

Government of the People's Republic of Bangladesh
Ministry of Shipping

National Shipping Policy- 2000

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Summary		(1) – (2)
1.	Policy Structure	1
1.1	Background	1
1.2	Factors and Propensitie	1
1.3	Philosophy and Objectives	3
1.4	Involvement of Private Sector	4
2.	National Policy for Shipping Ports	4
2.1	Philosophy and Objectives	4
2.2	Management of Port Sector	4
2.3	Port Infrastructure	5
	2.3.1 Port and Port Structure	5
	2.3.2 Navigability of River	5
	2.3.3 Power Supply	5
2.4	Port Services	6
	2.4.1 Materials Loading Unloading	6
	2.4.2 Container Traffic Handling	6
	2.4.3 Marine Vessel and Equipment for Port	7
	2.4.4 Pilotage Services	7
2.5	Port Administration	7
	2.5.1 Overall Function	7
	2.5.2 Manpower of The Port	8
	2.5.3 National Port Council	8
	2.5.4 Environment Protection	8
	2.5.5 Contingency Planning	9
	2.5.6 Safety	9
	2.5.7 Taking Action About Disputed/Detained Ship	10
	2.5.8 Port Area	10
2.6	Other Related Matters	10
	2.6.1 Development of More Commercial Activities	10
2.7	Financing for Work Policy	11
	2.7.1 Financing and Fee of The Users	11
	2.7.2 System	11

3.2	Shipping Services	13
3.3	Logistic Support	14
	3.3.1 Containerization	14
	3.3.2 Ship Manufacturing and Repair Facility	14
	3.3.3 Ship Breaking Industry	15
3.4	Organizational Structure	15
	3.4.1 Decontrolling and Liberalization	15
	3.4.2 Environmental Management	15
	3.4.3 International Shipping Conventions, Protocol etc.	16
	3.4.4 Human Resource Development	16
	3.4.5 Legal Structure	17
3.5	Other Allied Matters	18
	3.5.1 Issuing License to Freight Forwarders	18
	3.5.2 Strengthening Representing Organization	18
	3.5.3 Seamen Welfare Centre	18
3.6	Planning of Finance	18
4.	National Policy for Inland and Coastal Shipping	19
4.1	Philosophy and Objectives	19
4.2	Sector Management	19
4.3	Infrastructure of Inland and Coastal Shipping	20
	4.3.1 Infrastructure Development and Management	20
	4.3.2 General Field of Inland Shipping and Sea Port Development	21
	4.3.3 Water Way Management	21
4.4	Inland and Coastal Shipping Services	22
	4.4.1 Passenger Carrying Services	22
	4.4.2 Material Carrying Services	22
	4.4.3 Ferry Service to Cross Main Rivers	22
	4.4.4 River way Protection and Pilotage	23
	4.4.5 Hydrographic Survey	23
	4.4.6 Dredging	24
	4.4.7 Debris Removal and Rescue Operation	24
	4.4.8 Indigenous Engine Boat	24
4.5	Inland and Coastal Shipping Corporation	25
	4.5.1 Administration	25
	4.5.2 Shore Land	25
	4.5.3 Supervision of Inland Shipping	25
	4.5.4 Environmental Management	25

4.6.2	Training Certification and Appointment of Manpower in Inland Shipping	26
4.6.3	Emergency Step During Disaster	27
4.7	Related Other Factors	27
4.7.1	Appropriate Technology	27
4.7.2	Passenger Policy	27
4.8	Financing Strategy	28
	5. Profitable Sides	28
	6. Conclusion	29

Summary

A program was fixed in the National Five years plan (1997-2002) to ensure basic demand of every citizen through construction of proper infrastructure to increase production and to create employment opportunity. Creation of a positive economic environment and giving encouragement to development and economic growth are the main objectives of the national planning.

Sufficient and efficient communication system is the pre-condition of commencement of economic development and to keep its force dynamic.

The aim of the government is to ensure efficient operation of port, shipping and inland shipping keeping shipping security and environmental aspect into due consideration.

A worldwide trend is being observed to improve standard of operation in the shipping and maritime sector. Specially these trends are observed in:

- Ensure safety of water transports, seamen and port users
- Protection of environment through pollution prevention.

In order to achieve increasing standard higher training and supervision are necessary for the persons involved with water transport and shipping.

Sufficient technical ability administrative consciousness and efficient performance of monitoring and regulatory work by the government are necessary to fill up the large demand of training and management and improvement of security related matters in this sector.

The government is willing to take up the following steps to fulfill the objectives stated in the national five years plan in respect of sea port, shipping and inland water transport:

- Development and maintenance of main channels of sea port and main, important channels of inland water transport movement.
- Development two existing seaports and installation of communication network between main river ports, ghat and inland container ports and depots.
- Making the fleet reasonable and in order to encourage investment in this sector development of ship movement and indigenous boat sector through providing facilities.
- Giving assistance to operation and development of national shipping lines.
- Collection of container handling equipment and to increase support facilities and construction of new terminals/internal container depots on the basis of demand.

- Protection of river ways from environmental decadence.
- Increasing excavation capacity to keep the navigability of the waterways.
- Improving rescue operation.
- Modernization of national rules and regulations those controlling water crafts, ports and shipping sectors to international standard.
- Expansion of work in the ministry level to ensure improved service in case of policy making, law preparation, planning and application.
- Ensure use of the most modern technology in the shipping sector.
- Establishment of shipping museum as educational matter for future generation.
- Ensuring safety of shipping.
- Supporting shipping/port facilities in regional and sub-regional level.

All these arrangements will ensure effective operation of waterways, seaports and shipping sector and will perform helpful role in the national development through meandering service helpful to business.

Government admits necessity of partnership of government and private sector for development of inland and coastal shipping, ports and ship movement sectors.

Necessity of a balanced progress of government and private sector is clearly acknowledged in the policy of this sector. Specially interest of workers and employees and rural poor people who are dependent upon different activities will be considered properly.

Government and private sector will work for rendering efficient, effective and economic service, which will meet up demand of the people and will be helpful for economic development of Bangladesh.

The country will get benefit of improved shipping seaports and sea going vessels through following:

- * Ensure carrying of passengers and materials in a short time and small expenses;
- * More safe and dependable service;
- * More stable investment situation;
- * Ensure welfare working environment.

Bangladesh has a long tradition in the field of water transport and shipping. Our people are welknown to all modern and old water transport and shipping structure. We are able to meet up demand of the people and we are also able to form an effective and competent service, helpful to the economic development of the country.

1. Policy Structure

1.1 Background:

Bangladesh is surrounded by India in the north and west and in the east Myanmar and India. In the south the country is spreaded up to Bay of Bengal. Bangladesh is mainly an alluvial soil formed low delta region through which three main rivers flow. Inland water system is widely spreaded through the rivers and canals and khals and beels in the country. As a result water transport was always important in Bangladesh, as it saves energy, favourable to environment and closely connected with the lives of people of all places.

Necessary program has been included in the fifth national five years plan (1997-2002) to ensure meeting up basic demand of every citizen through creation of employment opportunity to increase production and construction of proper infrastructure. Creation of a positive economic situation, raising strong private sector in the economic area and to encourage growth is the objectives of this plan.

