

CHAPTER 11

TRANSPORT AND COMMUNICATION

Transport and communication system as an essential physical infrastructure plays an important role in socio-economic development of the country. It is very much necessary to make a developed and efficient transport and communication system compatible with international, national and regional road network. Considered this view, Padma Bridge, Metro-rail, Dhaka Elevated Express way and some other mega-projects are being implemented. To operate Railway as an environment-friendly, safe, affordable and dependable means of transport and to gain commercial and financial success, professional knowledge based organisational reforms and sector improvement are being implemented. Several measures have already been undertaken for dredging of dying river ways, 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. With limited resources Biman Bangladesh Airlines Limited is conducting international and national flights in different routes. To modernise, develop and expand the country's telecommunications system, various measures have been undertaken by the government. Keeping consistency with the targets of Vision-2021, SDG and Seventh Five Year Plan, the Government has undertaken various initiatives to expand information technology. Various development projects and programmes are in progress to ensure the use and application of information and communication technology by increasing digital literacy at all walks of life, extend public service through IT-based activities and, finally, build a modern and developed Bangladesh through the introduction of e-governance and e-commerce.

Transport and communication system is a vital physical infrastructure for the socio economic development of a country. According to the final estimate of Bangladesh Bureau of Statistics (BBS) the contribution of the transport and communication sector to GDP was 11.26 percent and the rate of growth was 6.76 percent during FY2016-17. In context of globalisation and the market economy involvement with regional and international transport international networking is crucial for Bangladesh.

Roads Communication

Roads and Highways Department (RHD)

The total length of road in the country is

21,302.08 km, of which 18,202.06 km is paved, under the management of Roads and Highways Department. Out of the total road network under this Department, 3812.78 km is National Highway (17.90%), 4,246.97 km Regional Highway (19.94%) and remaining 13,242.30 km is Zila roads (62.16%). Besides, RHD has 4,507 bridges and 13,751 culverts under its control. Moreover, RHD has currently been operating about 124 ferry boats in 41 ferry Ghats on its road network throughout the country. It may be mentioned here that the length of road network under RHD did not increase during last couple of years. But the quality of different important road segments has been significantly

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improved through carrying out development/improvement works of various standards as per requirement. The following table provides

a ten year time series data on RHD road lengths since 2008.

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

Year	(Kilometer)			
	National Highway	Regional Highway	Zilla Road	Total
2008	3570	4323	13678	21571
2009	3477	4165	13248	20890
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

Source: Roads and Highways Department; Ministry of Road, Transport and Bridges.

Moreover, the Government has taken necessary initiatives to implement 6 road and bridge projects by public private partnership arrangement. The procedure of selecting investors is underway of the following projects:

- Construction of Dhaka- Chittagong Expressway
- Upgrading of *Madanpur- Bhulta- Debogram- Joydevpur* to 4 Lane (Dhaka Bypass)
- *Hatirjheel-Rampura-Banosree* Ideal School and Collage *Shieker Jayga-Amulia-Demra* Highway (Chittagong Road Mour and Tarabo Link Road).

Other projects under RHD are:

- Improvement of *Gaboli-Nabinagar* Highway to Expressway with provision of service lanes

- Construction of Dhaka Circular Road with provision of service lanes: 2nd phase Improve to 4 Lane Highway (*Abdullahpur-Dhour- Birulia- Gaboli- Babubazar Fatullah- Chashara - Signboard*, 67 kilometer).

The draft of 'Road Transport Act, 2017' has been approved on 27 March 2017 by the Cabinet in order to replace the 'Motor Vehicle Ordinance 1983' with a modern and up-to-date one. Meanwhile, the 'Road Fund Board Act, 2013' has been approved by the Government to ensure proper and continuous supply of fund for road repairing and maintenance. The 'Bus Rapid Transit Law' is also underway.

A flawless road design is being implemented through identifying the accident black spots on the National Highways. The intensity of road accident has been reduced due to proper

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maintenance of road and straightening of road alignment. The ‘Improvement of Black Spots in National Highways’ for the treatment of 121 black spots at an estimated cost of Tk.168.05 crore has been completed during FY2016-17. Besides, a vast programme for safety on road through overload control by means of installing weigh-bridge at each important traffic origination point, signing and signaling of roads etc. is under implementation for long time.

Local Government Engineering Department (LGED)

Local Government Engineering Department (LGED) has been implementing a number of

projects/programmes for the development of rural and urban infrastructures of the country. Since its inception up to FY2016-17, LGED so far developed 1,07,910 km *upazila*, union and rural roads, constructed 1,335,174 meters bridges/culverts and planted trees along 24,839 km of those roads. Moreover, as many as 2,041 growth centers, 2,059 rural bazars have been developed and 3,150 Union *Parishad* Complex buildings have been constructed during the period.

The following table depicts achievements in Transport Infrastructure under various development projects of Local Government Engineering Department up to FY2016-17 since its inception.

Table 11.2: Achievement in Transport Infrastructure Development under LGED

Component	Financial Year											Total (Cumulative Up to June 2017)
	Cumulative up to June 2007	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
1	2	3	4	5	6	7	8	9	10	11	12	13
Earthen Road (km)	64691	-	-	-	-	-	-	-	-	-	-	64691
Paved Road (km)	57908	3993	3277	4023	4614	4905	6639	6548	5990	4813	5200	107910
Bridge/ Cuvert (m)	1038355	30020	33800	29363	38502	26415	27057	32707	24455	28500	29000	1335174

Source: LGED.

Since 2009, LGED removed water-logging from 6,34,901 hectares along with the increasing water preservation capacity, irrigation facilities and irrigable areas by implementing 436 sub projects under small scale water resources development programmes. Besides, that 23 rubber dams on perennial rivers were constructed. In FY2016-17, LGED has implemented 27 development projects for the development of

infrastructures in urban area covering improvement of 845 km roads, 776 meters bridges/culverts and construction of 120 km drains.

To liberate the traffic jam of Dhaka City this organisation takes initiative to build two flyovers. The progress of 8.70 km length Flyover under *Mogbazar-Mouchack* Flyover Development Project is about 95 percent and

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620 meters *Khilgoan* Flyover Loop has been completed in January 2016.

