
2019	3906	4483	13207	21596
2020	3906	4767	13423	22096
2021	3944	4883	13592	22419
2022	3991	4898	13545	22434
2023*	3991	4898	13587	22476

Source: Roads and Highways Department; Ministry of Road, Transport and Bridges. *Up to February 2023

A total number of 144 development projects have been included in the Annual Development Program (ADP) of Roads and Highways Department for FY 2022-23. An amount of Taka 22,675.86 crore is allocated for these projects. Of this, GoB component is Taka 18812.16 crore and project aid is Taka 3863.70 crore. There are twenty projects under the RHD which will be implemented on PPP basis through participation

of the public sector as well as private sector for the development of road network. Among these projects, six important projects are under implementation.

Road Safety

RHD is going to construct restrooms with parking facilities for truck drivers on 4 National Highways, at Cumilla on Dhaka-Chattogram Highway, Habiganj on Dhaka-Sylhet Highway,

Sirajganj on Dhaka-Rangpur Highway and Magura on Dhaka-Khulna under a project named "Construction of restrooms with parking facilities for truck drivers on 4 National Highways". The cumulative implementation progress of the project is 48.61% up to February/2023. As a result, these facilities will reduce road accident due to restlessness and fatigue of driving for long hours.

The project named as "Improving the Reliability and Safety in National Highway corridors of Bangladesh by Introducing of Intelligent Transport System (ITS) with the assistance of Korean International Cooperation Agency (KOICA) is under implementation with a view to develop a modern, safe and integrated road infrastructure on National Highways by using Intelligent Transportation System. Real Time Monitoring of vehicle movement will be possible through ITS which will facilitate identification of vehicle for breaking speed limit, illegal parking, congestion, road accident and instance action will be possible in this connection.

Highway Police, RHD Field Offices and a Study project identified 252 number of black spots on RHD Road Network. Counter measures have already been taken under development project and local arrangement for the treatment of 172 number of Black Spots on the highway. A project named as "Road Safety Development on National and Regional Highways" to be implemented by RHD with GoB Fund is under process to develop the remaining 80 black spots. The main objective of the project is to make necessary sign-signal and road marking, identify accident prone spots and develop the dangerous accident prone corridors with a view to improve the overall road safety on National and Regional Highways.

Road Safety Audit of 255 Kilometer has been completed. In the meantime, safety audit was completed of 500 kilometer highway in FY 2017-18 and 300 kilometer highway in FY 2020-21.

111 recommendations of National Road Safety Council are being implemented to create a work plan with a view to ensuring a disciplined road transport sector.

Toll Collection under RHD

An amount of Taka 1021.14 crore was collected as toll for the transportation of vehicle by road, bridge and ferry under RHD during the previous FY 2021-22. While an amount of Taka 725.51 crore is collected up to February during FY 2022-23.

Local Government Engineering Department (LGED)

A long term Master Plan over a period of 2005-2025 has already been prepared for successful implementation of rural infrastructures and other programmes by LGED aiming at balanced development across the country and is being implemented accordingly. In the last 15 years (2009 to March 2023) through the successful implementation of various projects, LGED has developed about 73,514 km road. Through the successful implementation of various projects 3,40,312 meters of bridges/culverts have been constructed on rural roads. Besides these, LGED has developed 4,892 growth center/village markets, built 3,487 Union Parishad Complex Bhaban, 425 upazila Complex Bhaban and 1,889 cyclone center.

Sustainable urban development is one of the prerequisites for the overall economic and social development of the country. In this regard, LGED has constructed about 13,541 km roads/footpaths and 21,144 m of bridges/culverts in cities through various projects for sustainable transportation in urban areas during the last 15 years (2009 to March 2023).

GIS based development of Rural Road Master Plan activities are being implemented under the Rural Connectivity Improvement Project (RCIP). Under this, a GIS based road prioritization system will be prepared for the purpose of

construction of new roads and maintenance of old roads. National Spatial Data Infrastructure (NSDI) is being prepared under the supervision of Bangladesh Survey Directorate as a uniform platform for sharing GIS data national.

The table 11.2 depicts achievements in transport infrastructure under various development projects of LGED up to March 2023 of FY2022-23.

Table 11.2: Achievement in the Development of Transport Infrastructure under LGED

Activities	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023*	Total**
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Paved Road (km)	4614	4905	6639	6549	5990	4813	5200	8534	5400	5500	3100	4450	3797	73514
Bridge/Culvert (m)	38502	26415	27057	32707	29000	28500	32000	29700	30000	7978	18000	20000	15390	340312
Construction of road & footpath at urban area (km)	70	468	717	698	1315	1110	1037	1256	1746	2332	710	1560	430	13541
Construction of bridge & culvert at urban area (m)	791	627	784	1011	1240	915	795	1167	3615	2538	3857	1804	1750	21144

Source: LGED * up to March 2023. ** from FY 2009-10 to FY 2022-23.

LGED is implementing 'Climate Resilient Rural Infrastructure Project' (1st Revised) in 24 upazilas of 06 coastal disaster prone districts. This project has developed 843.00 kilometers rural road, 79.89 kilometers HBB road, 735.00 meters drain, 56.84 kilometers canal excavation/re-excavation and 86.14 kilometers tree plantation.

LGED is also implementing Multipurpose Disaster Shelter Construction Project (MDSP) to protect the lives and property of people in coastal rural areas from natural disasters like cyclones and tidal surges. The coastal districts are Barisal, Bhola, Patuakhali, Pirojpur, Chittagong, Cox's Bazar, Feni, Noakhali and Laxmipur. So far, 323 new cyclone shelters are constructed through this project and 211 cyclone shelter construction work is ongoing, and 396 existing cyclone shelter is being upgraded.

Bangladesh Road Transport Authority (BRTA)

With a view to bring about discipline in the road transport sector since its inception Bangladesh Road Transport Authority (BRTA) has been entrusted with the task of ensuring overall supervision, proper management and effective control. At present, the organization is running its operation through its 57 district circle offices and 5 metro circle offices. Issuance of registration and fitness certificates of vehicles, route permit and driving license is the main responsibility of this organization. BRTA is playing an important role in overall development of transport sector as well as establishment of discipline in the sector.

Following measures have been taken to enhance standard of service, prevent environment pollution and reduce traffic jam:

- A central platform named 'BRTA Service Portal (BSP)' has been launched to bring all BRTA services to the doorsteps of the people. The services of BRTA such as learner driving license print, Ridesharing Service Provider Enlistment Certificate and Ridesharing Motor Vehicle Enlistment Certificate Print, taking appointment for renewal of motor vehicle fitness from BRTA Dhaka Division and Chattogram Circle office, payment of motor vehicle tax and fees, submitting online application for motor vehicle registration and publication of driving license test results etc. are now provided online through the BRTA Service Portal (BSP).
- In order to renew the fitness certificate of motor vehicles in an automated manner with the financial and technical assistance of a Korean international organization, BRTA is renewing fitness certificates at Dhaka Metro Circle-1, Mirpur, through a 2 (two) lane Vehicle Inspection Center (VIC) since October 2016. Recently, an initiative has been taken to set up a VIC with 12 (twelve) lanes in the same office.
- A modern central Data Center has been established for preserving different vehicle and driving license data
- National Road Safety Strategic Action Plan 2021-24 draft has been prepared to reduce the number of injured and death in road accidents. National Safe Roads Day has been celebrated on 22 October 2023 under the theme "Obey the speed limit, prevent road accidents".
- In order to facilitate driving license related services easier, an online-based application has been introduced through BRTA Service Portal (BSP) from November 16, 2022. Under this process

the applicant has to come to the BRTA center once instead of at least 4 (four) times to provide bio-enrollment and participate in the examination. The e-paper driving license with the QR code downloaded and printed from the customer's own BSP account or displayed as a soft copy on the mobile phone is permissible to use temporarily for driving the motor vehicle. After the completion of smart card printing process, the driving license smart card is delivered by post to the address given by the applicant.