It is necessary to remain a sufficient and efficient communication system as precondition of commencement of economic development and to keep the same continued. The key for market expansion and its consolidation is investment to create competency in carrying system. This investment becomes helpful for introducing economy of scale, increase of competition, reducing production cost, increasing export early and achieving larger partnership in the international trade.

Development of communication infrastructure and its maintenance basically remains under government sector in Bangladesh. In some cases of operating communication system private sector is involved with government sector. As an instance, private sector is playing the main role in case of inland water transport, though government sector renders some services. In case of sea going vessel government has kept its prominency on it. But during the recent years role of private sector has been increased. The ownership and responsibility of operation are remained with the government. Private sector is rendering some cargo handling services.

1.2 Factors and propensities:

Bangladesh has a number of limitations in developing underground communication system:

- * Natural disadvantages, such as inaccessible area, repeated lower standard of soil, loosing navigability of rivers for siltation and river erosion.
- * Financial limitation, such as shortage of investment and insufficiency of maintenance.
- * Organizational, such as insufficient legal infrastructure, internal permanent problems of government sector.

- * Since road transport has become prominent in case of technology and investment so downfall has been observed comparatively in inland and coastal shipping sector.
- * Due to less investment in this sector waterways are not being maintained well, for which navigable waterways are being decreased gradually.
- * Due to less investment and due to change of riverbanks regularly necessary facilities have not been formed in the river ports.
- * Income has been decreased for excess river vessels in this sector and investment of owners has become limited to develop inland river fleet.

Port:

- * Due to fast change of material handling technology material handling technology of the port requires immediate change.
- * Due to fast increase of container for carrying materials big amount of investment is necessary for ship-to-shore and shore handling machineries.
- * Average productivity of the Dock workers will be increased for taking changed material handling technology.
- * Improved customization system is necessary to meet up increasing huge amount of materials and use of internal container depots and development of all assisting organizations.

Maritime Shipping:

- * Maritime shipping sector has to face serious international competition.
- * Relaxation of rules and regulations in the international trade has made the shipping lines encouraging to constitute international alliance among themselves.
- * Due to increase of container traffic high power liner route centering hub ports has been formed and necessity of specialised ship for huge quantity of trade in the important main routes is being increased.

A worldwide trend is observed for improving standard of shipping and operating maritime sector. Specially in these cases:

- * Decreasing turn around period while marine vessels stay in the port.
- * Increase of computer technology gradually.
- * Ensuring safety of marine vessel, seamen and port users.
- * Environmental protection through prevention of pollution.

In order to achieve this increasing standard higher training and supervision are necessary for all that are associated with shipping and shipping activities.

Sufficient technical ability, administrative consciousness and efficient performance of monitoring and regulatory work by the government are necessary to fill up the large demand of training and management and improvement of security related matters in this sector.

1.3 Philosophy and objectives :

The main objective of the government is to assist and encourage for the overall economic development of Bangladesh through rendering most business helping transportation service keeping shipping security and environmental matters under due consideration and ensuring the most effective operation of ports, movement of sea going vessels and inland navigation sector. In this way employment opportunity will increase and income opportunity will also increase. Government is willing to undertake following actions to fulfill the objectives of shipping sector as stated in fifth five years plan.

- Development and maintenance of main channels of seaports and main and important channels of inland navigation.
- Development of existing two seaports and establishment of communication network between main river ports, ghats, inland container ports and depots.
- Rationalisation of fleet and development of shipping and indigenous boat sector to encourage investment in it through giving some facilities.
- Giving assistance in running and development of national shipping lines.
- Collection of necessary container handling machineries, increasing assistance facilities, construction of new modern terminal/internal container depot and ensuring its best use.
- Rendering passenger and cargo carrying service for coastal islands including facilities.
- Supporting regional and sub-regional shipping transport/port facilities.
- Ensuring shipping security and to save waterways from environmental degradation.
- Expansion and modernisation of training facilities of cadet, sea men of sea going vessels and workers of inland marine vessels.
- Improving rescue operation.
- Increasing excavation capacity to protect navigability of waterways.
- Modernisation of marine vessel, port and shipping sector controlling rules and regulations up to existing international standard.
- Establishment of naval museum as education place of future generation.
- Expansion of working area in the minister level to ensure improved service in case of policy determination, preparation of rules and regulations, planning and implications.
- Best use of modern information technology in the shipping sector.

All these steps will ensure effective running of waterways, sea ports and shipping sectors and will play a helpful role in the national development through rendering early trade assisting service.

Government understands necessity of government and private sector partnership for the development of inland and coastal shipping, port and shipping activities sector.

1.4 Involvement of Private Sector :

Meanwhile necessity of balanced progress of government and private sector has been acknowledged by the government. Necessary initiative will be undertaken to encourage private sector to render competent and efficient service. New fields will be opened for private sectors considering demand of the people and economic development of the country. As a result participation of private sector in the shipping sector will be increasing gradually.

2. Sea port :

2.1 Philosophy and objectives :

Traditionally the function of seaport is expansion and development of facilities of trades and commerce specially of international trade. International trade of Bangladesh is run through main two seaports Chittagong and Mongla. In the year 1999 more than 17 million tons of materials are loaded and unloaded in these two ports. During the same year about 1.2 million ton materials were carried through Benapole Land Port. Besides, about 0.1 million ton materials were handled in the inland river and airport. If this trend of materials handling continues then it is assumed that quantity of materials handling through seaports will be double within the next 10 years.

The objective of the government is to ensure the most competent and effective service by the seaports to play helpful role in achieving overall economic development of Bangladesh. Ports will have to be prepared for this purpose and modern operation system will have to undertake. In this way external trade of Bangladesh will be easier and the neighboring countries will be encouraged in transit and transshipment trade expansion.

Ports can not be treated as an isolated factor. Port plays the role of connecting factor in carrying system. In order to play proper role port needs coordinated carrying system organised properly through water and roadways. Port is not only the centre of shipping and trade and commerce but also the centre of industry and service activities.

2.2 Management of Port sector :

Overall management of the port will be rearranged as follows, so that-

- Matter of more responsibility of the government is acknowledged in planning and preparation of rules and regulations.
- Modernisation and proper empowerment of port management.
- Effective coordination of the port authority with custom and transport system.
- Expansion of facilities of food supplying i.e. bunkering.
- Ensuring human resource development.

2.3 Port Infrastructure :

2.3 Port Infrastructure :

Strategy of the government regarding infrastructure development, operation and management of ports will be as follows:

- * Development of network and material handling facilities of main sea ports. In order to improve the port government will undertake plan/scheme properly through involving private entrepreneur or through other way. Participation of private sector will be encouraged in port management, operation and maintenance.
- * Creation of new facilities, construction of special type of berth and establishment of effective inter-connection with other transportation system.
- * Protection of safety and environment and determination of standard to keep the environment proper for work and ensuring application of those factors. This standard will be fixed by the Ministry of Shipping and these will be compulsory to follow.
- * Continuing mooring facilities in the river and bulk oil transportation facilities through pipeline and special and proper handling facilities for materials.
- * Continuing necessary assistance to use modern management system.

2.3.2 Navigability of River :

Excavation and maintenance of waterway entrance of port and front side of jetty are necessary for port development and undertaking necessary assistance of ship movement is necessary.

