1 INTRODUCTION

1.1 Background

The introduction of the Railway Master Plan contains a brief description of the main activities undertaken leading to a long term Master Plan for the Bangladesh Railway (BR). In order to develop balanced transport infrastructure in Bangladesh, the Government of Bangladesh approved the National Land Transport Policy (NLTP) in April, 2004 and is actively formulating the Integrated Multi-modal Transport Policy (IMTP) as envisaged in the NLTP as well as a revised Poverty Reduction Strategy, MDGs, Sixth Five Year Plan and Vision 2021. Both the NLTP and the IMTP place emphasis on the preparation of long-term plan for each of the transport sub-sector identifying railways as a priority. The NLTP provides different strategic options for railways such as upgrading and expansion of railway infrastructure, achieving higher quality services and operations and establishing international rail links. However, in order to survive as a viable mode, it must significantly improve its efficiency, service quality and establish better connectivity.

Moreover, in November 2004, the Ministry of Planning approved the Revised Terms of Reference (ToR) of Transport Sector Coordination (TSC) Wing of the Physical Infrastructure Division of the Planning Commission. This ToR also emphasised need for the preparation of future Railway Master Plan. To this end, TSC Wing consulted Ministry of Communications (then BR was under the Ministry of communications) and planned for preparation of a 20-year Railway Master Plan with the support of DfID's funded international consultants. Preparation of the plan commenced immediately with the followings:

- increase railway efficiency with interventions to make best use of assets;
- extend railway (infrastructure) to meet policy objectives;
- integrate railway network in a multi-modal approach;
- allow railway to play a greater role in the overall transport sector with a view to contributing to economic and social development;
- prepare railway for playing role in regional and international context;
- establish Broad Gauge throughout the country to bring uniformity in the Gauge System;
- extend its network within the capital city Dhaka by introducing metro system to reduce traffic congestion and
- modernize its loco workshops and training institute with a view to increase its operation and human capacity.

This plan sets out the infrastructure requirements to achieve these goals. The cost estimates for investment presented in this report were developed from a review of available reports, along with BR's own cost estimates. Although the plan does not present Economic Internal Rates of Return (EIRR) for the proposed investments, but provides a comprehensive discussion on the benefits of rail transport to the nation and the value of strategic investment to facilitate freight and passenger movement. In the preparation of this long-term Master Plan, the following activities were undertaken:

- A review and study of previous reports and documents of relevance;
- Comprehensive data collection on passenger and freight movement from Central Railway Building, Bangladesh Railway, Chittagong ;

- The creation of a computer based GIS mapping, and network analysis (trip assignment model) using dynamic segregation model;
- The forecasting of key parameters, and the selection of a preferred scenario for future railway networks;
- The development of transportation strategies to cater to the national and regional traffic demands;
- The formulation of a programme of works for the next 20 years;

Originally preparation of the Master Plan was overseen by a Steering Committee chaired by the Secretary, Ministry of Communications along with the following officials as members: Director General of Bangladesh Railway, Division Chief of Physical Infrastructure Division, Chief/Joint Chief of Ministry of Communications, Chairman of Chittagong Port Authority, Chairman of Mongla Port Authority, Chairman of Land Port Authority, Chairman of BIWTA, Joint Chief of ERD of Ministry of Finance, Joint Chief of Planning Wing of Ministry of Shipping, Additional Chief Engineer (Planning & Maintenance) of RHD and Deputy Chief (Eco) of the Ministry of Communications, who also served as the Member Secretary of the committee.

Lastly, Bangladesh Railway has been separated from the Ministry of Communications and now under the Ministry of Railways. As a result, this Master Plan again was reviewed by a committee headed by the Secretary, Ministry of Railways. The members of this Review Committee are Director General of Bangladesh Railway, all Additional Director Generals and General managers of Bangladesh Railway, Joint Chief of Rail Wing, Planning Commission, Joint Chief of TSC Wing, Planning Commission, Director General of IMED, Joint Secretary of ERD and Deputy Chief of Ministry of Railways. The TSC Wing of the Planning Commission coordinated the preparation of the Railway Master Plan.