Bangladesh Road Transport Authority (BRTA)

Bangladesh Road Transport Authority (BRTA) has been entrusted with the task of ensuring overall supervision, proper management and effective control with a view to bring about discipline in the road transport sector since its inception in 1988. This organisation is responsible for issuing registration and fitness certificates of vehicles as well as executing other regulatory activities as per Motor Vehicles Ordinance 1983. In FY2015-16, BRTA collected revenues Tk.1,619 crore against the target of Tk.1,354 crore, that is 119.57 percent of the target. In FY2016-17, BRTA released Tk.1,469 crore against the target of Tk.1,771 crore. The figures of target and actual collection of revenues from the FY2008-09 to FY2016-17 are given below:

Table 11.3: Revenue Target and Collection of BRTA

(In crore Taka)

Fiscal year	Target Amount	Collection	Percentage of Collection (%)
2008-09	550	646	117.59
2009-10	660	642	97.35
2010-11	870	685	78.76
2011-12	903	642	71.09
2012-13	1101	769	69.91
2013-14	1156	952	82.33
2014-15	1249	1062	85.04
2015-16	1354	1619	119.57
2016-17	1771	1469	82.95

Source: BRTA

Following measures have been taken to enhance standard of service, prevent environment pollution and reduce traffic jam during FY2016-17:

- Draft of National Road Safety Action Plan, 2017-2020 has been prepared
- To reduce road accident and enhancing road safety consciousness, a total of 52,670 professional drivers have been provided training.
- Legal actions have been taken against black smoke emitting defective vehicles through mobile courts to control vehicular pollution
- Up to June 2017 a total of 4,28,308 sets Retro Reflective Number Plates and radio Frequency Identification (RFID) tags have been produced and 3,97,055 sets of the same have been affixed to various vehicles. Production and affixing activates of Retro Reflective Number Plates and RFID tags have been continuing
- In FY2016-17 a total of 3,77,802 chip-based electronic smart Card Driving License have been produced and distributed
- In FY2016-17 a total of 4,77,205 Chip-based Electronic Digital Registration Certificate (DRC) have been produced and 3,12,592 DRC was distributed
- Collection of MV taxes and fees through online banking system is continuing
- A modern central Data Center has been established for preserving different vehicle and driving license data with safety and security
- Processing registration and issuing tax token, fitness, fitness certificate, route

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permit etc. of vehicle issue/renew is running through Information System of BRTA.

Bangladesh Road Transport Corporation (BRTC)

Bangladesh Road Transport Corporation was established in 1961 aiming to establish a better road transport system in the country. 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. The financial statement of BRTC from FY2008-09 to FY2016-17 is given in the Table 11.4:

Table 11.4: Revenue Target and Collection of BRTC

(In Crore Taka)

Financial Year	Operating Income	Operating Expenditure	Operating Surplus
2008-09	99.63	94.88	4.75
2009-10	98.81	91.31	7.50
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	9.54
2014-15	234.07	230.51	3.56
2015-16	266.36	258.31	8.05
2016-17	262.55	267.60	(5.05)

Source: BRTC

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

- At present, BRTC fleet contains 1538 buses and 146 trucks.
- To facilitate the journey of the students of different educational institutions, some 44 buses were donated to 22 educational institutions from BRTC fleet during 2009-2016.

- BRTC provided training to 7,188 participants in FY2015-16 and 8,121 in FY2016-17 through 17 Training Units (14 Training Centers and 3 Training Institutes).
- To facilitate comfortable journey to the Government and semi-government employees including the students of different universities, BRTC deployed 272 staff buses to 15 institutions which are running in 178 routes. Besides, 2 BRTC buses are plying in *Mirpur-Azimpur* route through which the students of 26 schools in Dhaka City are benefited.
- BRTC has introduced 'Women Bus Service' for the working women of different sectors to facilitate their safe journey. Now, 18 buses are running in 15 routes in Dhaka and Chittagong City.
- The number of vehicles as well as new routes has already been increased covering at least 20 percent more routes throughout the country. Now, the total number of routes in and outside of Dhaka stands at 390 (including staff bus routes).

Dhaka Transport Coordination Authority (DTCA)

Dhaka Transport Coordination Authority (DTCA) was established in 2012 to provide a smooth planned, coordinated and modern transport system for Dhaka city and its adjacent districts. DTCA jurisdiction covers 7,400 sqkm that includes districts of Dhaka, *Narayanganj*, *Munshigonj*, *Manikgonj*, *Gazipur* and *Narsingdi*. As a matter of fact, DTCA plans, approves, coordinates and

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monitors the transport related infrastructure projects within its jurisdiction.

Progress of Important Activities of DTCA

Coordination of Transport System

Dhaka Transport Co-ordination Authority Board comprises of 31 members. Board gives approval and direction for establishing Multimodal Transport System in and around Dhaka.

Strategic Transport Plan (STP)

In 2005, 20 year long term Strategic Transport Plan was formulated by the then Dhaka Transport Coordination Board (DTCB). Currently due to rapid urbanisation, improvement of living standards etc., STP (revised) has been approved by the Cabinet on 29 August 2016.

Clearing House

In order to ensure hassle free and seamless travel by different modes of transport by using SMART card 'Rapid Pass' under e-ticketing system, clearing house at DTCA office has been established on 20 May 2014. In the meantime, 60,000 Rapid Pass have been procured and introduced for BRTC A/C bus and a private owned A/C bus at *Uttara-Motijheel* route.

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

With a view to reducing the traffic congestion in Dhaka metropolitan area, Dhaka Mass Rapid Transit Development Project has been approved by the Government in 2012 under which 20.1 km long elevated MRT Line-6 (Metrorail) from Uttara to Bangladesh Bank is being implemented with an estimated cost

of Tk.21,985.07 crore. A hundred percent government owned company, Dhaka Mass Transit Company Limited (DMTCL) has been established to operate, maintain and manage Metrorail system in and around Dhaka city. Though the project duration is from July 2012 to June 2024, the Government has decided to complete construction of Uttara 3rd Phase to *Agargaon* section within 2020 and the entire section up to *Motijheel* within 2021. Once completed, the time interval of the Metrorail will be 4 minutes and total travel time will be 37 minutes. This Mass Transit System can transport around 60,000 passengers in both ways each hour. Each electric train will be comprised of 6 cars in each set. The entire project will be implemented through 8 packages.

Bus Rapid Transit (BRT) Line-3

With a view to developing Mass Rapid Transit system in Dhaka city in line with the Strategic Transport Plan recommendations, 22 km long bus based Mass Transit System implementation programme has been taken. The alignment of BRT Line-3 is from Hazrat Shahjalal International Airport to *Jhilmil* and after implementation, it will be able to carry 30,000 passengers per hour in both directions.

Besides that, a 20 km long BRT Line-3 (north section) from Airport to *Gazipur* is now under implementation by Roads and Highways Department (RHD) under ADB financing. After implementation of both North and South part of BRT, passengers can travel seamlessly from *Gazipur* to *Keraniganj* area using the BRT system.

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Traffic Management

In order to reduce traffic congestion in Dhaka city through intersection improvement and Intelligent Traffic System (ITS) introduction in 4-Inter sections (*Paltan, Gulshan-1, Gulistan* and *Mohakhali*), a pilot project 'Dhaka Integrated Traffic Management Project' is being implemented. Hopefully, this project will be completed within June 2018.

Bridges Division

Bridges division is responsible for implementation and maintenance of bridges and tunnels which are 1,500 meters and over in length, flyover, expressway, causeway, link road etc. The main activities of 'Bangladesh Bridge Authority', the only organisation of Bridges Division, are as follows:

Bangabandhu Bridge

To ensure integrated communication system, 4.8 km long *Bangabandhu* bridge was built in 1998 over *Jamuna* river at the cost of Tk.3,745.60 crore. The bridge which connects two regions divided by the *Jamuna* river helps to accelerate the country's overall political, social, economic, administrative and cultural development. A direct rail communication has been established with capital Dhaka to Rajshahi, *Lalmonirhat, Dinajpur* and Khulna by building railway by the side of *Bangabandhu* bridge. Now, it is possible to communicate with north-west region from Dhaka within very short time. Apart from the road and railways facilities, other facilities like electricity, gas and fiber

optic telephone line have been established through this bridge.