In that case government will take necessary step of excavation work and to keep direction of channels for navigability of river ways.

2.3.3 Power Supply :

A dependable source of power supply should remain to keep a modern port running for twenty-four hours. Ensured supply of power for seaports are considered essential. Government will render necessary assistance to the following planning for this purpose.

- * Undertaking proper step for continuous and sufficient power supply to the ports.
- * Port authority will be encouraged to increase power production and distribution capacity in the main ports or will be encouraged to enter into agreement to increase power production. Undertaking of this system will remain under existing rules and regulations regarding national security and operation.

2.4 Port Services :

2.4.1 Materials Loading Unloading :

Port service will include river vessel and material handling and all other activities, which will be directly necessary for complete service of port operation. Technological and structural change in ship movement and material handling, specially in containerisation, have brought opportunity to create new facilities and accepting challenge by the port. Accordingly government will give following assistance to ensure competitive and efficient service in the ports to keep conformity with the increasing trend of trade and commerce.

- * Keeping continuous training and raising standard of all who are associated with port management, both under government and private sector.
- * Collection of special type of machineries for material handling.
- * Providing definite jetty facility for main import and export materials.
- * Raising existing facilities for loading unloading of materials.
- * Increasing efficiency of jetty activities through use of computer network in all works and to operate the same coordinately.

2.4.2 Container Traffic Handling :

If we exclude liquid materials then 40 percent of the materials transported through sea are containerised and this rate is increasing everyday. In the year 1999 more than 4 Lac TEUS containers are used in the main two seaports of Bangladesh. It is expected that quantity of containerised traffic will increase double the rate of overall increase of total materials carried in the seaports. Government will undertake following program in this respect.

- * Reconstruction of existing berths of Chittagong and Mongla port and giving assistance in additional container berth improvement through construction of new terminal.
- * Giving assistance for improvement of container depot in all the specific places of the country to face the demand of container handling, clearance and preservation service.
- * Undertaking overall endeavor to constitute a coordinated system of all kinds and to construct necessary infrastructure in the boundary of the inland container depot.

Participation of private sector will be encouraged for construction and operation of container terminal and other facilities.

2.4.3 Marine Vessel and Equipment for Port :

Auxiliary river boat, such as tug, launch, pile boat must remain to achieve desired efficiency in handling of sea going ship in the water area of Bangladesh and those must be fit for work. Port authority will have to undertake following actions in this matter.

- * Review of demand of service activities in the port and preparation of plan to collect proper marine vessel and equipment as per demand.
- * Review of removal of all submerged/Wreckage ship and of procedure, management and operation factors to ensure achievement of highest success in operating port.
- * Determination of ways and means to encourage private sector to render all such services.

2.4.4 Pilotage Services :

Pilot is necessary to show way of all ships of weight more than 200-Ton (GRT) Recent pilot activities are not sufficient. Government will take following action for safe ship movement in the limited water area of the port.

- * Review of demand of pilot service for all marine vessels of more than 200 tons (GRT) and tug boat collection.
- * To increase incentive facilities to collect more pilots and consideration of alternative arrangement including introduction of special training program.

2.5 Port Administration :

2.5.1 Overall Function :

Necessity of reorientation of the institutional structure, which has been formed in the sea port administration and supervision work, is admitted by the government. At present many rules are existed for independent performance of duties by the port authority. Government desires in this consideration that-

- * Review of the existing operation system and legal structure regarding management of seaports. Its objective will be to entrust planning and supervision in Ministry Level and decentralizing responsibility of taking decision regarding port matters to port level and it will be clearly separated.
- * Review of operation system for bringing change in management, fund and collection activities in the port administration.
- * Review of the existing system for early settlement of materials remaining in the port space/storage shed after stipulated period.

Government is determined to keep ownership of main seaports of Bangladesh under government sector. Awarding construction, operation and maintenance of these ports will remain open for both government and private sector. It is expected that in course of time port authority will remain entrusted in performing their planning and statutory responsibilities and service activities and facilities will be transferred to the commercial organisations through lease or agreement stage by stage.

2.5.2 Manpower of the Port :

Very skilled manpower is necessary for running a modern port. Specialised jetty or separate jetty use for containerisation and for bulk cargo and specialised cargo mean keeping conformity with changing situation and making the workers fit for this. If proper safety training is not arranged and necessary security system is not introduced materials and container handling may be dangerous. Necessity of training and improving labour power to meet up day to day new demand of running a modern port is undoubtedly important.

Government will undertake following action considering necessity of introducing effective and safe operation system in the seaports.

- * Review and reform the structure of organisation representing labour union and structure of existing labour organisation in the port.
- * Review and reform activities of executive body of the dock labour.

Ensuring modern management of new terminals in the port and standard of life of employees engaged in the terminal will be raised enhancing income through raising standard.

In order to increase efficiency and improve management standard of the port existing training institute will be strengthened and standard will be raised in cooperation with all concern.

2.5.3 National Port Council :

Government will constitute National Port Council. This council will be formed comprising government representatives, port authorities, other organisations and port users. The function of National Port Council will be to advise the government on different matters relating to port operation.

2.5.4 Environment Protection :

Coastal water area, entrance of the port and 'Kharis' are important national resource of Bangladesh. This water area should be protected from pollution. Environmental Protection Agency is going to determine its desired standard and preparation of rules and regulation concerning this in the national level. At present responsibility of environmental matters within the port area is entrusted to the port authority. There are sufficient experience and rules and regulations in the international level regarding pollution control in the water area of the sea.

The government is liable to ensure an effective system regarding pollution problem in the sea and coastal water area. Government will undertake following steps in this matter:

- * Preparation of an environmental management strategy for the port and coastal water area keeping conformity with international oceanic pollution convention.
- * Innovation of rules and regulations, monitoring and management system to ensure control and removal of environmental pollution effectively in the port and ocean area.

2.5.5 Contingency Planning :

Bangladesh off and on become prey of natural calamities. In the same way activity of the port may be seriously hampered for accident occurred in the ship or coast. Government understands necessity of taking early and effective necessary action for keeping the essential activities of the port continued in these circumstances. Accordingly port authorities will undertake following action and if necessary will want government instructions.

- * Keeping the loss to the lowest limit and preparation of contingency plan to face the natural emergency situation to keep the activities of the port continued to the highest level in the crisis situation.
- * Annual practice operation to test disaster management preparation.
- * Preparation of contingency plan to face any situation if important port activities are hampered for reasons like accidents or ship wrecking.

2.5.6 Safety :

Ensuring safety of ports and materials transported through ports are basic important factor. Government will undertake following steps for development of existing safety arrangement.

- * Reciting again strongly that insuring safety in the port is one of the main duties of the port authority.
- * Proper action will be taken for early disposal of complaint regarding specific crime occurred in the port area.
- * Giving permission to port authority for execution of agreement with organisations of both government and private sector for giving security service in the system determined by the port authority.
- * If necessary an independent security force will be formed in cooperation with the different port authorities which will work side by side with the existing security force or like other countries independent security force formed for economically important organisations may be engaged in the port.

- * Giving permission to the port authorities for authorisation of giving own security force appointment within the operating area of their own (port boundary) to the independent terminal operators.