Up to February 2023 in FY2022-23, BRTA collected revenues of Tk. 1,303.35 crore against the target of Tk. 3,054.00 crore. The figures of target and actual collection of revenues from FY2010-11 to FY 2022-23 are given in table 11.3 below:

Table 11.3: Revenue Target and Collection of BRTA

(Taka in Crore)

Fiscal year	Target Amount	Collection	Percentage of Collection (%)
2010-11	908.56	685.60	75.46
2011-12	903.59	642.37	71.09
2012-13	1101.25	769.86	69.91
2013-14	1156.60	952.25	82.33
2014-15	1249.23	1062.29	85.04
2015-16	1354.01	1619.02	119.57
2016-17	1771.84	1469.86	82.96
2017-18	1805.51	1545.07	85.57
2018-19	1834.14	1825.83	99.55
2019-20	2017.92	1681.67	83.34
2020-21	2235	1627	72.79
2021-22	2400	1823.87	75.99
2022-23*	3054	1303.35	42.68

Source: BRTA * Up to February 2023

Bangladesh Road Transport Corporation (BRTC)

‘Bangladesh Road Transport Corporation (BRTC)’ plays an important role to ensure modern, fast, efficient, economic, comfortable and safe road transport system through a controlled mechanism for better quality service and reasonable fare/freight. At present, there are 1350 buses and 585 trucks in the fleet of BRTC as well as there are 22 bus depots and 2 truck depots.

Some progressive activities of BRTC in recent time are given below:

- BRTC has 24 Training Units (04 Training Institutes and 20 Training Centers) to provide training in driving, auto-mechanic, welding etc. Through this training center 14,794 and 7,843 trainees (men and women) have been trained in the fiscal year 2021-22 and 2022-23 (till January 2023) respectively.
- Procurement of 340 CNG and 50 Electric Single Decker AC buses from Korea and 100 Electric Double Decker AC buses from India are under process.
- Through "Amader BRTC" mobile Apps, passengers are now able to know about the schedule and specific location of buses at the 13 routes of BRTC.
- To make comfortable journey to the government and semi-government employees including the students of different universities, BRTC deployed 402 staff buses to 47 institutions. Moreover, 10 number of Double Decker buses running in Chattogram City under the supervision of Zilla Parishad for which the students of schools are benefited. BRTC has introduced 07 buses for the working women of different sectors to facilitate their safe journey in Dhaka City.
- BRTC is providing free transport service to the designated and war-wound freedom fighters. In addition, BRTC reserves 15 seats in each bus of city service for women, children, physically disabled people and freedom fighters. “No smoking” sticker has been given inside each bus of BRTC.
- Now International Bus Service is running in Dhaka-Kolkata-Dhaka, Dhaka-Agartala-Dhaka, Agartala-Dhaka-Kolkata-Agartala, Dhaka-Sylhet-Shilong-Guwahati and Dhaka-Khulna-Kolkata routes.
- Besides this, “Vehicle Tracking System” is introduced in 663 buses and 334 truck procured in 2019. “Vehicle Tracking System” will be introduced gradually in all buses and trucks of BRTC.
- Under the project “Modernization and Strengthening of 03 Training Institutes and 17 Training Centers of BRTC to develop the skills of drivers” modern equipment is being procured for modernization and strengthening of 25 training units through construction of 21 training centre buildings.
- Through the project “Skills for Employment Investment Program (SEIP)” under Finance Division, Ministry of Finance, an initiative has been taken to create 01 lakh skilled drivers in the next 05 years. BRTC will train 47,500 drivers in 05 years to develop their skill. 14,700 trainees in 1st phase, 8,100 trainees in 2nd phase, 17,700 trainees in 3rd phase have completed their trainings and training of 2749 trainees is in progress. The financial statement of BRTC from FY2010-11 to FY 2022-23 is given in the Table 11.4:

Table 11.4: Revenue Target and Collection of BRTC

(Taka in Crore)

Financial Year	Operating Income	Operating Expenditure	Operating Surplus
2010-11	115.11	109.84	5.27
2011-12	173.60	171.90	1.70
2012-13	201.70	198.48	3.22
2013-14	243.11	233.53	9.58
2014-15	234.07	230.51	3.56
2015-16	266.36	258.31	8.05
2016-17	262.55	267.60	-5.05
2017-18	253.18	256.10	-2.92
2018-19	258.88	259.82	-0.94
2019-20	349.28	324.43	24.85
2020-21	324.46	299.68	24.78
2021-22	475.91	440.15	35.76
2022-23*	372.64	339.04	33.60

Source: BRTC * Up to January 2023

Dhaka Transport Coordination Authority (DTCA)

Dhaka Transport Coordination Authority (DTCA) was established in 2012 to provide a coordinated and modern transport system for Dhaka city and its adjacent districts. DTCA jurisdiction covers 7,400 square kilometers that includes- districts of Dhaka, Narayanganj, Munshigonj, Manikgonj, Gazipur and Narsingdi. As a matter of fact, DTCA plans, approves, coordinates and monitors the transport related infrastructure projects within its jurisdiction.

Progress of Important Activities of DTCA

- As a part of transport planning, DTCA starts a project “Preparation of Comprehensive Transport Master Plan for Narayanganj and Gazipur City Corporation” in Gazipur and Narayanganj.
- In order to ensure hassle free and seamless travel by different modes of transport: Metrorail, Bus Rapid Transit, Bangladesh Railway, BRTC Bus, Marine Transport of BIWTC and Non-government contract buses etc. by using SMART card under e-ticketing system, e-Clearing House at DTCA office has been established in 2017. Smart card is being used as ‘Rapid Pass’.

- In order to reduce traffic congestion in Dhaka city through improvement of intersections and introduction of Intelligent Traffic System (ITS) in 4 Intersections (Paltan, Gulshan-1, Gulistan and Mohakhali), a pilot project ‘Dhaka Integrated Traffic Management Project’ is being implemented. The physical work of the project will be completed very soon. Under this project Action Plans and Manuals will be prepared by the Japanese expert team which will be finalized based on the information obtained after setting up ITS.
- Through the project named “Bus Depot and Terminal Feasibility Study and concept Design” 10 locations are identified around Dhaka City for the construction of inter-district and city bus terminals.
- According to DTCA Act, there is a provision for approval of the design regarding circulation and movement of vehicles from DTCA before the construction of a multi-stored building or residential project. DTCA issues NOC based on Traffic Impact Assessment (TIA).
- A six-member road safety cell has been set up in DTCA on the recommendation of the National Road Safety council.
- According to Revised Strategic Transport Plan (RSTP), a project titled “Feasibility Study on Dhaka Outer Ring Road: Eastern, Western, Northern Part Project” has been taken to evaluate the feasibility of Dhaka Outer Ring Road to connect different regions of Bangladesh bypassing Dhaka region.

Dhaka Mass Transit Company Limited (DMTCL)

With a view to alleviate Traffic congestion and to improve the environment in Dhaka Metropolitan City and its adjoining areas, Dhaka

Mass Transit Company Limited (DMTCL), a government owned company has laid out the following time bound action plan to build a network of 6 Metro Rail systems by 2030.

The time bound action plan is given in the Table 11.5:

Table 11.5: Time Bound Action Plan, 2030 of DMTCL

Name of the MRT Line	Phase	Probable Completion Year	Type
MRT Line-6	First	2025	Elevated
MRT Line-1	Second	2026	Elevated and Underground
MRT Line-5; Northern Route		2028	
MRT Line-5; Southern Route	Third	2030	
MRT Line-2			
MRT Line-4			

Source: Road Transport and Highways Division.