Construction of *Bangabandhu* bridge facilitates the increase of agriculture production to a great extent in northern region and farmers are getting the fair price of their products. Besides, industries have flourished in that region too.

Toll collection is increasing every year from the Bridge. The revenue earnings for the period of FY2008-09 to FY2016-17 from this bridge are shown in Table 11.5.

Table 11.5: Description of the toll realised from *Bangabandhu* Bridge

(In Crore Taka)

Financial Year	Target	Revenue collection	Collection rate (%)
2008-09	181.53	212.45	117.00
2009-10	230.00	243.93	106.00
2010-11	260.00	267.66	102.94
2011-12	312.21	304.66	97.58
2012-13	335.40	325.20	96.96
2013-14	358.98	323.38	90.23
2014-15	365.13	349.08	95.60
2015-16	391.98	402.55	102.69
2016-17	456.68	484.53	106.09

Source: Bangladesh Bridge Authority.

6th Bangladesh China Friendship (Mukterpur) Bridge

In order to establish transportation link between Dhaka and adjacent commercial area *Munshigonj*, construction of 1,521m long *Mukterpur* bridge over the river *Dhaleswary* was completed in 2008 at the cost of Tk.197.36 crore.

Padma Bridge

The present Government has attached the highest priority to the construction of the *Padma* Multipurpose Bridge at *Mawa-Janjira* point for establishing an integrated communication network among all regions of the country. The implementation work of this largest-ever project at the cost of Tk.28,793.39 crore, also the biggest self-financed project, is progressing in full swing. The 6.15 km long bridge is expected to open for traffic movement in 2018.

The progress of important packages of The *Padma* Multipurpose bridge project up to February 2017 is as follows:

- The physical progress of Main Bridge is 40 percent. Meanwhile, 70 meter bottom of 25 piles and full 128 meter of 19 piles and 20,000 meter out of 30,000 meter steel pile fabrication of main bridge have been constructed. Moreover, 1,25,000 tons steel out of 1,29,000 tons reached the site. 3D assembling of super structure is underway in Bangladesh and China.
- The work of 4 truss fabrication length of 150 meter is progressing in *Mawa* construction yard. Meanwhile, 8 test piles of main bridge have been completed and an additional test pile of viaduct and 150 meter wide channel direction to bridge alignment are under construction.
- *Janjira* viaducts 56 bored pile have been completed and pile cap work is running on. Moreover, 4 transition piers bored pile, each having 3 diameters have been completed.

- The physical progress of river training work is 32.50 percent. Different size rocks, stone pieces, cement, sand and other construction materials are under mobilisation in site.
- In resettlement sector, Tk.614.28 crore has been given as additional assistance among the affected people till June 2017. About 2,153 plots have been allotted to the affected families in the resettlement sites till June 2017. Among them 621 landless (affected) families have got plot without any cost. 87,457 saplings have been planted to resettlement and service area on both sides of *Padma* bridge. Overall physical progress of project is 44 percent till June 2017.

The *Padma* Bridge will connect 19 districts of south-western region of the country with the eastern part and the capital Dhaka. 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). Apart from contributing to the communication network, the bridge will also help in the economic development through increasing production, employment, income and alleviating poverty. This bridge will play a significant role in the socio-economic development by raising GDP by 1.20 percent and reducing poverty by 0.84 percent approximately.

Dhaka Elevated Expressway

The contract agreement has been signed with 'Italian-Thai Development Public Company Limited' on 15 December 2013 to construct the 46.73 km (with ramp) long Dhaka elevated expressway at the cost of TK.8940.18 crore from Hazrat Shahjalal International Airport to *Kutubkhali* on the Dhaka-Chittagong highway on PPP basis. Construction of this expressway including ramp is going on and meanwhile 589 pile drives already completed. It is expected that construction work will end by 2020. People of the important areas of this city like airport, *Kuril, Mohakhali, Tejgaon, Manikmia avenue, Polashi, Karwanbazar, Kamlapur, Motijheel* will use this elevated expressway to reduce consumption of Fuel and curtail working hour wasted and to avoided traffic jam.

Tunnel under the River *Karnaphuli*

Steps have been taken to construct about 3.40 km long tunnel at the cost of Tk.8,446.46 crore under the river *Karnaphuli* in order to connect west part of Chittagong city to East part. It is expected that this project helps to reduce traffic jam and facilitate to direct road communication among Dhaka-Chittagong-Cox'sbazar, enabling smooth transportation of goods from Chittagong sea port and proposed deep sea port. A commercial contract has been signed between China Communications Construction Company Ltd. for constructing this tunnel. It is expected to complete by 2020.

Construction of BRT Lane (Elevated Section)

Steps have been taken to construct of 20 km long Bus Rapid Transit (BRT) lane at the cost of Tk.2039.85 crore under the 'Sustainable Urban Transport Project' from *Gazipur* to Hazrat Shahjalal International Airport. Bangladesh Bridges Authority is responsible for implementation of 4.5 km elevated section. Detailed design of elevated section has already been done.

Construction of Dhaka-Ashulia and Dhaka East-West Elevated Expressway

Feasibility study has completed to construct about 24 km long Dhaka-Ashulia Elevated Expressway from Hazrat Shahjalal International Airport to EPZ through *Ashulia*. To construct the expressway on G-to-G basis, a MoU has been signed with the Chinese Government nominated organisation China National Import and Export Corporation (CMC). Moreover, Feasibility study is being conducted to construct about 35 km long Elevated Expressway from *Hemayetpur* of *Savar* to *Madanpur* of Chittagong road through *Sirajdikhan*. These two expressways will reduce traffic congestion in and around Dhaka city and traffic from Chittagong, Sylhet and other eastern part and from south western region through Padma Bridge to the north-western districts will be convenient.

Conduct Feasibility Study to Construct Subway (Underground Metro) in Dhaka city

Preliminary initiative has been taken to construct subway or underground metro in order to reduce the traffic jam of Dhaka city.

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In this process, 4 preliminary alignments have been selected. Feasibility study will be conducted very soon.

Conduct Feasibility Study of Tunnel Under the *Jamuna* River

Initiative has been taken to conduct the feasibility study of tunnel under the river *Jamuna* which connects *Gaibandha* and *Jamalpur* district.

Construction of Other Large Bridges

In order to maintain uninterrupted road network initiatives have been taken to build new bridges under the Bridges Division. As a part of this, for development of southern regional roads network in the district of Barisal and *Patuakhali* feasibility study of bridges at '*Rahamotpur-Babugonj-Muladi-Hijla*' roads over *Arialkha* River, at '*Lebukhali-Dumki-Boga-Doshamina-Golachipa -Amragachi*' roads over *Golachipa* river, at '*Kocua- Betagi-Potuakhali-Lohalia-Kalia*' roads over *Payra* River has been completed. PDPP has been approved for the 3 proposed bridges costing of Tk.44.24 crore. On the basis of this estimation, foreign fund has been sought. It is expected that construction of these bridges will start soon after availability of finance.

Moreover, steps have been taken to conduct feasibility study of 4 other bridges over *Payra* River in *Patuakhali-Amtoli-Borguna* roads, over *Meghna* river in *Bhulta-Araihazar-Nabinagar* roads and over *Tetulia* and *Kalabodor* river which connect with Barisal and *Bhola*.