2.5.7 Taking action about disputed/detained ship :

Government, subject to settlement of dispute/case regarding detained ship, will review and amend concerned rules to explain clearly the competency of the port authority to transfer such ship to the definite anchorage under responsibility of owner/agent.

2.5.8 Port Area :

Use of land of the port is an important factor to the port authority. At present port area has been determined through government gazette notification. In order to meet up necessity of future development it is necessary to take care of land adjacent to water area. Accordingly government will take following actions:

- * A specific policy will have to be prepared in respect of transfer/ allotment/ lease of own land of port authority and the land situated in the port area.
- * In case of transfer of land/property of personal ownership within the port area prior permission of the port authority will have to be taken.
- * If anybody wants to construct any installation within the port area then provisions of Port Authority Ordinance will have to be followed.

2.6 Other Related Matters :

2.6.1 Development of More Commercial Activities :

Activities of seaport are not limited within collection and supply of materials only for local market. Materials of neighboring countries are also loaded and unloaded during transit. Ship repairing, construction and ship breaking may also be done in the port. Supply of ration and energy are important work. Export Processing Zone remains in same ports now a days.

Government must want to see that the national seaports are operated in such way that these become able to render all possible services. Government will undertake following step for the purpose:

- * There will remain government bindings in respect of remaining proof of allotment of land, for assistance in related activities, in the plan prepared by the port authority.
- * There will be government support in the plan of the port related activities in the port adjacent area.

2.7 Financing for Work Policy :

2.7.1 Financing and Fee of the Users :

Fund will be collected for this sector from the source of general government fund and fee received for services from the port users.

Government believes that in the interest of ensuring long term financial utility of the port payment of sufficient fee by the service receivers is reasonable. Due to this government understands necessity of ensuring sufficient profit against money invested by the government or others for the development of port facilities.

In order to keep financial continuity of this sector taking action is definitely proper. In order to ensure sufficient financial profit this can be done through reorganisation of revenue realisation system. So government will help the port authority to undertake the following steps:

- * Introducing research and pilot program for amendment of port tariff, dredging, navigation, pilotage and all other port activities.
- * Giving instruction to port authority for amendment of tariff keeping conformity with service rendering so that any special service user becomes bound to pay for the said service more directly.
- * Identification of those services properly for which special assistance are needed and at the same time determination of ways as to how the said services can be less expensive.
- * Following power will be given to the port authorities in respect of development of port infrastructure:
- * Invitation to the investors for development of facilities in the port on the basis of agreement of lease.
- * Giving encouragement to the capital investors under local or foreign or joint venture under private sector or under government sector under joint venture.

2.7.2 Tariff System :

Responsibility of tariff determination and addition will remain on the port authority as autonomous organisation. The port authority will keep the tariff system of the concerned port under review continuously under a balanced tariff system and addition of rule. Competitive charge will have to be determined in comparison to the existing charge of the nearby ports simultaneously with trying to raise income to the highest from the user of port facilities and machineries. Specially charge will have to be determined in such way that encouragement is created in the highest use of area and machineries and trend of using valuable port area as godown for long term stocking of materials can be stopped.

Tariffs will remain under audit and review in consideration of limited alternative in the international trade. Reasonableness of tariff will be tested through audit and review on yearly basis considering change brought in the regional and international standard and in the tariff system.

3 Sea Transportation :

3.1 Containerization :

It is essential to remain an efficient sea-going shipping system for national development of Bangladesh. In consideration of long period shipping tradition and rich background of sea-going government is eager to develop this sector to create greater opportunity of increasing skill and employment. It is possible to do it through giving active encouragement to shipping service under private sector, ship owners and concerned others and through reorientation of existing rules and regulations for rendering more efficient service.

In case of shipping service development in Bangladesh materials carried through different ports, shipping in the international arena and trend of cargo handling technology must be brought under consideration. The main things to be considered in this matter are:

- * Expansion of container trade: In the field of materials transportation in the world shipping trade wide expansion has been held in the use of container. Container trade in Bangladesh has also been increased keeping conformity with this trend. Since containers are generally remains in the large ships in the international shipping and since port facility of such ship does not exist in Bangladesh so our trade of such kind are done through Singapore and Colombo. Initiative will have to be taken to construct port facility in Bangladesh with such deep navigability. If such facility is constructed then no lighterage will be necessary in the outer anchorage of Chittagong port.
- * Experience of Bulk materials movement: Bulk trade is being operated in higher rate gradually with the help of special type of sea-going vessels and in that case specialised handling facilities should remain in the ports.

The objective of this government in the field of national shipping policy preparation is to protect trade and commerce of the country, ensuring its development and giving assistance to it. If an efficient shipping system is formed in the country with minimum expenses with this objective then the same will have to be ensured.

Government will encourage rendering service in the field of shipping through shipping companies of both local and foreign.

Government also admits that development of ports and its efficient management is the pre-condition of a practical shipping system. Action will be taken in these regards through implementation of proper policy for port development. Government through implementation of proper port development program is taking step to implement the same with due importance.

3.2 Shipping Services :

It is essential for national development of Bangladesh to ensure efficient shipping service activity. This can be achieved through giving encouragement to national shipping line. Owners and operators/liners of ships under private sector and through keeping liberal policy in respect of shipping services run under foreign ownership in international shipping.

Government will give assistance in running Bangladesh Shipping Corporation (BSC), the national shipping line of the country. BSC will be working as a guide liner of sea trade and an ideal organisation of the country. In order to run BSC more commercially gradually it will be reformed. Financial reorganisation of the organisation will be made and it will run in future according to a trade plan balanced with the government.

Government will take following action in this matter:

- * Financial reconstruction of BSC will be done to place the organisation on a strong and sustainable economic base.
- * Executive Board will have to prepare own business plan, which will be a 5 (five) years program. In it there will be year wise operating budget proposal. These plans will be the base of understanding with the government.
- * Government will assist the Executive Board of BSC to work independently under agreed business plan of both the parties.
- * Government will direct the Executive Board of BSC to prepare a fleet expansion plan with possibility of involvement in container feeder business. Discussion on size and component will be held on this basis.
- * Executive Board will remain specially careful so that the organisation may run more profitably in future.

Government will continue to give assistance in different ways so that shipping service under private sector can render effective shipping service both nationally and internationally.

3.3 Logistic-Support :

3.3.1 Containerization :

An early increasing part of trade in Bangladesh is carried by container. If facilities of container service are to achieve fully then this service will have to reach the doorstep of the people. For this purpose efficient shipping line, port free from complexity of duty and equipped with security system and simple internal distribution system along with experienced clearing agents are needed.

Government will give assistance as follows in these regards:

- * Existing ports and construction of new internal container depot/container terminal.
- * Coordination between concerned agencies and custom authority to ensure application to simplify document preparation and inspection system of different materials.
- * Coordination of concerned ministries for ensuring importance of forming proper road, rail and inland waterway communication for the ports.
- * Participation of local and foreign entrepreneurs under private sector to develop container service and related facilities.

3.3.2 Ship Manufacturing and Repair Facility :

Though Bangladesh has no big sea going fleet yet there is a large fleet of coastal tanker, coaster, fishing troller and engine boat. Many marine vessels for local use are being made in the country and many workshops and repair centres are being established.