Dhaka Mass Rapid Transit Development Project (MRT) Line-6:

Under the revised action plan, construction works of 21.26 km long MRT Line from Uttara to Motijheel is ongoing. MRT Line-6 consisting of 17 stations has the capacity of transporting 60 thousand passengers per hour. The overall progress of works up to 31 December, 2022 is 92.52%. Honorable Prime Minister publicly inaugurated the commercial operation of MRT Line-6 from Uttara to Agargaon section on 28 December, 2022. The progress of the civil construction works from Agargaon to Motijheel is 91.02%. Construction works are ongoing for the 1.16 kilometers extension of the route from Motijheel to Kamlapur. Inauguration of the Motijheel to Kamlapur section has been planned for June, 2025.

MRT Line-1

With the target for the completion of Line-1 by 2026, the progress of Tendering process of 12 packages is at different stages for the construction of the total 31.241 kilometers long MRT Line-1 consisting of 19.872 kilometers long underground route from Airport to Kamlapur and 11.369 kilometers long elevated route from Notun Bazar to Pitolganj Depot and also for the construction of 21 Stations in between. A Consulting Firm has been appointed to supervise the construction works. A Contractor has been appointed for the Pitolganj Depot Land Development works under package CP-01. 8 lakh people will be able to move daily if MRT Line-1 is in operation by 2026.

MRT Line-5 (Northern Route)

The feasibility study, basic design and land acquisition for 20 km long MRT Line-5 (Northern Route) (13.50 km underground and 6.50 km elevated) having 14 stations (underground 9 and elevated 5) from Hemayetpur to Vatar has been completed. Detailed design and tendering process are ongoing and at different stages. Appointment of a Contractor for the land development works at Hemayetpur depot under CP-01 is at the final stage. There is a plan to inaugurate the construction works of MRT Line-5: Southern Route in July, 2023. Upon completion of MRT Line-5 in December 2028, 12,30,000 people will be able to move daily.

MRT Line-5 (Southern Route)

With the target for the completion of Line-5 by 2030, the Feasibility study has been completed to construct the 17.40 kilometers long MRT Line-5: Southern Route comprising of 12.80 kilometers long Underground line from Gabtoli to Aftab Nagar West and 4.60 kilometers long elevated line from Aftab Nagar Center to Balurpar. Different surveys and engineering design works are currently ongoing. Preparation of DPP for

this investment project is underway based on the feasibility study. Upon completion the works in 2030, 9,24,500 people will be able to move daily.

MRT Line-2

The Government of Bangladesh has signed a Memorandum of Understanding (MoU) with the Government of Japan to construct the about 24 km long MRT Line-2 comprising of elevated and underground sections from Gabtoli to Chattogram Road by 2030 under G2G through PPP basis. 65 hectares of land for construction of Depot and Depot access corridor of MRT Line 2 at Demra area of Dhaka city between Green Model Town and Amulia Model Town has been identified preliminarily.

MRT Line-4

Currently, searching for a development partner is ongoing to conduct the feasibility study for the construction of 16 kilometers long MRT Line-4 consisting of Elevated and Underground sections from Kamlapur to Madanpur of Narayanganj via Signboard by 2030.

Transit Oriented Development (TOD) Hub

From the experiences of different countries in the world it is observed that Metro Rail cannot run profitably with the collection of fare alone. Under this circumstances, plans have been made to establish TOD Hubs at the lands adjacent to the Uttara Center Station of MRT Line-6 and Gabtoli Station of MRT Line-5: Northern Route to generate Non-Fair Business revenue. The TOD land near the Uttara Center Station of MRT Line-6 has been designated as a Green Field and the TOD land adjacent to the Gabtoli Station of MRT Line-5: Northern Route has been designated as a Brown Field under a project taken up by RAJUK. Under this project, a Draft Concept Plan is ongoing now.

Bridges Division

Bridges division is responsible for implementation and maintenance of bridges and tunnels, elevated expressway (which are 1,500 meter and above in length), flyover, causeway, link road and so on. The main activities of ‘Bangladesh Bridge Authority’, the only organization of Bridges Division, are as follows:

Bangabandhu Bridge

4.8 kilometer long Bangabandhu bridge was built in 1998 over Jamuna river in order to accelerate the country’s overall political, social, economical, administrative and cultural development. Agricultural production is increased to a great extent in northern region after the construction of the bridge and farmers are getting the fair price of their products. Furthermore, industries have flourished in that region too. The revenue earnings for the period of FY2010-11 to FY 2022-23 (up to February 2023) from this bridge are shown in Table 11.6.

Table 11.6: Description of the toll collected from Bangabandhu Bridge

(Taka in Crore)

Financial Year	Revenue collection
2010-11	267.66
2011-12	304.66
2012-13	325.20
2013-14	323.38
2014-15	349.08
2015-16	402.43
2016-17	484.42
2017-18	543.80
2018-19	575.41
2019-20	560.28
2020-21	654.82
2021-22	704.55
2022-23*	439.68

Source: Bangladesh Bridge Authority, * Up to February 2023

Padma Bridge

The Padma Multipurpose Bridge at Mawa-Janjira point (6.15 km long) will play an important role to establish an integrated communication network for southern region with other regions of the country. Padma Bridge, the country's largest infrastructure built with Bangladesh Government's own fund at an estimated cost of BDT 30,193.38 crore was inaugurated by Honourable Prime Minister Sheikh Hasina on 25 June 2022 and the bridge was opened to traffic movement on 26 June 2022. Till February 2023, a total of BDT 545.59 crore tolls has been collected since the bridge was opened to traffic. River training works of the project is ongoing. Progress of River training works is 97.50% and overall physical progress of the project is 97.00%.

Vehicles is running through the upper part of the Padma Bridge and rail will run through its lower part. More than 30 million people in an area of about 44,000 square kilometer or 29% of the total area of Bangladesh will be directly benefited from the bridge. Moreover, this bridge will bring revolutionary changes in the communication system in the South Asian regions as well as in the internal communication system due to its alignment in the Asian Highway (AH-1).

Construction of Dhaka Elevated Expressway

A total of 46.73 km (with ramp) long Dhaka elevated expressway from Hazrat Shah Jalal (R) international airport to Kutubkhali on the Dhaka-Chattogram highway will be constructed on Public Private Partnership (PPP) basis for reducing the traffic jam in Dhaka city. An agreement was signed with the investor on 15 December 2013. Till February 2023, construction of 1482 piles, 326 pile caps, 323 columns, 320 cross-beams, 3048 I-girders of the 1st phase has been completed. Also, 2974 I-girders and 317 bridge decks have been installed. Construction of 1575 piles, 315 pile caps, 299 columns, 268 cross-beams and 1541 I-girders of 2nd phase has

been completed. Also, installation of 1426 I-girders and 58 bridge decks has been completed. Progress of 1st phase of the project is 94.35%, 2nd phase 48.30%, 3rd phase 3.23% and overall progress is 58.73%. Highest efforts are being given to complete the construction of this expressway by June 2024.

Construction of Tunnel under the River Karnaphuli

The implementation work of 3.40 km long tunnel under the river Karnaphuli is about to finish. To connect the west part of Chattogram city to east part, reduce traffic jam, ease direct road communication among Dhaka- Chattogram-Cox'sbazar and transport goods from Chattogram sea port and proposed deep sea port, the tunnel will contribute 0.166 percent to the national GDP growth. Casting of all the 19,616 tunnel segments has already been completed. The completion of the South Tube of the tunnel was celebrated on 26 November 2022. Till February 2023, 96.50% physical work of the project has been completed. 2nd revised DPP of the project has been approved in the ECNEC meeting held on 17 January 2023. As per 2nd Revised DPP the total estimated cost of the project is BDT 10,689.71 crore and project period is from 01 November 2015 to 31 December 2023.