B. Railway Communication

To make a dependable, affordable, environment friendly and compatible mass-transport system the Railway Division was transformed into a separate Ministry on 4 December 2011. The Government has been allocated more resources for development of railway in comparison to any other previous government. Many projects have been implemented at a cost of Tk.9,022.25 crore since 2009. At present, Bangladesh Railway is implementing 53 (46 Infrastructure project with 7 sub-projects) development projects.

Since 2009, Bangladesh Railway has newly constructed 242.87 km rail line, 67 station buildings, 179 bridges and converted 248.50 km railway track into Dual gauge track. Besides, 1,090.43 km railway track, 597 bridges, 160 station buildings, 362 passenger coaches, 277 wagons have been rehabilitated. To address the shortage of rolling stocks 20 MG locomotives, 26 BG locomotives, 270 passenger carriages and 20 sets DEMU, 165 BG and 81 MG tank wagons, 270 Flat wagons and 30 Brake vans have been procured.

For the expansion of railway network, new railway track construction/rehabilitation projects such as *Dohazari-Cox's Bazar - Gundum* (129.58 km), *Kalukhali-Bhatiapara-Gopalgonj-Tungipara* (132 km), *Pachuria-Faridpur-Bhanga* (60 km), *Ishwardi-Pabna-Dhalarchar* (78.8 km) and *Khulna-Mongla* (64.75 km) have been undertaken and a project has been undertaken by Bangladesh Railway to construct 169 km railway line along *Dhaka-Mawa-Bhanga-Narail-Jessore* section to start train service over the *Padma*

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Bridge from the day of inauguration. Besides, ‘Feasibility Study with detailed design and Tendering Servicers for Construction of Rail Line from *Bhanga* Junction (*Faridpur*) to *Payra* Seaport via Barisal’ has been approved. After completion of this feasibility study, initiative will be taken to construct railway line from *Bhanga* Junction (*Faridpur*) to *Payra* Seaport via Barisal.

For the fulfillment of the desires of the mass people and for improving the service according to the commitment of present Government a total of 112 new trains have been introduced in different routes including Rangpur-Dhaka, Dhaka-Sylhet and Mymensingh-*Bangabandhu* Bridge East section and services of 30 trains have been extended. Ticket procuring and information of train by mobile phone and internet have been introduced under e-ticketing system as a part of establishing Digital Bangladesh. Moreover, Wi-Fi internet service has been introduced Hazrat Shahjalal International Airport and Chittagong Railway Stations and close circuit camera has been installed in important railway stations for the safety of the passengers.

Initiatives have been taken to upgrade the important railway corridors including those of Dhaka-Chittagong from single track to double tracks. For this purpose, *Laksam-Chinkia* and *Tongi-Bhairab Bazar* section have already been upgraded to double track, and construction of 2nd *Bhairab* and 2nd *Titas* Bridge along with approach railway track are going on. Moreover, a project for construction of a Rail Bridge parallel to the existing *Bangabandhu* Bridge over the river *Jamuna* under JICA funding has been approved in ECNEC. Besides, efforts have been taken for upgrading the single track *Khulna-Darshana* section into double track and conversion of meter gauge to dual gauge in the *Parbatipur-Kawnia* Section under Indian 2nd Line of Credit.

Projects have been taken to procure 100 MG locomotives, 550 MG and 150 BG passenger coaches in order to meet up the increasing demand of mass people.

Table 11.6 presents year wise data on overall performance of Bangladesh Railway over the period from FY2008-09 to FY2016-17.

Table 11.6: Overall Performance of Bangladesh Railway

Fiscal Year	Passenger Km (Million)	Freight Ton Km (Million)	Total operating revenue (Tk. in crore)	Total operating expense (Tk. in crore)
2008-09	6800.73	800.15	737.92	1172.74
2009-10	7305.00	710.00	673.16	1257.20
2010-11	8051.92	692.64	747.70	1491.82
2011-12	8787.23	582.11	726.42	1567.12
2012-13	8253.00	525.00	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*	9167.18	675.09	904.02	2229.22

Source: Bangladesh Railway, Ministry of Communication. *provisional

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C. Water Transport

To ensure maximum use of waterways as efficient, environment-friendly and secure communication the Ministry of Shipping has taken up the tasks for development of internal water transport infrastructure, its maintenance, operation and control. To contribute to the overall economic development of the country through ensuring modern port management, safe and uninterrupted movement of water vessels, developing human resources and providing efficient and affordable water transport services. Twelve organisations/agencies are working under the Ministry of Shipping that includes:

1. Bangladesh Inland Water Transport Authority (BIWTA)
2. Bangladesh Inland Water Transport Corporation (BIWTC)
3. Chittagong Port Authority (CPA)
4. Mongla Port Authority (MPA)
5. Bangladesh Land Port Authority (BLPA)
6. Department of Shipping (DOS)
7. Bangladesh Shipping Corporation (BSC)
8. Marine Academy, Chittagong (MA)
9. National Maritime Institute, Chittagong (NMI)
10. National River Conservation Commission (NRCC)
11. *Payra* Port Authority (PPA)

Activities of some of these agencies are presented below:

Bangladesh Inland Water Transport Authority (BIWTA)

As a statutory organisation Bangladesh Inland Water Transport Authority (BIWTA) is

responsible for development, maintenance, conservation and performing regulatory functions of the inland water transportation system. Several measures have already been undertaken to achieve the goals targeted under different time frames. Dredging of dead and dying river routes, development and maintenance of navigability of different river routes, ensuring safe movement of water crafts, development of inland river ports, activating the circular waterways around Dhaka city, creating infrastructural facilities to carry container goods in inland waterways, preparation of hydrographic charts in digital system, etc. are the major initiatives to be mentioned.

A total of 13 development projects of BIWTA were included in the Revised Annual Development Programme (RADP) in the FY2016-17. Among these projects 3 projects were implemented by organisations own fund. A total allocation of GoB and organisations own fund was Tk.877.69 crore and Tk.25.04 crore respectively. A sum of Tk.902.68 crore (provisional) has been incurred up to June 2017 against the projects included in the RADP. Table 11.7 shows the year wise income and expenditure of BIWTA during the period from FY2008-09 to FY2016-17.

Table 11.7: Income and Expenditure of BIWTA

(In crore taka)

Fiscal Year	Income	Actual Expenditure	Profit/Loss (+,-)
2008-09	160.22	160.53	-0.31
2009-10	175.33	182.74	-7.52
2010-11	237.53	239.10	-1.57
2011-12	290.78	272.91	+17.87
2012-13	349.09	239.40	+19.69

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Fiscal Year	Income	Actual Expenditure	Profit/Loss (+,-)
2013-14	320.04	377.61	-57.57
2014-15	358.58	385.29	-26.71
2015-16	506.64	524.66	-18.02
2016-17	603.40	695.96	-92.56

Source: BIWTA, Ministry of Shipping. *provisional

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 FY2008-09 to FY2016-17 is presented in Table 11.8.