Government will take following step in these regards:

- * Possibility of performing further role in ship building industry, specially sea going ship construction industry will be reviewed and necessary action for its development will be taken.
- * Possibility of giving encouragement and assistance in ship building and repair sector will be searched jointly with local and foreign shipping companies.

3.3.3 Ship Breaking Industry :

Recently ship-breaking industry in Bangladesh has been widened. Though there is reason of remaining sufficient uneasiness in respect of procedural security and industrial management in the work field of this industry. Location of this industry is near Chittagong port so sometimes it creates different problems in the activities of the port and it hampers security. Besides, importance may be given on adverse implication on the environment. So in order to encourage, consolidate, environment balanced and technology dependent of this industry Ministry of Shipping, Ministry of Industry and Ministry of Labour will prepare policy jointly.

3.4 Organizational Structure :

3.4.1 Decontrolling and Liberalization :

Imposition of unnecessary obstacle in the field of commerce makes impediments in proper and effective operation of trade and commerce. Government will undertake following step in this matter:

- * In order to remove all hindrances except essential control all the existing rules and regulations in this industry are to be reviewed and make the same upto date.
- * National Flag Carrying Ship Protection Ordinance will be reviewed in the light of the existing situation after forming World Trade Organisation. The purpose of this will be to liberalise rules and regulations to attract most effective shipping services, which are helpful for national development.

3.4.2 Environmental Management :

Bangladesh Government is under promise of keeping highest standard regarding environment in conformity of national development. Accordingly government will take following steps:

- * Considering existing rules and regulations, policy of industrial management, technological progress, demand of consumers and expectation of the people government will try to improve management system and environment.
- * Training and motivation process will continue for the workers to work consciously about environment.
- * In order to stop environmental pollution for ship movement, shipbuilding, ship repair and breaking activities concerned international convention, protocol etc. will be introduced and applied.
- * Probable plan will be prepared to face disaster.

4.3 International Shipping Conventions, Protocol etc :

Recently some multilateral agreement, convention, protocol have been undertaken by different international organisation of United Nations, worldwide. Among these some multilateral agreements executed by IMO, ILO, and UNEP etc. organisation related with shipping. These agreements are mainly related with science and technology development and these have been executed for worldwide consciousness about pollution. Implementation of all these multilateral agreements are essential for proper shipping worldwide. Mentionable among these is:

- * STCW 95 (Standard of Training Certification and Watch Keeping '95)
- * SOLAS/LOAD LINE PROTOCOL 88 (Safety of Life at Sea/Load Line Protocol '88)
- * MARPOL 73/78 (International Convention on Marine Pollution by Oil '73/78)
- * CSC 72 (Convention on Safe Containers '72)
- * LC 72 (London Convention' 72)
- * CLC (Civil Liability Convention)
- * FUND (Fund Convention)
- * OPRC (Oil Pollution Prevention Response and Cooperation)
- * SAR 79 (Search and Rescue Convention '79)
- * SALVAGE (Salvage Convention)
- * SUA 88 (Suppression of Unlawful Act '88)

Bangladesh will be developed in the shipping through implementation of these agreements after signing these. Government will undertake following action for implementation of these agreements:

- * To make Department of Shipping fit with necessary manpower and machineries for signing these multilateral agreements and implementation of the same.
- * Necessary administrative and infrastructural development for implementation of these multilateral agreements.
- * Arranging training of all concerned to prepare rules and regulations in the light of multilateral agreements signed by Bangladesh.
- * Taking necessary action for effective use of rules prepared in the light of multilateral agreements.
- * Improving standard of training as given in the training organisation for shipping officials and seamen up to international level according to demand of IMO convention.
- * Ensuring compliance of compulsory demand regarding eligibility of Inspector, Superintendent and others by the training organisation.
- * Control of port operation and shipping and reforming its regulatory sides.

! Human Resource Development :

Shipping is mostly a technology dependent sector. Introducing new technology has made this shipping business complex day to day. The changes which are being introduced in the international convention applicable in case of shipping are

to be observed and will have to apply in the work. In order to achieve success in shipping skilled and motivated workers are necessary. This is applicable for all classes of workers, which includes officer, seamen and manpower engaged in the shore, who are associated with shipping industry and shipping business organisations. Bangladesh has long tradition of sea menship. Following well established training centres are existed here.

- * Marine Academy, where training is given to the Deck and Engine Officer before service and during service.
- * Sea men Training Academy
- * Marine Fisheries Academy

Government will take following steps in these regards:

- * Modernisation of Marine Training Centres to increase necessary efficiency and its operation, financing and management will be reviewed, so that these are established on sustainable base.
- * Will review financing system of the training institute and will work for preparation of a consistent and clear financial structure for their future development.
- * Providing training under established rules and regulations and private sector will be encouraged to invest in the training and training facilities for certification.
- * Necessary assistance will be provided to raise the existing training program to the international standard for entering Bangladesh into IMO white list.
- * Training course will be introduced for human resource development of port and shipping management.
- * Taking action for competency test of sea going shipping officers and will be modernized in the light of uptodate international convention.
- * Probable action will be taken for registration and employment of the seamen.

3.4.5 Legal Structure :

There are many rules, regulations and acts regarding port and shipping activities in Bangladesh. These rules, in some cases, are very old and contradictory. These will have to be reorganised for raising those to the international standard of modern age.

Government will take following actions in these regards:

- * Detailed study will be conducted for determination of acceptability of all international conventions related with maritime shipping. In this study pollution and environmental management, regional ship movement, responsibility and compensation and naval safety conventions will be included.
- * Initiative will be taken to change all existing rules and regulations regarding port and ship movement.
- * Special attention will be ensured to comply terms and conditions of UNCTAD in case of increasing hire of ship.

3.5 Other Allied Matters :

3.5.1 Issuing License to Freight Forwarders :

Important role is played by the freight forwarders in the assistance activities of international trade. But in order to protect interest of the customer's registration and monitoring of freight forwarders are necessary.

The government is under compulsion to ensure rendering effective freight forwarding service. The government will also ensure so that the national organisations can compete with international companies on the basis of equity. So government desires:

- Government will discuss with shipper council, steamer agents association and others for review, registration and monitoring of activities of freight forwarders.
- Innovation of a proper registration and monitoring system which will give priority of rendering service.

3.5.2 Strengthening Representing Organization :

- Government is under promise to render assistance and support to flourish effective representing organisations to render encouragement for simplification of disciplined expansion of sea trade. These include representatives involved in import export business, necessary services for efficient shipping service, port and carrying services, shipping lines and ship owners.

3.5.3 Seamen Welfare Centre :

Activities of existing sea men welfare centre will be strengthen with the assistance of concerned international organisations to face day to day problems such as accident, disability or death for the welfare of general sea men.

3.6 Planning of Finance :

The government believes that those who are being benefited by sea going shipping services those should finance sufficiently to keep long term existence of those services financially.

The government is under promise to ensure effective and efficient shipping service, which is helpful to achieve national development. Therefore, the main targets of the government is to assist to form completely sustainable shipping service financially in the light of the direct and indirect help as the other countries give to their shipping services.