Construction of BRT Lane (Elevated Section)

Steps have been taken to construct 20 km long Bus Rapid Transit (BRT) lane at the cost of Tk. 2,039.85 crore from Gazipur to Shah Jalal International (R) Airport. Bangladesh Bridge Authority (BBA) is responsible for implementation of 4.5 km elevated section. The implementation work is progressing and 87.78% of physical work has already been completed by February 2023. 3rd revised DPP of the project has been approved on 26 December 2022.

Construction of Dhaka-Ashulia Elevated Expressway

About 24 km long Dhaka-Ashulia Elevated Expressway with the estimated cost of Tk. 16,901.32 crore was approved on 24 October 2017 to connect Hazrat Shah Jalal (R) International Airport to EPZ through Ashulia. To construct the expressway on G-to-G basis, commercial agreement was signed with a Chinese government nominated company on 29 November 2017. The loan agreement was signed with China Exim Bank on October 26, 2021 and has become effective since 10 May 2022. The land acquisition, preparation of the detailed design and pile construction of the project are in progress. Physical progress of the project is 2.75%. This expressway connecting Asian Highway Network and almost all National Highways will reduce traffic congestion in Abdullahpur-Ashulia-Baipail-Chandra corridor. After construction of the project GDP growth rate will increase by 0.217%.

Construction of bridge over Payra river on Kachua-Betagi-Patuakhali road

The project of costing Tk. 1,042 crore was approved in the ECNEC meeting on 10 March 2020 for the construction of 1,690 meter long bridge over the Payra River on the Kachua-Betagi-Patuakhali-Lohalia-Kalia road as part of the development of road communication network in the south. The agreement has been signed with contractor on March 2022 to construct this bridge. Land acquisition and preparation of detailed design are currently underway. The final report of RAP and EIA and Environmental Clearance of the project has already been received. The construction of this bridge is expected to be completed by 2025.

Road widening and construction of two-lane road from Panchabati to Muktarpur Bridge

DPP of estimated cost Tk 2,242.06 crore has been approved at the ECNEC meeting on 08/12/2020 for widening of 10.75 km road from Panchabati to Muktarpur Bridge and constructing

9.06 km elevated expressway. Agreements have been signed with contractor and consultant. Land acquisition activities are currently underway.

Construction of an Elevated Road from Mithamain Upazila Sadar of Kishoreganj to Morichkhali of Karimganj Upazila

To construct 15.31 km long elevated road from Mithamain Upazila Sadar of Kishoreganj to Morichkhali of Karimganj Upazila, DPP of estimated cost BDT 5651.14 crore has been approved at the ECNEC meeting held on January 17, 2023. The project period is 01 March 2023 to 30 June 2028.

Construction of bridge over Meghna river on Bhulta-Araihazar-Bancharampur road

Steps have been taken to build a 1.7 km long bridge over the Meghna River on the Bhulta-Araihazar-Bancharampur road between Narayanganj and Brahmanbaria districts. The activities of the Transaction Advisor appointed to build the bridge on a G2G PPP basis with a consortium from South Korea is in progress. Feasibility study, LAP, RAP EIA and Traffic Study have been completed. Updated Feasibility Study Report, RFP & PPP Contract have been submitted.

Preparation of master plan of Bangladesh Bridge Authority and conducting feasibility study for construction of new bridges and inner elevated expressways

Bangladesh Bridge Authority has taken steps to formulate a 25 year master plan with the aim of achieving sustainable development by 2030 and making Bangladesh a developed and prosperous country by 2041. In order to ensure integrated and uninterrupted transport system and to develop the road communication network of the country, short, medium and long term projects will be identified, adopted and recommended in the said master plan. Besides, feasibility study will be conducted on Meghna river at Chandpur-Shariatpur location, on Laxmipur-Bhola road and on construction of Dhaka Inner Elevated

Expressway. The study project is being implemented at an estimated cost of BDT 371.90 crore with the own funding of Bangladesh Bridge Authority.

B. Railway Communication

To ensure railway communication as a reliable, affordable, environment-friendly and publicly transport in Bangladesh, Railway Division has upgraded to a separate Ministry named as Ministry of Railways (MoR) in December 2011. The improvement of rail communication and transport services has been included as a priority sector in the national document on 8th Five-Year Plan and Perspective Plan, Vision-2021 and more budget has been provided for the development of the railway than that of the previous years. Total Number of 230 projects costing of Tk 5,53,662.00 crore have been included in newly approved railway master plan for implementing those projects at six stages from July 2016 to June 2045.

Bangladesh Railway has around 3,101 km of network which connects 43 districts and almost all the important places of the country. Necessary steps have been taken for renovation of existing rail tracks, purchase of new locomotives, wagons and coaches, repair of old locomotives and wagons, expansion and rehabilitation of existing rail tracks, modernization of the signaling system and level crossing gates. As per instruction of Honorable Prime Minister the activities are continuing to promote Bangladesh Railway to 4 zones and 8 divisions. In financial year 2022-2023, around 33 investment projects and TA projects are being implemented by the ministry. New districts will be brought under the rail network and national and international connections such as Trans Asians Rail Network, SAARC rail network will be established through

these development activities which will help to improve the overall transport facilities of the country including decrease in the traffic congestion of Dhaka.

Achievements of Bangladesh Railway since 2009 are construction of 650.11 km new rail line, conversion of 280.28 km railway line from meter gauge to dual gauge, construction of 126 new station buildings, construction of 732 new railway bridges.

Ongoing important projects of Bangladesh Railway are Padma Bridge Rail Link Project, Bangabandhu Sheikh Mujib Railway Bridge Construction, Construction of Single Line Dual Gauge Railway Track from Dohazari to Cox's Bazar via Ramu and Ramu to Gundum Near Myanmar, Construction of Dual Gauge Double Rail Line and Conversion of Existing Rail Line into Dual Gauge Between Akhaura and Laksam, Construction of Khulna-Mongla Port Rail Line, Construction of 3rd & 4th Dual Gauge Line in Dhaka-Tongi and Dual Gauge Double Line in Dhaka-Joydevpur Section of Bangladesh Railway, Construction of Dual Gauge Railway Line from Bogra to Shahid M. Mansur Ali Station Sirajganj, Construction of Broad Gauge Line From Madhukhali to Magura Via Kamarkhali, Construction of a Dual Gauge Line Parallel to the existing Meter Gauge Line in Dhaka-Narayanganj Section, Conversion of Meter Gauge Line into Dual Gauge Line from Parbatipur to Kaunia Section, Construction of Khulna-Darsana Double Line.

Table 11.7 presents year wise data on overall performance of Bangladesh Railway over the period from FY2010-11 to FY2021-22.

Table 11.7: Overall Performance of Bangladesh Railway

Financial Year	Passenger Kms (Million)	Freight Ton Kms (Million)	Total operating revenue (Tk. in Crore)	Total operating expenses (Tk. in Crore)
2010-11	8051.92	692.64	747.70	1491.82
2011-12	8787.23	582.11	726.42	1567.12
2012-13	8253.42	525.37	804.26	1562.38
2013-14	8135.00	677.35	800.17	1601.69
2014-15	8711.36	693.84	935.45	1808.29
2015-16	9167.18	675.09	904.02	2229.22
2016-17	10,040.66	1052.67	130.37	2835.52
2017-18	12993.91	1236.50	1486.15	2918.02
2018-19	14334.76	913.48	1406.58	3050.66
2019-20	9577.68	1002.04	1225.85	3188.97
2020-21	10455.60	1042.00	1182.00	3284.00
2021-22*	10455.60	1042.00	1182.00	3284.00

Source: Ministry of Railway. *Provisional

C. Water Transport

Waterway is an affordable, environment-friendly and secure communication system. The Ministry of Shipping has been developing, maintaining, managing and controlling the internal water transport infrastructure of Bangladesh to maximize the use of these waterways. In order to achieve overall economic development of the country by providing modern ports management, ensuring safe and uninterrupted shipping, human resources development and providing efficient and affordable water transport services, the activities of various departments/organisations under the Ministry of Shipping are described below:

Bangladesh Inland Water Transport Authority (BIWTA)

Bangladesh Inland Water Transport Authority (BIWTA) is responsible for development, maintenance and conservation of inland water transportation system. 14 development projects of BIWTA are included in the Revised Annual Development Programme (RADP) in the FY2022-23. Total RADP allocation is TK.