Table 11.8: Development and Maintenance Works of BIWTA

Fiscal Year	Dredging Quantity (lakh cubic meter)		
	Total	Development Dredging	Maintenance Dredging
2008-09	32.46	9.11	23.35
2009-10	39.96	5.00	34.96
2010-11	65.70	25.54	40.16
2011-12	68.10	24.48	43.62
2012-13	96.64	51.98	44.66
2013-14	104.92	47.02	57.90
2014-15	170.92	120.15	50.77
2015-16*	283.01	178.22	104.79
2016-17**	276.16	158.59	117.37

Source: *Revised, ** Provisional

In addition to the above activities, BIWTA procured 14 technologically advanced dredgers, 2 high-powered salvage vessels, different types of navigational aids (e.g. Lighted Buoy, Steel Lighted Buoya, Bridle Chain, Solar Panel, R.C.C. Sinker, etc.) and other ancillary equipments during the last four fiscal years. With the installation of the

navigational aids along with establishment of 111 new poontons and 237 old pontoons of various sizes in different landing stations and river ports after having minor and major repairs. BIWTA also protects the river bank of important rivers surrounding Dhaka and Narayangong city by constructing 20m walkway.

Bangladesh Inland Water Transport Corporation (BIWTC)

By operating 181 vessels BIWTC is working to provide reasonable and service oriented transport system. At present, the organisation is diligently providing Ferry Services, Passenger Services, Cargo Services and Ship Repair Services to improve the service quality and operational efficiency, BIWTC has constructed total 45 different type of vessels during 2009-2016 with a cost of Tk.258.43 crore of which 17 ferry, 10 Pontoon, 4 Sea-truck, 12 Water Bus and 2 Inland Passenger Vessel. Moreover construction of 4 container vessel is completed on June 2017.

Not only the construction of new vessels, BIWTC, alongside has been completed rehabilitation of 4 Ro-Ro ferry, 2 K-type ferry and 6 pontoon under development project by spending Tk.53.22 crore. Besides, rehabilitation of 2 medium ferry has been completed by own fund of Tk.8.05 crore.

Table 11.9 shows the income and expenditure of the organisation since FY2008-09 to FY2016-17.

Table 11.9: Income and Expenditure Statement of BIWTC

(In Crore Taka)

Financial Year	Income	Actual Expenditure	Operational Profit	Interest & Depreciation	Profit before Dividend	Dividend paid to govt.	Income Tax paid Govt.	Net Profit
1	2	3	4	5	6	7	8	9
2008-09	171.71	130.20	41.51	18.65	22.86	5.00	0.00	17.86
2009-10	200.13	150.10	50.03	18.30	31.73	3.00	0.00	28.73
2010-11	211.99	153.81	58.18	21.11	37.07	5.00	0.00	32.07
2011-12	229.68	183.48	46.20	21.92	24.28	5.00	0.00	19.28
2012-13*	272.21	190.99	81.22	23.14	58.08	2.00	0.00	56.08
2013-14*	287.24	204.42	82.82	22.44	60.38	3.00	0.00	57.38
2014-15*	326.28	228.63	97.65	24.60	73.05	3.00	0.00	70.05
2015-16*	360.24	255.86	104.38	40.66	63.72	3.00	3.60	57.12
2016-17**	354.87	276.63	78.24	44.05	34.19	1.00	3.09	30.10

Source: Bangladesh Inland Water Transport Corporation, Ministry of Shipping. * Revised, ** Up to May 2017.

Chittagong Port Authority (CPA)

At present, the annual growth of trade conducted through Chittagong Port is 12 percent to 14 percent on an average. Considering the enormous importance of Chittagong Port on total economy of the country, the present Government has taken a massive development programme to add more dynamism in the operating activities of the port. Now, Chittagong Port is ready to extend its facilities for using by neighboring countries. As per international standard, one of the main performance indicators of any port is to keep Turn-Around time of vessels at minimum level. In 2007, the average Turn-Around time of vessels at jetty was 3.06 days. After vigorous efforts taken by the port administration at present Turn-Around time of vessels stands on 2.83 days up to June 2017. To conduct of the operational activities of the port smoothly and to increase the efficiency, the dwelling time of containers should also keep at minimum level along with vessels Turn-Around time. In 2007, the

average dwelling time of containers was 22.12 days. Due to tireless striving of the Port Administration, the dwelling time came down almost 11.15 days in 2017. Table 11.10 shows the income and expenditure of CPA

Table 11.10: Income and Expenditure of CPA

(In Crore Taka)

Fiscal Year	Rev. Income	Rev. Expenditure	Rev. Surplus (Before Tax)
2008-09	1133.72	457.51	676.21
2009-10	1155.35	624.78	530.57
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*	2030.85	1073.54	957.31
2016-17**	2386.22	1303.75	1082.47

Source: Chittagong Port Authority, Ministry of Shipping

Note: * Revised **provisional.

Mongla Port Authority (MPA)

Mongla Port was established in 1 December 1950 as an anchorage. It has been turned into

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a modern facilitated seaport gradually by implementing different development projects. At present, *Mongla* port has the capacity of berthing 35 of ships at a time by using 6 own Jetties, 6 Mooring Buoys, 16 anchorages and 7 private companies Jetties. There are 4 transit sheds 2 warehouse, 4 container yards, 2 car yards that can accommodate more than 100 crore MT of cargos, 70 thousand TUEs of containers and 6,000 cars annually.

In FY2016-17, *Mongla* port handled 75.12 lakh M.T of cargo, 26,952 TUEs of container, 15,907 cars. Table 11.11 shows the income and expenditure of *Mongla* Port from FY2008-09 to FY2016-17.

Table 11.11: Income, Expenditure and Profit/Loss of *Mongla* Port

(In Crore Taka)

Fiscal Year	Actual Income	Actual Expenditure	Net Income/Loss (+/-)
2008-09	58.40	55.43	2.97
2009-10	66.49	64.22	2.27
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

Source: *Mongla* Port Authority *provisional

To expedite the operational activities and develop the port infrastructure, Government has taken different types of initiative such as construction of *Padma* Bridge at *Mawa* point, establishment of *Khulna-Mongla* railway link, supply of gas through pipeline, construction of *Khan Jahan Ali* airport, establishment of 1,320 MW powered coal based power plant at *Rampal*, Special Economic zone at *Mongla* Port area etc. After

completion of the *Padma* Bridge, an opportunity will be opened up for Dhaka based export and import cargo especially for readymade garments. Moreover after establishment of coal based power plant at *Rampal* minimum 45 lakh MT of coal would likely to be imported through *Mongla* Port annually as raw materials of the company. On the other hand, special Economic Zone will create a new horizon for imports and exports. Consequently, the used of *Mongla* port will be increased tremendously.

***Payra* Port Authority**

Payra Port as third Sea-port of Bangladesh was inaugurated on 19 November 2013. In order to engage the limited scale of operational activities primarily with cement clinker, fertiliser and other bulk carrier vessels call in at the outer anchorage and discharge the cargo onto the inland vessels for hinterland transportation. For hassle free inland vessels movement fareway and mooring buoys have been laid to earmark navigational channel. In addition, a VHF Bade station had also been installed with telecommunication equipment. The customs and shipping facilities have also been established. As per requirement of International Association for Port and Harbor, ISPS code has implemented and UN locator code allotted for *Payra* Port by the United Nations, An Electric Sub-Station with 1,000 KVA capacities is installed for uninterrupted power supply. Besides, water treatment plant with a capacity to produce 250 MT/h has been installed for supplying pure drinking water to foreign vessels. A Pontoon jetty and two Electric cranes with lifting capacity of 5

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tonnes each have also been installed for ship berthing.