So the government-

- * Will review tax and tariff system that affect contrarily on the general national transportation service. Will examine probability of giving financial, revenue and other facilities to national shipping line and special cargo handling equipment operation.
- * Will review different ways so that the financial organisations become encouraged for long term financing to constitute shipping development fund.

4 National Policy for Inland and Coastal Shipping :

4.1 Philosophy & Objectives :

There are 24000 K.M. canals and rivers and khals and beels spreaded like net throughout the country. This area covers 7 percent of the total land area. But among this navigability of river vessels remains in 5970 kilometers in the rainy season and 3970 K.M. during dry season. 28 percent of total materials and 17 percent of passengers are carried through inland river way.

Waterway of Bangladesh, which is controlled by the three main rivers, is very much complex. These three rivers have formed the biggest delta of the world. These river ways are not permanent and due to siltation trend the degrading situation does not only create serious problem for navigation, but also creates serious problem in management, operation and development of inland and coastal shipping sector. Most of the river ports are in problem of non-wide front line of river and improved road communication.

The aim of the government is to ensure safe, efficient inland and coastal transportation system in Bangladesh, which will play a helpful role in achieving the expected target of national development.

4.2 Sector Management :

Existing organisations of Ministry of Shipping will be consolidated newly as follows:

- * BIWTC will continue ferry and steamer service operation.
- * BIWTA will continue supervision of management and operation work of inland and coastal shipping sector increasingly.
- * Department of shipping will supervise regulatory side of inland and coastal shipping increasingly.

BIWTA will continue to perform responsibility of Inland Shipping Network and infrastructure management and following arrangement will continue for financing of the purpose.

- * Rendering necessary assistance on yearly basis.
- * Realisation of charges from users for using dredging, shipping equipment, river way, river ports and other facilities.

BIWTC will continue its ferry and inland water service. This organisation will implement current program of its internal financial reformation to identify clearly as to which of its activities are profitable and which of its activities is urn through deficit for public interest. Current investment program in the ferry will continue to ensure river-crossing activities. Continuous endeavour will continue to improve operation system to keep efficiency of BIWTC operated service.

Department of Shipping will be active in respect of responsibility regarding regulatory control and application of rules. Specially this organisation will play a wide role for safety of river vessel and sea men and in determination standard to control environmental pollution which will make the legal structure of this head uptodate, related and will ensure observation activities more effective.

Government admits necessity of giving time, training and assistance to the personnel engaged in shipping activities so that they can understand their new role and perform the same correctly.

4.3 Infrastructure of Inland and Coastal Shipping :

4.3.1 Infrastructure Development and Management :

Strategy of the government regarding infrastructure development, operation and management is as follows:

- * Main river ways as are identified to be the main guiding force of inland shipping will have to be preserved and developed more. Dredged earth is to be thrown to the shore as much as possible to make the dredging effective.
- * Development of main inland river ports and internal container ports.
- * Encouragement of government or private patronisation to develop proper landing facilities (Pontoon and Jetty) in the rural area.
- * Continuous standard determination and the same will be implemented in case of shipping. Measurement of channels (length, breadth and depth), navigational lock size, horizontal and vertical measurement to cross bridge, overhead electric wire, material carrying will be inclusive to it. BIWTA will determine standard in this regards and all concerned organisations will follow the same compulsorily.

- * GIS database and modern management system will have to be used and expanded in the Ministry, its divisions and organisations.
- * In order to improve the shipping system discussion between Ministries and river way users will be supported.
- * Participation of private sectors will be encouraged in the preservation of river ways and in case of other matters.

4.3.2 General Field of Inland Shipping and Sea Port Development :

Economic development of any country is dependent on import export through main seaports of the said country. Overall efficiency of port depends on overall carrying system of the country. Development of inland and coastal shipping and development of seaports of the country should be done at the same time so that overall demand of the country is fulfilled.

Strategy in these regards will be as follows:

- * Inland and coastal main river ways will have to be developed and maintained in such way that river vessel can move freely for carrying materials between sea ports and hinterlands.
- * Construction of infrastructure of inland river ports alongwith container terminal with handling facilities so that materials carrying become easy. Participation of private sector will be encouraged in such construction, management and operation.

4.3.3 Water way Management :

Control of river system is essential for development of Bangladesh. Our rivers are alluvial soil prone and its flow is changing in nature. Impediments created by men along with natural causes are responsible for this. Change of flow in any part of the river may affect total flow seriously. So government desires:

- * To keep continue effective discussion regarding river basin management with the neighbouring countries. This discussion will be held in the light of national shipping policy and imposing proper importance on navigation. Matter of discussion may include exchange of data regarding hydrology and weather, afforestation, prevention of erosion to protect watershed and reducing degradation of soil standard.
- * To undertake more effective inter ministerial discussions so that negative effects of irrigation and flood control projects on navigability becomes less.
- * To keep proposal of ideal quantity of minimum water flow in some marked river and river ways to keep navigability even after use of water for irrigation, drinking and after use of water in different urban necessity.

4.4 Inland and Coastal Shipping Services :

4.4.1 Passenger Carrying Services :

Most of the inland passenger carrying system through river ways is under control of private sector. BIWTC operates some steamer service (rocket service) through inland waterways. BIWTC operates passenger-carrying service in the coastal area as moral responsibility of the government sector.

Government will ensure safe passenger carrying through undertaking following steps in future:

- * To continue inspection and observation of passenger carrying service under government and private sector to ensure survey, registration and related matters for safe water transport and to ensure life saving equipment in the ship. Department of shipping will determine standard in these regards and these will be compulsory to all organisations.
- * Passenger carrying service will be continued in the coastal area for public interest. This service will be run by BIWTC through giving government subsidy until private sectors come to this work.

4.4.2 Material Carrying Services :

Most of the material carrying service is run by private sector. Though the ships are old yet sufficient from the point of material carrying and also able keep competitive situation. BIWTC also run some cargo service, though their fleet is also old.

Government will continue assistance to the material carrying service as follows:

- * Making old ship scrap stage by stage and substitute new ships in the fleet increasing standard and efficiency of service of the existing services of BIWTC.
- * Until ship will be repaired or will be made scrap applying safety and survey rules of ship strictly.

4.4.3 Ferry Service to Cross Main Rivers :

Bangladesh Inland Water Transport Corporation (BIWTC) runs ferry service for crossing main rivers of the country. Many ferries of the organisation are old. Subject to demand and opening new route these ferries should be rehabilitated and new ferries will be necessary. In this case government will keep the following system continue.

- Ensure sufficient ferry service to cross main rivers.
- BIWTC will have to keep proper fleet of ferry to meet up demand as per requirement in the main ferry ways.
- Encouraging introduction of private sector side by side with the government sector in the new ferry routes.

In order to make easy entrance of the private entrepreneur these services may be awarded them on contract basis. But before it maintenance and operation system of existing facilities in the shore should be decided along with determination of proper charge/custom charges on discussion and on the basis of mutual consent.