1,280.00 crore and expenditure upto February 2023 is Tk. 395.51 crore. BIWTA has procured 45 nos. dredgers and 255 nos. ancillary vessels, 12 nos. Longbum excavator, 02 nos. demolition excavator, 05 nos. amphibian excavator, 03 nos. cabin crusar, 23 nos. pontoon and 12 nos. fork lift. Table 11.8 shows the year wise income and expenditure of BIWTA during the period from FY2010-11 to FY2022-23.

Table 11.8: Income and Expenditure of BIWTA

(Tk. in Crore)			
Fiscal Year	Income	Actual Expenditure	Profit/Loss (+/-)
2010-11	237.53	239.10	-1.57
2011-12	290.78	272.91	+17.87
2012-13	349.09	329.40	+19.69
2013-14	320.04	377.61	-57.57
2014-15	358.02	382.31	-24.29
2015-16	500.80	518.88	-18.08
2016-17	614.46	699.67	-85.21
2017-18	625.35	689.33	-63.98
2018-19	679.38	698.50	-19.12
2019-20	759.13	762.66	-3.53
2020-21	772.91	802.23	-29.32
2021-22	809.07	878.61	-69.54
2022-23*	513.75	571.07	-57.32

Source: BIWTA, Ministry of Shipping. *Up to February 2023.

BIWTA performs development and maintenance dredging in every year for smooth transportation

of passenger and cargo. The volume of development and maintenance dredging during the period from FY2010-11 to FY 2022-23 is presented in Table 11.9.

Table 11.9: Development and Maintenance Works of BIWTA

Fiscal Year	Dredging Quantity (In Lakh Cubic Meter)		
	Development Dredging	Maintenance Dredging	Total
2010-11	25.54	40.16	65.70
2011-12	24.47	43.61	68.08
2012-13	56.03	44.65	100.68
2013-14	47.02	57.90	104.92
2014-15	120.15	50.77	170.92
2015-16	178.22	104.79	283.01
2016-17	158.79	117.37	276.16
2017-18	211.89	134.98	346.87
2018-19	278.84	139.63	418.47
2019-20	152.96	280.73	433.69
2020-21	220.76	226.33	447.09
2021-22	265.91	226.67	492.58
2022-23*	65.71	128.02	193.73

Source: BIWTA, Ministry of Shipping, * Up to January 2023.

Hydrographic Survey during the FY2015-16 to 2022-23 are shown in table 11.10:

Table 11.10: Year wise Hydrographic Survey

FY	Inland water ways (sq km)	Costal waterways (sq km)
2015-16	2751.34	1000.00
2016-17	2750.00	1200.00
2017-18	2700.00	1000.00
2018-19	1864.40	700.00
2019-20	1992.25	750.00
2020-21	1712.19	2100.00
2021-22	1533.00	1677.00
2022-23*	1556.25	106.00

Source: BIWTA, Up to January 2023.

Bangladesh Inland Water Transport Corporation (BIWTC)

To enhance the service quality in different sectors, BIWTC has constructed 70 different types of vessels (23 ferrys, 21 auxiliary vessels (pontoon), 4 Sea-trucks, 12 water buses, 2 Inland Passenger vessels, 2 Coastal Passenger vessels, 2 Oil tankers and 4 Container vessels) during the period of 2009 to 2022 (February) under development projects.

Achievements of BIWTC:

- Two Shallow Draft Oil Tanker and one floating workshop are added to its fleet very recently.
- Eight (08) nos. of wreckers are engaged in different ferrys at a cost of Tk 16.25 crore to ensure smooth ferry operation.
- Automation system has been introduced at Paturia-Daulatdia ferry terminal from March 2019. It will be introduced for all vehicles gradually.
- 4 container vessels constructed under development projects are engaged in transporting containers from Chattogram Port to Pangaon Container Terminal and from Chattogram to Kolkata.

Table 11.11 shows the income and expenditure of the organization since FY2010-11 to FY2021-22.

Table 11.11: Income and Expenditure Statement of BIWTC

FY	Income	(Taka in Crore)	
		Actual Expenditure	Net Profit
2010-11	211.99	153.81	32.08
2011-12	229.68	183.48	19.28
2012-13	272.21	216.13	56.08
2013-14	297.35	235.08	62.27
2014-15	326.72	269.43	57.29
2015-16	359.18	310.96	48.22
2016-17	356.95	329.71	27.24
2017-18	371.91	287.36	84.55
2018-19	380.13	307.62	15.16
2019-20	371.32	312.40	-5.63
2020-21	410.98	390.10	20.88
2021-22	438.59	440.86	-2.27

Source: Bangladesh Inland Water Transport Corporation.

Chattogram Port Authority (CPA)

Chattogram Port Authority, as the principal sea port of Bangladesh, handles nearly 92 percent of international trade of the country. With the increasing trend of export-import of the country, Chattogram Port Authority handled a total of 32,55,358 TEUs of containers and 11,81,74,160

MT of cargo in FY 2021-22, with the aid of newly constructed yards and terminals. In the fiscal year 2021-22, the growth rate of imports and exports on an average was 3.77 percent in the case of cargo and 7.16 percent in the case of containers. To manage the rising volume of containers, the Chattogram port presently possesses a fleet of 153 container handling equipment and 248 cargo handling equipment including Quay Gantry Cranes and Rubber Tired Gantry Cranes. Furthermore, the Chattogram port is procuring 104 nos. of equipment to enhance its operational capabilities.

Table 11.12 shows the income and expenditure of CPA.

Table 11.12: Income and Expenditure of CPA

(Taka in Crore)

Fiscal Year	Rev. Income	Rev. Expenditure	Rev. Surplus (Before Tax)
2010-11	1453.15	634.13	819.02
2011-12	1529.92	652.62	877.30
2012-13	1570.37	803.00	767.37
2013-14	1634.32	815.65	818.67
2014-15	1876.82	860.95	1015.87
2015-16	2029.25	1065.83	963.42
2016-17	2407.65	1352.54	1055.11
2017-18	2661.76	1390.52	1271.24
2018-19	2892.86	1610.53	1282.33
2019-20	2924.99	1716.29	1208.70
2020-21	3070.36	1892.75	1177.61
2021-22*	3585.01	1934.30	1650.71
2022-	2078.60	907.81	1170.79

Source: Chattogram Port Authority *Provisional **Up to January 2023.

Mongla Port Authority (MPA)

Mongla Port is being turned into a modern facilitated seaport gradually by implementing different development projects. At present, Mongla port has the capacity to berth more than 47 ships at a time, 6 in own jetties, 14 in private jetties, 3 in mooring and 24 in anchorages respectively. There are 2 warehouses, 4 transit shed, 1 staffing and un-staffing shed, 6 container yards, 2 car yards that can accommodate more

than 1.50 crore MT of cargoes, 1 lakh TUEs of containers and 20 thousand of cars annually. Table 11.13 shows the income and expenditure of Mongla Port from FY2010-11 to FY2022-23.