Bangladesh Land Port Authority (BLPA)

Bangladesh Land Port Authority came into being in 2001 under the BLPA Act, 2001 as a statutory regulatory body with a vision of expedite and facilitate export-import activities through land ports. Bangladesh Land Port Authority started its activities through the declaration of 12 land ports in 2001. Afterwards, 11 more land customs stations have been declared as land ports, at present, total number of land ports is 23. Among them, *Benapole, Bhomra, Burimari, Akhaura, and Nakugaon* Land Port are being operated by own management of BLPA. On the other land *Sonamosjid, Hilli, Teknaf, Banglabandha and Bibirbazar* land ports are being operated on Build Operate Transfer (BOT) basis. The construction of infrastructures for *Tamabil* Land Port is under implementation which will be completed by June, 2018. With a view to starting the operation of the remaining land ports, the process for the work of acquiring land along with the construction of necessary infrastructures is under process. Table 11.12 shows year wise income and expenditure of BPLA during the period from FY2008-09 to FY2016-17.

Table 11.12: Income and Expenditure of Bangladesh Land Port Authority

(In Crore Taka)

Fiscal year	Income	Expenditure	Surplus (+/-)
2008-09	26.74	24.97	1.77
2009-10	33.52	26.29	7.23
2010-11	41.20	32.38	8.82
2011-12	42.08	31.91	10.17

Fiscal year	Income	Expenditure	Surplus (+/-)
2012-13	47.78	37.29	10.49
2013-14	61.31	51.06	10.25
2014-15	70.52	47.38	23.14
2015-16	80.01	42.67	32.57
2016-17	111.47	53.44	58.03

Source: Bangladesh Land Port Authority.

Department of Shipping (DOS)

Department of Shipping is responsible to ensure safety of inland, coastal, fishing ocean-going vessels of Bangladesh and foreign vessels calling at ports. It also protects the trade interest of the Bangladeshi vessels. The functions of this organisation are performed according to the provisions of national shipping policies, shipping laws and regulations and applicable conventions relating to maritime and inland shipping.

The main sources of revenue incomes of the Department are: registration and survey of ships, conducting competency examination and issuing certificate to the seafaring officers and crews, examination fees, light dues, issuing seafarers ID cards, manning agents licensing fees, penalty for contravention of shipping laws etc. The statement of incomes and expenditures of this organisation is shown in the Table: 11.13.

Table 11.13: Income and Expenditure of the Department of Shipping

(In Crore Taka)

Fiscal	Target	Actual	Expenditure
2008-09	5.29	6.19	9.57
2009-10	9.25	11.66	4.63
2010-11	10.25	12.55	5.53
2011-12	12.71	13.26	5.54

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Fiscal	Target	Actual	Expenditure
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

Source: Department of Shipping, *revised data.

Bangladesh Shipping Corporation (BSC)

Despite limitation of resources of the country, BSC acquired 38 vessels through continuous efforts and patronage of the Government since its inception. After sale of old and uneconomic vessels, BSC has 3 vessels in the fleet of which 1 container vessel and 2 lighter oil tankers.

The main goal of BSC is to carry out the most of the goods/cargo of the country, which is not now possible for BSC having a huge shortage of vessels in her fleet. In conformity with the vision 2021, BSC has already taken a plan to acquire a few vessels of different types and sizes by 2021. Among them:

- Three new product oil tankers and 3 new Bulk Carriers under preferential loan facilities from the Government of China.

Meanwhile, the 1st installment of the payment has been paid and the construction works of the vessels are going on under this project

- One readymade/yard sale Product Oil Tanker procurement by BSC's own fund has been approved by the Cabinet Committee on Government Purchase (CCGP)
- Procurement of 2 new Chemical/Crude Oil Tanker under financing by loan from the donor countries/organisations
- Procurement of 2 new Mother Oil Tanker
- Procurement of 10 new Bulk Carriers
- Procurement of 4 new cellular container vessels
- Procurement of 2 new Mother Bulk carriers (specialised for carrying coals etc.)
- Procurement of 2 new Mother Product Oil Tankers (specialised for carrying diesel etc.) are under process.

Table 11.14 shows profit and loss of FY2008-09 to FY2016-17

Table 11.14: Statement of Income-Expenditure and Profit-Loss of BSC

(In Crore Taka)

FY	Total Income	Total expenses (Including depreciation and interest)	Net Profit/Loss (+/-)	Depreciation and interest	Operational Profit including depreciation and interest
2008-09	276.74	287.00	-10.26	18.99	8.73
2009-10	273.25	259.91	13.34	17.16	30.5
2010-11	266.66	264.79	1.83	14.47	16.30
2011-12	282.01	280.55	1.46	13.24	14.70
2012-13	328.51	326.96	1.63	17.89	19.52
2013-14	171.14	167.77	3.37	11.58	14.94
2014-15	130.01	124.68	5.34	1.98	7.32

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FY	Total Income	Total expenses (Including depreciation and interest)	Net Profit/Loss (+/-)	Depreciation and interest	Operational Profit including depreciation and interest
2015-16	118.81	112.08	6.73	1.85	8.58
2016-17*	49.05	39.88	9.17	0.84	10.01

Source: BSC * provisional (up to December 2016)

Marine Academy, Chittagong

Bangladesh Marine Academy was established in 1962. It has already produced more than 4,000 competent marine cadets in accordance with 'International professional skill Evaluation' of International Maritime Organisation (IMO) which is still going on. Besides, from 1980 approximately 40,000 mariners have had 'Higher Professional Training' through preparatory and ancillary courses. At present, this institution is affiliated by Bangabondhu Sheik Mujibur Rahman Maritime University (BSMRMU). It has upgraded 3 years course into 4 years Bachelor of Maritime Science (BMS) honours course for the cadets. Female cadet training is also introduced since 2012 with a view to enhancing female education development, empowering them, ensuring their equal right as well as creating the opportunity of job for the women. As a demand of IMO, STCW convention, 2010 all the training courses of academy have been modernised. During FY2015-16, 235 cadets have already been well trained and almost all of them are working in various sea going ships of native country and foreign countries.

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. Various ancillary courses are being introduced here for enhancing the skills and promotion of serving seafarers (Post-Sea ratings and officers). The seafarers trained from this institute are employed in the national and foreign flag-ships earn remarkable foreign currency, which play an important role for the socio-economic development of the country.

National River Conservation Commission (NRCC)

The National River Conservation Commission started its journey in August 2014. It was established for taking measures in connection with illegal occupation, prevention pollutions of river, maintenance of navigability, multiple uses of rivers for socio-economic development purpose.

Some major achievements of the commission are given below:

- Effective monitoring and feedback system on the goal oriented tasks have been created and are being implemented through *Upazila*, District and Divisional River Conservation Committees ensuring peoples' participation in the river protection process

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- Primary data is being generated, taking information from the *upazila* and district level for the purpose of making it well accepted user friendly
- About 146 km of water ways of Boral River flowing through 4 districts have been recovered and reinstated in the auspices of NRCC
- A lot of illegal constructions (bridge, culvert, cross dam and others) creating obstructions for free flowing has been identified and some of them have been removed by the BIWTA, BWDB, District Administration as per the recommendations of the commission.