1.2 Need for a Master Plan

The rapid development of Bangladesh over the last 20 years has been underpinned by large-scale investment in the road sector. However, there is now a growing recognition that continued road building to deal with increasing demand for transport is neither environmentally nor financially sustainable. At present, international forums gave emphasis for modal shift from road to rail as railways pose less carbon emission and less land consumed mode of mass transport. A properly integrated transport plan should utilize the best features of road and rail, and ensure that the two modes can largely complement one another. Rail is more suited to long haul, bulk traffic, while road's strength lays more in short haul, or feeder services. Therefore, intermodal terminals should be planned which utilize rail for the long haul tasks, with road providing the feeder services to and from these intermodal terminals to introduce door to door service. As a result the Government's draft Integrated Multi-modal Transport Policy (IMTP) contains provisions for a paradigm shift away from road construction towards investment in railways and inland water transport. The objective of the IMTP is that much higher shares of the net increase in transport demand will be carried by these two modes than is currently the case. This requires a coherent plan, designed to utilise more fully the strengths of the rail and road transport modes in a complementary manner.

The challenge facing Bangladesh Railway is immense. The inherited colonial network does not suit the strategic transport needs of modern Bangladesh. Track, locomotives and rolling stock are in relatively poor conditions, and a range of physical and institutional issue inhibit the realisation of the full capacity of the existing network. At the same time railways have potential in-built advantages over road transport for the carriage of containers and a range of bulk commodities. Railways can offer safer and faster inter-city travel at more reasonable

fare than road transport. And the railway in Bangladesh has the potential to play a major role in the context of regional transport and trade.

The potential of the railway in Bangladesh needs to be unlocked through planned investment in track, signalling, rolling stock, maintenance and human resource. This long-term Railway Master Plan focuses on the infrastructure component requirements. Some indicative estimates of rolling stock requirements have been made. Maintenance needs are highlighted as these need to be urgently addressed. The institutional framework for BR will have to change in the future to meet the new challenges contained in the master plan. Preparatory work for the modernisation of BR is being undertaken by consultants on behalf of the ADB. Following the results of that work, the human resource needs can be identified.

The plan is expected to guide the overall development of Bangladesh Railway (BR) in the foreseeable future. Once adopted by the Government, it will allow BR to go for planned and systematic development as opposed to ad-hoc initiatives. The implementation of plan, along with modern management and operating practices will allow railway to play its full role, not just in the transport system, but in fostering the economic and social development of Bangladesh.

1.3 Report Contents

The report deals with an assessment of the current BR's railway network, compatibility of standards with neighbouring countries and its traffic characteristics which are highlighted in Chapter 2. A diagnosis of existing problems and opportunities are set out in Chapter 3 and 4. Chapter 5 sets out the background of growth in traffic and provides an analysis as to how the rail traffic may be expected to grow over the next twenty years. Chapter 6 deals with the vision and key areas where railway will seek to achieve the vision. Chapter 7 outlines the strategy and approaches that have been used to develop the plan, where a number of corridors have been identified and adequate attention has been focussed on them. Chapter 8 deals with the analysis of those corridors, requirement of rolling stocks, regional linkages and trade facilitation issues, rail based Inland Container Depots (ICD) and future of container traffic to be carried by rail, as well as analysis of unit costs which have been used for programme cost, social and environmental issues, and lastly Dhaka Rail and its integration with the plan. Investment projects are set out in Chapter 9. Chapter 10 deals with programme costs and its phasing. The way forward in Chapter 11 indicates as to what is needed to achieve and accelerate the implementation of the programme.

1.4 Data Sources

All data sources in various tables have been adequately provided with references. Where no reference is given, it means that the plan preparation team has generated the data.