4.4.4 River way Protection and Pilotage :

At present BIWTA performs the responsibility of marking naval channel. Since the river changes its way so map of navigability and river notification are to make uptodate frequently and naval assistance materials are required to be substituted. The river where way of river vessels is being changed again and again, pilotage service in those ways is compulsory. Due to shortage of pilot ships is to wait and movement becomes delayed. If a network of river ways in main rivers are to run then navigation safety system will have to be controlled strictly. So BIWTA will have to undertake the following steps:

- Substitution of naval assisting equipment in the river way and those are to be observed regularly. At the same time naval assistance equipment will have to install in the new waterways.
- Pilotage service should be arranged in the important and necessary naval ways. The river ways where there is shortage of pilot, efficient seamen are to be motivated from the private sector to render pilotage service.
- Training program will have to undertake to get more efficient pilots continuously years after years.

4.4.5 Hydrographic Survey :

- Hydrographic survey becomes necessary to collect basic information to know the geographical change of river ways, selection of place to install naval assistance equipment, dredging and identification of place for river administration, ascertaining quantity of dredging etc. Government will give BIWTA the following orders to perform:
- Preparation of plan to perform hydrographic survey effectively.
- Ensuring regular undertaking of necessary hydrographic survey.
- If necessary assistance of Navy will be taken for hydrographic survey and to coordinate the same with other organisations.
- Increase of strength of BIWTA for plan, control and to supervise hydrographic survey run under private initiative.

4.4.6 Dredging :

In order to keep main part of the inland river ways navigable main responsibility will be preparation of an effective dredging plan and its implementation. Government will perform following work through BIWTA for the said purpose.

- A five years term dredging plan will be prepared for inland waterways. The river ways through which big river vessels, small launches and local engine boats run will be brought under this plan.
- In order to meet up dredging demand dredging capacity of both private and government sector will be utilised. New more dredgers will be required. These dredgers may be collected by the government and/or by local/foreign/joint ownership companies of the private sector.

4.4.7 Debris Removal and Rescue Operation :

When any wreckage or impediments makes obstacle in the way of river vessel and/or becomes risky in vessel movement then BIWTA is supposed to remove such obstacle. Rescue vessel with high power lifting capacity becomes necessary to use in the emergency situation.

Government will take following step for this purpose:

- Review of rescue and removal related rules and regulations in the light of specially passenger carrying river vessel accident.
- Effective program will be taken along with plan to face the emergency situation to run river vessel rescue and removal work properly and surely. Collection of necessary equipment and rescue vessel and training proposal will be included in it. At the same time there will be rules, regulations and procedure to get rescue vessel in the emergency situation.

4.4.8 Indigenous Engine Boat :

About 7,00,000 (seven Lac) local engine boat both passenger carrying and materials carrying and fishing troller move in the inland and coastal river ways of Bangladesh. Government will undertake following step to improve safety system of such engine boat users.

- Introducing an easy registration system for the engine boat of below 16-horse power by preparing a proper act.
- Taking necessary action for registration of such engine boat and annual survey under proper act.

Department of shipping will monitor and supervise work of organisation entrusted with registration activities of such river vessel in favour of the government.

4.5 Inland and Coastal Shipping Corporation :

4.5.1 Administration :

Administration of inland water transport is run by the Department of Shipping and BIWTA. River vessels engaged in the inland waterway are controlled by Inland Water Ordinance, 1976.

4.5.2 Shore Land :

Boundary of foreshore under inland river ports is not practically marked by any boundary. Unplanned and illegal installations enters the river illegally. As a result breadth of the river becomes less, navigability decreases and degrades alluvial situation.

Government will ensure foreshore protection through following steps:

- Practical identification mark will ensure foreshore port boundary of all internal river ports.
- All illegal installations of foreshore either will be removed or will be legalized.
- Law regarding land possession, lease or construction in foreshore land with approval or BIWTA and law regarding no construction without approved design of the said organisation will be applied.

4.5.3 Supervision of Inland Shipping :

BIWTA and Law Enforcing Agency will perform responsibility of testing existing helping equipment in the river way and to protect the same from theft. In this regards concerned Deputy Commissioner will be coordinated. In order to ensure safety of the inland river ways government will amend existing act and rules regarding this.

4.5.4 Environmental Management :

Marine Pollution Ordinance has been passed in the parliament which is mainly effective to prevent pollution of coastal and seaports. But no organisation has been set up for implementation of rules and regulation regarding this. In order to fill up this vacuum Department of Shipping will be authorised to prepare rule to prevent environment pollution by inland marine vessel in the inland river way, outlet of the river and in coastal water boundary. Pollution from marine vessel (control of contaminating materials, garbage management and disaster management), pollution from facilities of marine vessel (control of contaminating materials and garbage management), and work relating to marine vessel (dredging, ship maintenance and repair and dismantling of ships).

The government is under compulsion to keep high standard consistent practical development requirement. So the government will undertake following steps:

- Preparation of rules regarding control of environmental pollution by the river vessel in the inland waterway, estuary and in the coastal water area.
- Institutional form will be given to the environmental control system applying law and imposing punishment if necessary.
- Construction of facilities for proper disposal, of waste materials.
- Ascertaining affect on environment while considering new river ports and container terminal projects.
- Stopping unplanned establishment and illegal possession by the public in the riverbank, specially in the inland river ports area.
- Introducing “polluter pay” policy in the instructions to be prepared for statutory systems to be undertaken for protection of environment.

4.6 Safety & Environment Protection of Inland Shipping :

4.6.1 Registration, Survey & Certification of Inland Marine vessel :

Government wants to continue ensuring safe operation system of inland shipping through effective survey, inspection and control of river vessel and navigation assistance facilities. Institutional and infrastructural facilities of Department of Shipping are insufficient in comparison to safety facilities. As a result full implementation of Marine Ordinance are not being implemented. Government will take following step to solve problem regarding approval of design, registration, survey, inspection and certification of inland water transport and to protect environment of inland river ways:

- * Will establish and improve “Inland Shipping Safety Administration” (ISSA) under Department of Shipping.

4.6.2 Training, Certification & Manpower Appointment to Inland Marine vessel :

In order to ensure safe and efficient inland Shipping Service for Bangladesh all owners and seamen will have to be trained. For this purpose all training institutions should be brought under Department of Shipping. Government will continue to render assistance in development of training institutions to arrange high standard training of inland shipping workers. In this field two main training institutions are:

- * Deck Personnel Training Centre where there is arrangement of one year apprentice for deck cadets of inland water transport.
- * Bangladesh Institute of Marine Technology where Diploma is given in Marine Engineering.

Government will undertake following step to ensure inland shipping:

- * Policy on manpower appointment in the ship will have to prepare to ensure safe shipping always.
- * Ensuring sufficient trained seamen appointment in all engine boats. At least 50% sea men will have to be appointed from sea men trained from government approved organisation in the engine boats with more than 37 K.W power.
- * Private sector will have to be motivated to establish inland shipping men training centre. Necessity of training course and training period will have to be approved by the government.

4.6.3 Emergency Step During Disaster :

Inland shipping sector will have to remain ready to give service any time during any adverse situation and natural disaster. For this government will direct Department of Shipping to undertake following steps.

- * A possible plan will have to be prepared to collect fleet of both government and private sector to face any emergency situation or natural calamities.

4.7 Related Other Factors :

4.7.1 Appropriate Technology :

An extraordinary situation is existing in Inland Shipping sector or Bangladesh. Innovation and use of proper technology fit for the situation in Bangladesh is very much important. Government will take following steps for this purpose.