D. Air Transport

Civil Aviation Authority of Bangladesh (CAAB)

Bangladesh is a member country of the International Civil Aviation Organisation (ICAO). Civil Aviation Authority of Bangladesh (CAAB) renders its services to regulate and to develop required aviation facilities in Bangladesh for national and international air transportation. Civil Aviation Authority installs, maintains and operates aerodromes, air traffic, air navigation and tele communication services and facilities. All other aviation related ground services and facilities are also ensured by CAAB for safe and smooth aircraft operation within the territorial air space of the country.

CAAB at present operates 3 international airports and 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 FY2008-09 to FY2016-17 is shown in Table 11.15.

Table 11.15: Financial Position of CAAB

(In Crore Taka)

Fiscal Year	Revenue Income	Revenue Expenditure	Net Profit
2008-09	412.49	203.61	208.88
2009-10	551.15	258.20	292.95
2010-11	595.19	315.78	279.41
2011-12	731.88	337.44	394.44
2012-13	783.24	337.87	445.37
2013-14	1026.28	427.68	598.60
2014-15	1220.80	481.13	739.67
2015-16	1330.06	710.98	619.70
2016-17	1556.30	942.30	614.00

Source: Civil Aviation Authority.

Biman Bangladesh Airlines Limited

Biman Bangladesh Airlines Limited, the national flag carrier, plays a vital role in air transportation within and outside the country. *Biman* has been maintaining its network in spite of limited fleet and financial constraints. At present, *Biman* is operating flights to 7 domestic and 15 international destinations. These include south-east Asia 2 destinations in the SAARC countries, 4 destinations in the Southeast Asian, 8 in the Middle East and one destination in Europe. Year wise income and expenditure of *Biman* during FY2008-09 to FY2016-17 is shown in Table 11.16

Table 11.16: Income and Expenditure of *Biman*

(In Crore Taka)

Fiscal Year	Revenue Income	Expenses	Net Profit/Loss (+/-)
2008-09	3,039.70	3,024.12	15.58
2009-10	2948.03	2994.10	-46.02
2010-11	3343.93	3568.10	-224.16
2011-12	3823.67	4417.90	-594.21

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Fiscal Year	Revenue Income	Expenses	Net Profit/Loss (+/-)
2012-13	3951.90	4237.50	-285.63
2013-14	3760.12	3958.90	-198.80
2014-15	4687.34	4415.11	272.23
2015-16	4835.63	4559.60	324.10
2016-17*	4467.00	4347.00	120.00

Source: *Biman* Bangladesh Airlines Limited. * Provisional

The fleet of *Biman* consists of 12 aircrafts which include four 777-300s, two 777-200s, four 737-800s and two Dash8-Q400s. With a view to modernising its fleet, *Biman* signed a contract with Boeing for the procurement of 10 next generation aircrafts. *Biman* acquired two 777-300s in 2011 and 2014 and two 737-800s in 2015. The remaining four 787-8s, *Dreamliners* will be delivered to *Biman* in FY2018-19. With an aim in sight to increase the fleet size, *Biman* has dry leased two 777-200s from Egypt Air in March and May in 2014. In addition to this, to operate in domestic and regional routes, *Biman* also dry leased two 74-seater Dash8-Q400s from Smart Aviation for a period of 5 years in April 2015. *Biman* Bangladesh Airlines is going to purchase 3 DASH8-Q400 Next Gen Series Aircraft from Bombardier Inc. Canada under G to G arrangement. In FY2016-17, *Biman* has carried 23,45,373 passengers and 33,542 tons of cargo.

With a view to notifying the passenger of their flight schedules, SMS service was started from 2015. *Biman* has attained the capability of C-Check its 777-300 and 737-800 aircrafts in its own hangar. Apart from this, the A-Check and all types of maintenance and repair services are being conducted by its own engineers. In order to increase revenue and decrease sales cost, Revenue Management system, Revenue

Integrity system and Flight Profitability system have been introduced. For network expansion, *Biman* has a plan to reinstate its Delhi and Hong Kong routes from winter schedule 2017. In addition, *Biman* has a plan to expand its services to Guangzhou, Colombo and Mali.

E. Information and Communication

Bangladesh Telecommunication Regulatory Commission (BTRC)

Bangladesh Telecommunication Regulatory Commission (BTRC) is functioning since 2002 with a view to providing reliable and affordable telecommunication services for the mass people irrespectively with the effective utilisation of Telecommunication and ICTs infrastructure. To facilitate connecting the unconnected through quality telecommunication and information technologies at an affordable price by introducing new technologies, BTRC is working in implementing the national dream of 'Digital Bangladesh'. BTRC is playing an important role to expand internet connectivity to entire country especially to all districts and *upazila* level by effective utilisation of capabilities and resources of both public and private sector. Currently the penetration of telephone users especially the number of mobile subscribers is increasing beyond prediction, where the total number of subscriber exceeded 13.6 crore in June 2017.

Table 11.17 shows the number of mobile and fixed phone subscribers, growth rate, internet users, Tele density etc. from 2008 to June 2017 and Table 11.18 shows the total number of subscribers of different mobile operators during June 2017.

Table 11.17: Subscriber Number, Growth and Tele density of Mobile and Fixed Phone

Subscriber Number, Growth Rate and Tele density	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017*
Mobile Subscriber (Crore)	4.46	5.24	6.87	7.30	8.66	9.74	11.48	12.19	12.64	13.60
Fixed phone Subscriber (Crore)	0.13	0.17	0.17	0.17	0.10	0.10	0.11	0.11	0.07	0.06
Total Subscriber(Crore)	4.02	4.71	5.64	7.47	8.76	9.84	11.59	12.30	12.71	13.67
Internet User (Crore)	-	-	-	-	2.84	3.10	3.55	4.28	6.66	7.33
Yearly Tele density (%)	27.91	31.95	38.05	44.6	60.9	63.91	76.44	78.79	81.48	87.32

Source: BTRC; * Up to June 2017

Table 11.18: Number of Subscribers of Different Mobile Operators (up to June 2017)

S.L	Operators	Subscribers (In Crore)
1.	Grameen Phone Ltd (GP)	6.16
2.	Banglalink Digital Communications Limited (Banglalink)	3.16
3.	Robi Axiata Limited (Robi)	3.96
4.	Pacific Bangladesh Telecom Limited(Citycell)	0.00
5.	Teletalk Bangladesh Ltd (Teletalk)	0.32
	Total	13.60

Source: Bangladesh Telecommunication Regulatory Commission (BTRC) .

Bangladesh Telecommunications Company Limited (BTCL)

To modernise and expand the country's telecommunications system, varieties of activities have been continued by BTCL. BTCL had 14.62 lakh land line telephone capacity and 6.62 lakh telephone connection throughout the country at the end of the year 2016-17. At the same time, 256 Kbps to 1.5Mbps unlimited ADSL internet service was subscribed by 20.6 thousands customers. GPON based internet service provides 1-4 Mbps over optical fiber to 212 customers. Number of leased line subscribers was 1836, which includes 1000 Union Parishad

connections. They consume 76.6 Gbps bandwidth. Number of MPLS VPN subscribers was 75. BTCL has so far connected all 64 districts, 424 *upazilas* and 1,212 Union Parishads through 21,500 Km optical fiber cable, which is the main ICT backbone of the country. BTCL has registered 40,220 country domains (bd) and 341 Bangla domains (বাংলা).