Table 11.13: Income, Expenditure and Profit/Loss of Mongla Port

(Taka in Crore)

Fiscal Year	Income	Expenditure	Net Income/ Loss (+/-)
2010-11	85.52	63.69	21.83
2011-12	105.81	71.66	34.15
2012-13	138.08	94.13	43.95
2013-14	155.73	102.10	53.63
2014-15	170.17	109.48	60.69
2015-16	196.62	131.90	64.72
2016-17	226.56	155.15	71.41
2017-18	276.14	166.81	109.33
2018-19	329.12	196.12	133.00
2019-20	338.19	221.01	117.18
2020-21	348.35	217.27	131.08
2021-22	317.08	219.99	97.09
2022-23*	207.93	152.93	55.00

Source: Mongla Port Authority * Up to February 2023.

From FY 2010-11 to FY 2019-20, handling of ships increased by 12.23%, Cargo 14.75% and Container 5.59% and revenue income 13.17% respectively. However, in the FY 2020-21, Mongla port handled 970 ships, 119.45 lac m.ton cargo, 43959 TEUS container. Moreover, in the FY2020-21 revenue income was Tk 340 crore.

Payra Port Authority

Payra Port started its journey as third sea port of the country on 19 November 2013. In order to engage the port in operational activities on a limited scale within clinker, fertilizer and other bulk carrier vessels at outer anchorage and discharge the cargo by inland vessels for hinterland transport. For hassle free foreign and inland vessels movement fare way and mooring buoys have been laid to earmark navigational channel. Very High Frequency (VHF) Base

station is also installed with telecommunication equipment. The customs and shipping facilities have also been established. As per requirement of International Association for Ports and Harbor, International Ship and Port Facility Security (ISPS) code has been implemented and UN locator code has been allotted for *Payra Port* by United Nations to ensure security of the port.

5,390 acres of land has been acquired to establish various infrastructures and support facilities for the port. An immediate maintenance dredging project was undertaken for about 9.75 million cubic meters of dredging. As a result, ships with a capacity of 25,000 DWT are being able to enter the Rabnabad Channel regularly. Moreover, The Capital and Maintenance Dredging of the Rabnabad Channel was inaugurated by the Honorable Prime Minister on October 27, 2022 to facilitate the arrival of ships with the capacity of 50,000 DWT. Payra Port has earned Tk. 71.40 crore (including Vat) by handling 1,302 national and international vessels so far. It is expected that the flow of ships will be doubled by March, 2024.

Bangladesh Land Port Authority (BLPA)

At present, total number of land ports are twenty four (24); among those fifteen (15) land ports are in operation. Out of fifteen (15) land ports Benapole, Bhomra, Akhaura, Burimari, Nakugaon, Tamabil, Sonahat, Gobrakura-Koraitoli, Belonia and Ramgarh Land Ports are being operated by own management of BLPA while Sonamoshjid, Hilli, Teknaf, Banglabandha and Bibirbazar Land Ports are being operated on Build Operate Transfer (BOT) basis. Table 11.14 shows year wise income and expenditure of BPLA during the period from FY2010-11 to FY2022-23.

Table 11.14: Income and Expenditure of Bangladesh Land Port Authority

(Taka in Crore)

Fiscal year	Income	Expenditure	Surplus (+/-)
2010-11	41.20	32.38	8.82
2011-12	42.08	31.91	10.17
2012-13	47.78	35.82	11.96
2013-14	61.31	51.06	10.25
2014-15	70.52	47.38	23.14
2015-16	83.20	55.36	27.84
2016-17	111.51	75.02	36.49
2017-18	148.33	95.53	52.80
2018-19	210.94	144.25	66.68
2019-20	208.77	160.03	48.74
2020-21	264.83	174.73	90.10
2021-22	272.32	252.26	20.06
2022-23*	128.31	91.38	36.93

Source: Bangladesh Land Port Authority* Up to December 2022

During the FY 2022-23, a total of 06 development projects/activities are being implemented under Bangladesh Land Port Authority at the cost of Tk 1424.00 crore. During this fiscal year, development activities of 3 land ports named Bilonia, Sheola and Dhanua-Kamalpur will be completed and operation of the ports will be commenced. A Project to construct Cargo Vehicle Terminal on 41.00 acres of land is being implemented at Benapole Land Port at the cost of Tk 329.00 crore and progress of the project is 40%. In the fiscal year 2022-23, International Passenger Terminal in Ramgarh Land Port has been constructed in Ramgarh Upazila of Khagrachari district with the financing of World Bank. As a result passenger movement with Tripura state will start through this port very soon.

Department of Shipping (DOS)

The training and examination procedures for the seafaring officers and crews of the ocean-going vessels plying on the international routes have been streamlined in accordance with the related international convention. As a result, Bangladesh is included in the 'White List' of the International

Maritime Organization (IMO) under the provision of the STCW Convention in respect of maritime training, examination and certification of the seafarers. For this reason, the job opportunities of the Bangladeshi seafarers have been expanded in the global shipping market through employing them in foreign ships all over the world. A Long Range Identification Tracking (LRIT) system has been implemented for observing movement of the national flag ships plying on the international maritime routes. Seafarer Biometric Machine Readable Identity Documents (SID) are being issued to the Bangladeshi seafarers with a view to facilitating them to travel through all countries of the world to join their appointed ship which further helps them to get job opportunities abroad. Bangladesh has ratified and implemented the Maritime Labour Convention 2006 and the Seafarers Identity Document (SID) Convention (revised) 2003, as amended adopted by ILO.

In order to enhance maritime safety, security and to facilitate rescue operation as a mandatory requirements of international conventions, the Department of Shipping has undertaken a development project named “Establishment of Global Maritime Distress and Safety System and Integrated Maritime Navigation System” with an estimated cost of Tk. 687.03 core and its activities are under implementation. The statement of incomes and expenditures of this organization is shown in the Table: 11.15.

Table 11.15: Income and Expenditure of the Department of Shipping

(Taka in Crore)

Fiscal year	Revenue income Target	Revenue income	Expenditure
2010-11	10.25	12.55	5.53
2011-12	12.71	13.26	5.54
2012-13	14.26	12.95	14.63
2013-14	15.26	14.43	10.12
2014-15	15.99	18.21	9.33
2015-16	17.29	29.03	11.63
2016-17	19.72	33.46	16.37
2017-18	37.93	38.98	16.56
2018-19	36.54	43.80	17.53
2019-20	41.81	38.12	15.66
2020-21	41.33	39.62	15.01
2021-22	47.75	49.94	19.60
2022-23*	45.75	45.46	09.95

Source: Department of Shipping* up to February 2023

Bangladesh Shipping Corporation (BSC)

Providing safe and efficient shipping services in international sea routes and carry out all forms of activities connected with or ancillary to shipping, Bangladesh Shipping Corporation (BSC) has been playing an important role. Despite the limitations of resources, BSC is able to acquire a total of 44 ships through continuous efforts and patronization of the government since establishment. At present there are 8 vessels in BSC fleet. Table 11.16 shows year wise income and expenditure of BSC during the period from FY2010-11 to FY2021-22.

Table 11.16: Statement of Income-Expenditure and Profit-Loss of BSC

(Taka in Crore)

Fiscal Year	Total Income	Total Expenses	Net Profit
2010-11	266.66	264.79	1.87
2011-12	282.01	280.55	1.46
2012-13	328.59	326.96	1.63
2013-14	171.14	167.77	3.37
2014-15	130.01	124.67	5.34
2015-16	118.81	112.08	6.73
2016-17	116.55	107.89	8.66
2017-18	126.52	114.00	12.52
2018-19	230.31	175.08	55.23
2019-20	322.84	281.37	41.47
2020-21	322.97	250.95	72.02
2021-22*	257.52	131.21	126.31

Source: BSC * Up to February 2022.