- * Preparation of activity data of this sector will have to be prepared and will have to make it upto date regularly.
- * Proper design for ship, pontoon, jetty, gangway considering necessity of the country and its geographical condition, specially considering fitness during disaster will be encouraged to do through research institutes and action will be taken to disseminate research knowledge early.

4.7.2 Passenger Policy :

Accident in river routes in Bangladesh is very normal. In these accidents death, injury, disableness and loss of personal assets of the passengers happen. Those who fall under the accident do not get sufficient compensation. Those who dies, or losses personal property and those who become injured or disabled, government will take following step for payment of compensation to them:

- * Compulsory insurance act will be prepared for inland water route passengers, so that compensation can be given for death, injury, disableness or loss of personal property.

Crew Policy

4.8 Financing Strategy :

Fund for this sector will be received from government fund, inland shipping way users and charges received from service receivers given by the Department of Shipping. It will be right to take step for expansion of revenue realisation system to make the financial condition sustainable for this sector. The facility users who does not give charges at present or give less charges than service, charges in increasing rate will have to be taken from them. Government wants to take following steps for this purpose.

- * In order to innovate proper price determining system early for all services of Department of Shipping and inland water transport, survey and registration of ship, taking examination of inland water transport employees and giving them certificates, approval of water transport, test and approval of equipment kept in the ship, dredging, shipping, pilotage, port, river way use etc. study and experimental program will be taken.
- * Charges payment system will be determined in such way that any service receiver may pay charge more directly.
- * Amount of subsidy will determine identifying clearly as to in what services subsidy will be given or users who may get such subsidy.

5 Profitable Sides :

- * Whole country will enjoy result of shipping, seaport and sea going shipping service development. Direct beneficiary of this policy are:
- * People of Bangladesh and businessmen who will enjoy benefit of decreasing price of commodities for decreasing carrying cost.
- * Passengers and ship men who will get benefit of more safe and dependable service.
- * Workers of this sector who will earn more competency and will remain in long term activities with more security and respect.
- * Ship owners who will be able to undertake plan for giving service and for more investment in this sector.

6 Conclusion :

Bangladesh has a long tradition of shipping and running river transport. Our people are familiar with all modern and old river transport and shipping infrastructure.

It is necessary to protect our previous history for future generation realising possibility of abolishing traditional construction art followed since long days and realising early change of all these systems. So protection of different type of marine vessels, skillness in different matters and evolution of skill in handicrafts which have kept basic contribution in our national development will be consistent with the traditional life of Bangalee. So in order to save this heredity government wants to establish marine archives, which will be beneficiary to future generation and will render knowledge to them.

Government and private sector in order to form an effective and competent shipping service, which will be able to meet requirement of the people and which will be helpful to financial development of the country, can work side by side.

Management of Environment Monitoring and Control Laboratory:

1. Management:

1.1 Committee

A management committee will be formed with two members nominated by the Department of Shipping and two members of BUET nominated by the Departmental Head of the Civil Engineering for efficient operation of the Laboratory. A member of BUET will be Chairman of the committee and a member of Department of Shipping will be Vice-Chairman of the committee. In absence of the Chairman Vice-Chairman will perform the responsibility of the chairman.

1.2 Management committee will meet at least once in a month. But on emergency necessity management committee may meet at any time. Besides this, any party will be able to call meeting on short-term notice if necessary.

1.3 Responsibility of the Management Committee:

- a. Performing research, commercial activity of the project and day to day function of the laboratory, determinations of management policy and its approval,
- b. Settlement of any dispute that may arise between EMCL and BUET,
- c. Settlement of dispute that may arise between EMCL and any third party,
- d. Presenting interest of EMCL to the proper authority,
- e. If any equipment, installed in EMCL, becomes damaged due to accident or if any mechanical defect is found then the management committee will constitute an inquiry committee and find out the cause of defect and will submit report and recommendations to the proper authority.
- f. Financial transaction such as invoicing, receipt of money/payment of money and keeping accounts.

2. Equipment Management:

2.1. Safety of the equipment:

Existing system of BUET will remain in effect for safety of the equipment installed in EMCL.

2.2 Management committee will keep list of equipment installed in EMCL and make the list upto date.

3. Government policy will be followed in case of new equipment purchase and repair, purchase of spare parts, purchase of chemical items and other consumable materials for EMCL.
4. Commercial Activities of EMCL:
 - 4.1 EMCL will operate commercial activities with the assistance of management committee to ensure its stability.
 - 4.2 Subject to approval of management committee if any user of BUET uses EMCL then no revenue will be realised.
 - 4.3 The test or any other facilities which will be used on commercial basis 15% of the revenue accrued from those use will have to be deposited to the concerned head of the government and 15% will be paid to Bureau of Research Testing and Consultation Services (BRTC) of BUET. Management committee will submit an account of income and expenditure to BRTC, BUET every after six months.
 - 4.4 Remaining 70% will be used in the following way.
 - a. 20% of the income will be spent to purchase chemical and other consumable items and spare parts.
 - b. Remaining part of the income (50%) will get management committee, concerned professor of BUET and concerned officers/employees of EMCL, proportionately.
 - 4.5 Own testing work of Department of Sipping, such as dredge material testing, testing which is necessary for monitoring of water ways environment, etc. will not be included in the commercial activities.
 - 4.6 Officers/employees of EMCL will be able to participate in testing work run on commercial basis in EMCL by BUET during own time on request of the BUET authority beyond government office hours after proper performance of responsibilities entrusted by the government. For this purpose BUET will pay honorarium to the concerned officers/employees of EMCL according to existing system.

Responsibility of Department of Shipping

- 1) Two members of the Department of Shipping will remain in EMCL Management Committee (MC),
- 2) Concerned officers and employees of Department of Shipping will assist in the work of EMCL user teachers and researchers of BUET,
- 3) Department of Shipping will allow researcher of BUET and Bureau of Research Testing and Consultation Services for use of the equipment installed in EMCL,
- 4) Both department of Shipping/BUET will maintain logbook for keeping records of using equipment installed in EMCL,
- 5) Department of Shipping will follow provision of BUET in case of carrying/transportation of any materials within BUET or outside BUET campus,
- 6) Officers and employees of EMCL will carry identity card while remaining in BUET,
- 7) Will arrange direct telephone connection.

Responsibility of Engineering University

- 1) BUET will arrange installation of equipment in EMCL and proper necessary place for use of the officers/employees of EMCL.
 - 2) Will give list of teachers and researchers of BUET who will use equipment installed in EMCL to MC.
 - 3) Two members of BUET will remain included in EMCL Management Committee (MC).
 - 4) BUET will allow to use following facilities to officers/employees of EMCL-
 - a. Civil Engineering Library.
 - b. Seminar, Conference/Lecture Room.
 - d. Prayer Room.
 - 5) BUET will render all assistance to transfer all equipment installed in EMCL to the own place of Department of Shipping after expiry of the agreement.
 - 6) BUET will ensure existing safety of equipment installed in EMCL.
 - 7) EMCL/BUET will maintain logbook for keeping records of using equipment in EMCL.
 - 8) BUET will bear expenses of natural gas, water and power necessary in the Lab.
-