Table 11.19 shows the revenue targets, revenue income and expenditure of BTCL during the period from FY2008-09 to FY2016-17.

Table 11.19: Year wise Income and Expenditure of BTCL

(In Crore Taka)			
Fiscal Year	Target	Revenue Earned	Expenditure
2008-09	1500	1720	1622
2009-10	1583	1241	1343
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	1116	999

Source: BTCL. *provisional

Bangladesh Submarine Cable Company Limited (BSCCL)

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Bangladesh Submarine Cable Company Limited (BSCCL) is a public limited company under the Posts and Telecommunication Division which connects Bangladesh with International Information Superhighway through SEA-ME-WE-4 submarine cable system. For exchanging data and voice it is possible to maintain

international connectivity easily through this submarine cable beneath the Ocean. From its establishment BSCCL is a profitable company and it becomes a successful, transparent and dependable in capital market. Table 11.20 shows year wise income of BSCCL during the period from FY2008-09 to FY2016-17.

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

(In Crore Taka)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17*
Revenue Earned	43.59	60.34	83.78	121.45	124.84	75.37	54.07	61.86	74.08
Net Profit (before tax)	11.55	34.86	54.86	83.13	109.59	48.81	13.90	17.86	20.90
Net Profit (after tax)	11.55	34.65	30.51	74.48	87.21	36.23	12.91	16.55	17.61

Source: BSCCL*Up to March 2017

Major works of BSCCL during FY2016-17:

- Connecting the country with the Second Submarine Cable
- Initiative to provide Bandwidth to Bhutan
- Increasing the usage of Bandwidth

Bangladesh Post Office

Bangladesh Post Office (BPO) renders its service throughout the country by 9,986 offices. Along with its own services BPO provides the following agency services. These are:

- a) Post office savings bank (general and periodic accounts)
- b) Savings Certificate (Sales and withdrawal/encashment)
- c) Postal life Insurance
- d) Prize bond (Sales and withdrawal/encashment)
- e) Revenue stamp and non-judicial stamp

f) Printing and delivery of all Government non-postal stamps.

In FY2016-17 Bangladesh Post Office transmitted letter and parcel of 8.64 crore, during same period income from Money Order Service is Tk.105.23 Crore.

Information and Communication Technology (ICT)

For building Digital Bangladesh with a view to implementing vision 2021, Information and Communication Technology (ICT) Division is working ceaselessly. Government is working aiming to export 5 billion dollar in ICT sector by 2021 in the guidance of 7th Five Year Plan. The following paragraph delinates the activities in the ICT Sector.

E-Governance:

Eradicating impediment related to interoperability among platforms, integrating ICT infrastructures, removing existing complexity of ICT superstructures, introducing IT solution in the field of

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outsourcing, reducing overall risk of new investment in the IT/ITES section, Bangladesh Computer Council (BCC) has taken an endeavor to develop Bangladesh National Enterprise Architecture (BNEA). A project named 'Implementation of e-Government Master plan for Digital Bangladesh' is being implemented by BCC for building ICT roadmap for all ministries and divisions. A mobile phone based apps named 'Alapon' has been introduced to bring the government officials under a unique communication platform for ensuring quick service. Many public and private institutions, banking institutions have started using digital signature. Digital signature is being used also in making e-TIN and Birth certificate.

ICT Infrastructure Development

For establishing Public Network backbone all over Bangladesh and spreading Network in various ministries/divisions/agencies, district and *upazila* headquarters, a project named 'Development of National ICT Infra-Network for Bangladesh Government (Bangla Gov. Net)' has been completed. As part of the previous activities of the project, BCC implemented another project named 'Development of National ICT Infra-Network for Bangladesh Government (Info Sarker-2)'. Under this project internet connectivity has been established in 18,434 Government offices. Video Conferencing System has also been established in 800 offices. To expand internet connectivity up to 2,600 union and 1,000 Police offices another Project named 'Development of national ICT Infra-Network for Bangladesh Government (Info-Sarker-3) Project' is being implemented. The rest of 772 unions will also be brought under internet

connectivity by a Proposed Project titled 'Establishment of ICT Network to remote Areas (Connected Bangladesh)'.

Implementation work of establishing 4 tier standard data centre is going on under 'Establishment of National IV Tier Data Centre' project in *Kaliakoir, Gazipur*. National e-Service hosting service can be delivered easily through this data centre. Disaster recovery centre of data centre has been established in Sheikh Hasina Software Technology Park, Jessore.

Human Resource Development and Employment

Bangladesh Korea Institute of Information and Communication Technology (BKIICT) of BCC has trained up 471 trainees on customised training course in FY2016-17 as many as 600 persons with disabilities have been provided training for skill development. Job fair takes place for disabled people in every year. A number of 223 disabled persons as well as participants have been employed from such fair. For flourishing ICT sector as well as IT industry, 3,000 ICT skilled manpower are being built up under 'Leveraging ICT for Growth, Employment and Governance Project'. As many as 4,466 students from 31 universities have been trained for foundation skills training. Moreover, 4,466 students from 48 university/colleges have been trained on 'Top up IT training' course under the project.

After finishing their training, successful 749 trained people have been recruited to IT companies. LICT Project has signed MoU with 32 IT companies to ensure recruitment for those trained persons to the companies.

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Moreover, 2901 Sheikh Russel Digital Lab including 65 Sheikh Russell Language Lab have been established at high School/College and primary School level under 'Establishment of Digital Lab and Language Lab all over Bangladesh (1st Revised) Project'. Another 1,015 computer lab will also be established at educational institutions through 2nd revised project. The ultimate goal of this project is to enhance ICT knowledge among the youth so that they can be employed abroad with skills.

6,341 persons have been trained on skill enhancement programme, mid-level programme, C-level training programme, capacity building in public sector, IT training for IT students from Infosys in Bangalore, oracle and SAP under the project 'Support to Development of *Kaliakoir* Hi-Tech Park (and other Hi-Tech Park) (3rd Revised)' Project. For human resource development and skills development, software testing and quality assurance lab and animation lab have been established respectively in Jahangirnagar University and Dhaka University.

To create innovation eco-system, technology based innovation and entrepreneurship, and to preserve intellectual property, BCC is implementing a project named 'Innovation Design and Entrepreneurship Academy'. A Guidelines has been prepared to facilitate start-ups by giving seed money, venture capital under this project.

Development of IT Industry

To stimulate activities relating to software quality testing, BCC has taken a project to establish software quality testing and certification centre.

Bangladesh Hi-Tech city is the largest state owned Hi-Tech Park which is being established on 355 acres of land at *Kaliakoir, Gazipur*. The basic infrastructure work has been completed already.

The construction work of establishing Sheikh Hasina Software Technology Park is almost finished. The park is situated on 12.13 acres of land in Jessore. 12 IT/ITES companies have been allotted space for their business.