Bangladesh Marine Academy

Since the establishment Bangladesh Marine Academy, Chattogram has trained about 5,090 professionally skilled, environmentally conscious, intelligent and smart marine cadets (including 85 female cadets since 2012) in accordance with ‘IMO STCW Convention’. The academy has recently been accredited by the Nautical Institute, London and the Institute of Marine Engineering, Science and Technology, London, and the Merchant Navy Training Board, London. Australian Maritime College (University of Tasmania), recognitions of European Commission, Singapore Maritime Administration, UK Merchant Navy Training Board, Nautical Institute, London, IMarEST London and South Asian Business Excellence Award 2017.

National Maritime Institute

National Maritime Institute is the only Technical Training Centre for Bangladeshi seafarers (ratings). Unemployed youths are selected for training from all over the country under a standard selection procedure. They are trained here as per the syllabus in accordance with the STCW convention of IMO to develop them into competent maritime manpower. Temporary branch of NMI has been established at Madaripur. A project for construction of buildings & provision of other facilities has been taken.

The Directorate of Seamen and Emigration Welfare

The Directorate of Seamen and Emigration welfare is a regulatory body for the welfare and wellbeing of seafarers under the control and supervision of the Ministry of Shipping. The Directorate has been playing an important role to solve the seafarers problem at homeport and foreign port where Bangladesh seafarers face problem with the coordination to the concerning authorities. The Directorate of Seamen and Emigration Welfare is exclusively welfare orientated government organization. Its only source of income is seat rent collection from seafarers those who stay in the seamen's hostel and certain portion (15 percent) of Levy Collection under the Levy Collection Rule-2013.

National River Conservation Commission (NRCC)

The national River Conservation Commission was established on 5th August under the National River Conservation Commission Act, 2013. The Commission is responsible for ensuring multidimensional use of the river for socio-economic development including preventing illegal possession of rivers, water and environmental pollution, illegal construction and various irregularities and also responsible for restoration of normal flow of rivers, proper maintenance of rivers and the development of the river as a transportable.

D. Air Transport

Civil Aviation Authority of Bangladesh (CAAB)

To regulate and develop aviation facilities in Bangladesh for national and international air transportation Civil Aviation Authority of Bangladesh (CAAB) renders its services. CAAB installs, maintains and operates aerodromes, air traffic, air navigation, aviation related ground services and telecommunication services and facilities. At present CAAB operates 3 international airports, 7 domestic airports and 2 Short Take-Off and Landing (STOL) ports. Out of these, 8 airports are in operation. Due to inadequacy of passengers, no flight is operating at 2 other domestic airports and 2 STOL ports. The financial position of CAAB during the period from FY2010-11 to FY 2022-23 is shown in Table 11.17.

Table 11.17: Financial Position of CAAB

(Taka in Crore)

Fiscal Year	Revenue Income	Revenue Expenditure	Total Expenditure (Revenue and others)	Net Profit
2010-11	653.89	316.87	623.84	30.05
2011-12	731.05	378.54	838.44	-107.39
2012-13	795.21	330.34	644.53	150.68
2013-14	1150.29	423.33	976.86	173.43
2014-15	1410.32	497.67	1277.22	133.10
2015-16	1504.17	506.85	1256.76	247.41
2016-17	1518.14	571.56	1424.17	93.97
2017-18	1659.65	594.16	1766.04	-106.39
2018-19	1690.79	620.73	1708	-17.21
2019-20	1554.54	630.94	2165.97	-611.43
2020-21	1159.44	666.03	1451.30	291.93
2021-22	1910.98	759.73	1900.03	10.95
2022-23*	1057.61	404.02	973.25	84.36

Source: Civil Aviation Authority * Up to February 2023.

Biman Bangladesh Airlines Limited

At present, Biman Bangladesh Airlines Limited, the national flag carrier, is operating flights to 7 domestic and 21 international destinations. Among the international destinations, 03 SAARC destinations, 3 in South East Asia, 02 East Asia, 10 in Middle East, 02 in Europe and 01 in North America are still operating. Bangladesh Biman transported a total of 22,76,737 passengers and 43,975 tonnes of cargo in fiscal year 2021-22.

For providing better services to the valued customers or passengers, Biman has started Call Center Services. Besides Biman has started online Web-Site as well as Mobile apps. Biman has introduced web check-in service for Domestic and International passengers at Hazrat Shahjalal International Airport for the first time in the country's history. Year wise income and expenditure of *Biman* during FY2010-11 to FY 2022-23 is shown in Table 11.18.

Table 11.18: Income and Expenditure of Biman Bangladesh Airlines Limited

(Taka in Crore)

Fiscal Year	Revenue Income	Expenses	Net Profit/Loss (+/-)
2010-11	3343.93	3568.09	-224.16
2011-12	3823.67	4417.88	-594.21
2012-13	3951.89	4237.52	-285.63
2013-14	3816.94	4102.56	-285.61
2014-15	4772.79	4448.65	324.13
2015-16	4965.53	4730.03	235.50
2016-17	4551.52	4504.63	46.90
2017-18	4931.64	5133.11	-201.47
2018-19	5794.92	5577.11	217.81
2019-20	5044.45	5125.58	-81.13
2020-21	4,128.39	3,969.99	158.40
2021-22	6935.28	6495.50	439.78
2022-23*	5454.23	4937.34	516.89

Source: Biman Bangladesh Airlines Limited, *up to February 2023.

E. Information and Communication Technology Technology**Bangladesh Telecommunication Regulatory Commission (BTRC)**

Bangladesh Telecommunication Regulatory Commission (BTRC) is working to ensure

reliable, affordable and sophisticated telecom services. At present, it is working on the development of internet, especially broadband internet, across the country through efficient utilization of resources of government and non-government organizations. Price of internet bandwidth has been decreased appreciably in the last 10 years. Besides optical fibre network coverage has been expanded throughout the country to ensure quality internet service. To ensure the impact of this huge backbone network development, BTRC has launched a new internet tariff named “One Country One Rate”. For this reason, people across the country are getting access to quality internet service at affordable prices.

Bangladesh Telecommunication Regulatory Commission (BTRC) has collected Tk 1676 Crore as revenue up to March, 2023 during FY 2022-23. The "Ad Hoc-Digital Security Cell" was formed through its own manpower of BTRC. This cell is constantly conducting various state security and public safety monitoring activities on social media. Besides, it removes these harmful content from social media. Various internet giants- Facebook and Google-YouTube have started paying VAT including necessary registration. In order to ensure cyber security for telecommunication sector related organizations and to provide necessary assistance in mitigating cyber security risks in any situation of the state, BTRC- CSIRT is formed in combination with Posts & Telecommunications Division, BTRC, Department of Telecom, Digital Security Agency and related other organizations.

Bangladesh Telecommunications Company Limited (BTCL)

At present the project titled ‘Modernization of Telecommunication Network for Digital Connectivity’ is being implemented at a cost of BDT 3314.94 crore through which modern

telephone exchanges with high speed internet connection at district / upazila levels and strong telecommunication network will be established across the country. In addition, a project titled "Switching and Transmission Network Development for Strengthening Digital Connectivity" for the installation of high capacity switching exchanges and transmission equipment at a cost of Tk 155.38 crore is being implemented. BTCL is implementing Telecommunication Network Establishment Project in Chattogram Mirsarai Economic Zone at a cost of Tk 61.90 crore, Broadband Wifi expansion project for disadvantaged people in Haor, Baor and remote areas at a cost of Tk 459.85 crore and “BTCL’s Internet Protocol (IP) Network Development and Expansion” project at a cost of BDT 945.50 crore to expand and improve the quality of high speed broadband internet services across the country.

The project titled “Establishment of Telecommunication Networks in Economic Zones (Phase I)” at a cost of BDT 95.12 crore is being implemented for setting up telecommunication networks in 5 economic zones under BEZA. In order to provide modern and uninterrupted telecommunication services with 5G readiness across the country, BTCL's project titled "Development of 5G-compliant Optical Fiber Transmission Network of BTCL" at a cost of BDT 1059.10 crore is under implementation. The project titled 'Establishing External Telecommunication Network for Rooppur Nuclear Power Plant' is under implementation by BTCL for establishment of state-of-the-art and high speed dedicated external telecommunication network for Rooppur Nuclear Power Plant. Table 11.19 shows the revenue targets, revenue income and expenditure of BTCL during the period from FY 2010-11 to FY 2022-23.

Table 11.19: Year wise Income and Expenditure of BTCL

(Taka in Crore)

Fiscal Year	Target	Revenue Earned	Expenditure
2010-11	1566	1640	1976
2011-12	1760	2186	2203
2012-13	2498	1761	1756
2013-14	1306	1005	1385
2014-15	848	821	1106
2015-16	784	1242	1578
2016-17	982	1258	1442
2017-18	1148	1260	1652
2018-19	1200	1060	1428
2019-20	1087	922	1246
2020-21	895	854	1102
2021-22	1116	933	926
2022-23*	-	464	434

Source: BTCL * Up to December 2022.

Bangladesh Submarine Cable Company Limited (BSCCL)

Although the initial bandwidth capacity of BSCCL through SEA-ME-WE 4 submarine cable system was only 7.5 Gbps, by joining various upgradation programs and establishing connectivity with the SEA-ME-WE 5 submarine cable system in 2017, it presently stands at 3420 Gbps. At present BSCCL alone is satisfying about 60% demand in the case of the country's overall internet bandwidth, whose amount is about 2524 Gbps (Gigabyte Per Second) as per data collected on 29 March 2023. Various initiatives taken by the government to reduce the cost of internet has made it affordable for the mass people. Due to the relentless effort of the present government, bandwidth price has been reduced from Tk.

27,000 per Mbps (Mega bit per second) in 2009 to less than Tk. 300 in 2023.

Under upgradation process of the SEA-ME-WE 4 submarine cable a contract agreement has been signed with the supplier, Ciena and with this upgradation, the total capacity of SMW4 Submarine Cable System will be 4600 Gbps. Bangladesh's 3rd Submarine Cable installation work is in progress under the SEA-ME-WE 6 (SMW6) consortium. The supplier selected by the consortium started its job from 15/02/2022 and completed the Desktop Study and the Route Survey work of Bangladesh portion.

Table 11.20 shows year wise revenue income of BSCCL during the period from FY2010-11 to FY 2021-22.

Table 11.20: Income and Expenditure of Bangladesh Submarine Cable Company Limited

(Taka in Crore)

Particulars	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Revenue Earned	83.78	121.45	124.84	75.37	54.07	61.86	103.67	140.5	195.57	249.86	344.85	441.74
Net Profit (before tax)	54.48	83.13	109.59	48.81	13.90	17.87	38.95	29.39	77.90	125.20	239.98	320.10
Net Profit (after tax)	30.51	74.48	87.21	36.23	12.91	16.55	31.82	7.33	58.58	95.60	190.73	250.02

Source: BSCCL

Bangladesh Post Office

Bangladesh Post Office is dedicated to deliver a wide range of basic postal service and financial & ICT based digital postal service with its countrywide network. Bangladesh Post Office is committed to ensure a speedy, reliable and affordable service to the people of all walks of life. It always focuses on bringing people's happiness through pragmatic & innovative ideas as well as uplifting of this department to a profitable one. A total of 1863 post offices are converted to ICT based rural post offices under the project 'onstruction of ICT based rural post office'. Besides daily transaction of banks in 71 main post offices are operated on digital system under the project 'Process Automation of Bangladesh Postal Department'. Bangladesh Post Office has taken various initiatives for its continuous development and as a result there are some future planning such as extensive introduction of agent banking and cash services in rural areas, Introduction of International Remittance Service, construction of technology based mail processing and e-commerce hub by 2026, renovation of old post offices and expansion of EMTS services etc.

Information and Communication Technology (ICT) Division

To achieve the goal of establishing Bangladesh into a developed state by 2041, Information and Communication Technology (ICT) Division is working ceaselessly.

Activities taken:

- Union Information Service Center (UISC) with solar power has been set up in 1013 unions where there is no electricity. These centers were renamed the Union Digital Center (UDC);
- The National Data Center (Tier-III) set up by the Bangladesh Computer Council is providing various services such as Mail Domain, Web Site and Application Hosting, VPS Service, Cloud Service and G-Drive uninterruptedly to more than 731 government offices. The number of service recipients from data centers is more than 10 crore. The National Data Center is providing support for a2i's e-nothi server and network migration.
- High speed internet connection has been established through the optical fibre cable in 18434 government offices (ministries, departments, districts and Upazila levels);
- 893 video conferencing systems have been set up across the country. WiFi network has been set up in Bangladesh Secretariat and ICT towers to make internet accessible. Solar power facilities are provided in 487 UNO offices. 254 agricultural information Centers and 25 telemedicine centers have been set up;
- Network and WiFi services of 17,380 offices are provided so far under the central monitoring system of the National Network Operations Center (NOC). The latest technology 4K Multi Conferencing Unit (MCU) has been installed in BCC to modernize the video conferencing system. WiFi-6 with 5G technology including Agile Controller is installed to ensure WiFi network security;
- To connect India, Nepal, Bhutan and Bangladesh by optical fiber cable and increase the data exchange capacity, BTCL has installed 56 km of optical fiber cable from Panchagarh district to

Banglabandar Noman's Land to connect with the NOC established in Siliguri under Regional Network (RN) of South Asia Sub Regional Economic Cooperation Information Highway (SASEC IH) project. Transmission Equipment have been set up at BTCL Chuadanga, Meherpur, Magbazar, Panchagarh and Thakurgaon to connect Siliguri with NOC via Kolkata

- IP camera based surveillance system has been set up to make Sylhet a "Safe City" under the 'Digital Sylhet City' project.
- **iDEA Fab Lab:** An iDEA Fab Lab has been set up at the project office with world class advanced devices to facilitate research and testing in the production of innovative products by startups. In this lab, young entrepreneurs, startups and stakeholders will be able to take advantage of testing and research at various stages of production of their innovative products.
- Digital Forensic Lab, "Cyber Range", Cyber Defense Training Center and 15 Critical Information Infrastructure cyber sensor technologies have been set up under the BGD eGov CIRT project.
- Honorable Prime Minister Sheikh Hasina inaugurated the world's seventh largest Uptime Institute "Four Tier National Data Center" at Bangabandhu Hi-Tech City, Kaliakair, Gazipur on 28 November 2019 and is now operating as the company named Bangladesh Data Center Company Limited (BDDCL);

- Implementation of G-Cloud is underway by setting up DRCC to ensure data sovereignty using world-class Oracle Cloud Technology here. Besides, it will be possible to provide services to all public/private organizations from June, 2023 by setting up the state owned cloud called "Meghna Cloud". "Center of Excellence" will be ensured through collaboration between the data center industry and universities under the Meghna Cloud Agreement along with the establishment of Artificial Intelligence, Big Data Analytic Platform.
- Information and Communication Technology Act, 2006 (Amended-2009), Digital Security Act 2018, One Stop Service (Bangladesh Hi-Tech Park Authority) Rules 2019, National Information and Communication Technology Policy 2018, Government E-mail Policy 2018, 333-related guidelines-2021, Made in Bangladesh Strategy 2021, National Strategy for Robotics, Bangladesh National Digital Architecture (BNDA) guidelines etc. have been formulated.